

Contributions to Management Science

Datis Khajehian
Mike Friedrichsen
Wilfried Mödinger *Editors*

Competitiveness in Emerging Markets

Market Dynamics in the Age of
Disruptive Technologies

 Springer

Contributions to Management Science

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Wilfried Mödinger
Editors

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Market Dynamics in the Age of Disruptive
Technologies

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*To Hadi Zarea, the one without whom this
achievement would have never happened.
To my father, mother and brother, everything
of my life.*

Datis Khajeheian

Foreword

While in the past decades the pervasive diffusion of a new paradigm based on ICT and automation has led to a dramatic transformation of the competitive challenges in all the industrialized and emerging economies, more recently the massive application of AI and robots to both manufacturing and service industries has implied a new wave of Schumpeterian “creative destructions” across all economic sectors.

In this turmoil, media industry is within the bulk of the technological revolution with the main digital players (Facebook, Google, Microsoft, Apple, etc.) virtually taking over the sector. Moreover, together with technological change on the supply side, new patterns of consumption are also deeply modifying the demand side of the competition struggle within the industry.

In this context, this book is a valuable contribution for three reasons. First—at the macroeconomic level—it provides a comprehensive analysis of the new challenges affecting the different actors (large and small firms, regulators, consumers) involved in the new competitive game, with a focus both on the industrialized and on the developing economies. Second—at a meso level—big conglomerates are studied together with new and small firms in order to investigate their patterns of survival and possible cooperation. Third—at a micro level—the different organizational changes needed to cope with the new supply and demand conditions are investigated in detail.

Therefore, ranging from macroeconomics to strategic management, this book can be recommended to economists, management scholars, policymakers, business men and practitioners interested in the media industry and its future perspectives.

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List of Abbreviations

B2C	Business-to-costumer
CEO	Chief executive officer
CRM	Customer relationship management
DSPs	Demand-side platforms
EC	Entrepreneurial cognition
EMMNEs	Emerging Market Multinational Enterprises
FDI	Foreign direct investment
FNDC	National Forum for the Democratization of Communication
FNOL	First notice of loss
FROI	First report of injury
GCI	Global Competitiveness Index
GRPs	Gross Rating Points
ICT	Information communication technology
ID	Data and Information
IGL	Innovation Growth Lab
IPTV	Interactive protocol television
IRIB	Islamic Republic of Iran Broadcasting
ISEFC	ICT Startups Empowerment and Facilitation Center
IT	Information Technology
KRG	Kurdistan Regional Government
LRM	Logistic regression model
NEMODE	New Economic Models in the Digital Economy
PAYD	Pay as you drive
PAYHD	Pay how you drive
PPPs	Purchasing power parities
RF	Risky framing
SMEs	Small and medium-sized enterprises
SNs	Social Networks
SPRU	Science Policy and Research Unit

SSPs	Supply-side platforms
TV	Television
UBI	Usage-based insurance
VAS	Value-added service

Part I
Editorial

An Introduction to Competitiveness in Fast Changing Business Environment



Datis Khajeheian, Mike Friedrichsen, and Wilfried Mödinger

[The word of] New technologies is a historically relative term. We are not the first generation to wonder at the rapid and extraordinary shifts in the dimension of the world and the human relationships it contains as a result of new forms of communication, or to be surprised by the changes those shifts occasion in the regular pattern of our lives.

Carolyn Marvin (1988: 3)

Abstract This chapter is an introduction to the book. It presents that this book aim to provide the readers with a multidimensional insight about competitiveness in different markets. The focus is mostly on small firms that are operating in communication technologies markets, especially media; but also larger organizations such as broadcastings and other industries such as tourism, banking or football are also involved in this collection. After two main sections of competitiveness and emerging markets, organization of the book has been presented.

Globalization, communication technologies, always-on mobile devices, international free trade, global systems of banking and insurance, conglomerates and world-wide consumption of media products have made the globe as an integrated, interconnected and nested market. Multinational corporations are playing a decisive role in exchange of product and services and acquiring a large market share in international markets. Global brands are leading players of the market and there are few spaces for small firms and enterprises. Surviving in such competitive global and

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local markets, is becoming more and more difficult, for both of small or large organizations. Consumers consistently demand for more features with lower prices. Conglomerates with their huge resources deliver new applications, software and functions in free or with a very affordable price. New business models invented to deliver more value for less spending.

In media industry, emergence of new technologies created some new concepts such as media convergence. Emergence of different media resulted to E-merging media (Feldmann and Zerdick 2004) that implies on integration of media functions into one device, in the way that we experience today in our lives. Such advances have changed the consumption habits and provided consumers with lots of choices, while on the other hand resulted tougher competition among companies and firms to deliver value to the more demanding consumers. Many new small firms entered the market, thanks to reduction of entry barriers, and increased the importance and share of small firms and enterprises in the markets.

This book, aims to provide the readers with a multidimensional insight about competitiveness in different markets. The focus is mostly on small firms that are operating in communication technologies markets, especially media; but also larger organizations such as broadcastings and other industries such as tourism, banking or football are also involved in this collection.

1 Competitiveness

The World Economic Forum, which measure competitiveness among countries since 1979, defines competitiveness as “the set of institutions, policies and factors that determine the level of productivity of a country”. In this definition, “productivity” is the main subject (world Economic Forum). Huang et al. (2016) believe that core competitiveness of a company significantly depends on the strategic allocation of human resources and the related policies. We consider competitiveness in two levels of nation’s competitiveness and organization’s competitiveness.

In macro level (industry level), according to UK competitiveness Index (Huggins and Thompson 2016), competitiveness has been considered as “the capability of an economy to attract and maintain firms with stable or rising market shares in an activity, while maintaining stable or increasing standards of living for those who participate in it.” (Huggins and Thompson 2016). In this level, competitiveness implies on ability of firms and business organizations of a country to perform, without protection or subsidies, more successful than foreign competitors. To measure the competitiveness in macro level, there are some measures such as profitability, balance of foreign investments, national trade balance, and similar.

However, our focus in this book is on the competitiveness in organizational level. Competitiveness in organizational level is highly under influence of Michael Porter. His diamond model suggests four specific factors to explain why some industries are more competitive than others. These factors include (1) firm strategy, structure and rivalry, (2) Supported industries, (3) Demand Conditions, (4) Factor conditions (Porter 1990).

Porter continued his contribution in understanding of competitiveness by proposing the ‘five factors framework’ that identifies the sources of competition in an industry or sector. According to this framework, competitive rivalry is a product of interaction of suppliers, buyers, substitutes and potential entrants and firms are under pressure of four threats of entry, threat of substitutes, threat from power of buyers and suppliers and threat of competitive rivalry (Porter 1980). This framework enhances our understanding from competitiveness that has been gained from diamond model, and connects macro level with organizational level. These five factors are not independent, but highly related to each other: “Pressure in one direction can triggers off changes in another in a dynamic process of shifting sources of competition” (Johnson et al. 2005: 80).

It must be noticed that competitiveness is not a zero-sum game, and does not rely on the shifting of a finite amount of resources from one place to another, but it involves the upgrading and economic development of all places together, rather than the improvement of one place at the expense of another (UK competitive index Huggins and Thompson 2016: 7).

However, competitiveness does involve balancing the different types of advantages that one place may hold over another, i.e. the range of differing strengths that the socio-economic environment affords to a particular place compared to elsewhere (Ibid).

2 Emerging Markets

A common misunderstanding is to confuse about emerging markets and emerging economies. Emerging economies are including of five countries of Brazil, Russia, India, China and South Africa, addressing as BRICS, that are the fast developing countries which economically are close to developed countries (Yago et al. 2008). But according to Khajehieian (2017), emerging markets include but are not limited to these emerging economies, and is a more expansive concept that include any new market for products or services that is appearing from change. He articulates six types of changes that create emerging markets: (1) change in technology, (2) change in consumption habits, (3) change in demography, (4) change in law and regulations, (5) change in social demands, and, (6) change in values. These changes create many new markets and at the same time diminish many of existing markets.

This book, as its title implies, focuses on change in technology and how in the age of disruptive technologies, these changes create new and emerging markets for firms and enterprises, or how new processes and products enable organizations to compete more effectively. The core idea of this theme is that by introduction of new technologies, some new value propositions become possible, including new product, process and services, and consequently some niche markets appear that did not exist before, or did not valuable to cover because of cost and limitations in technology. These new markets are great opportunities for many organizations, especially for small firms with small market share and limited resources to leverage their innovativeness and agility to exploit these business opportunities.

At the same time, these technologies extinct some of existing technologies or make them ineffective and disadvantageous. Thus they are challenges for many of organizations with a considerable market share and a possession in the current markets. Extinction of some technologies for these established organizations means the necessity of renovating the processes and adapting with new requirements. Also threat of new entrants is a product of these new technologies.

For an example, by introduction of digital technologies media industry experienced a dramatic change in structure of competition and value chain. Before digital revolution and in regard with expensive prices of equipment and technology, production of media content was costly and capital-intensive activity. Accordingly, media organizations were large incorporations with advantage in access to resources and operational capabilities. Digital revolution dramatically reduced the cost of equipment and made it possible for individuals to perform the core process of production in their PCs. Affordable prices of software and computer equipment, made every single laptop or PC a studio of production. Thus large media companies threatened by a large number of individuals and media entrepreneurs. Then, appearance and popularity of web 2.0 and social media, threatened large media organizations in the distribution process too. With no need to traditional distribution channels, producers, content generators and artists could address the target customers directly and needlessly to the intermediary channels. And then, by pervasiveness of smartphones and popularity of applications, platforms became the arena of competition. Companies such as Facebook, Google, Microsoft and Apple that were known as technological companies, became large players in media industry, because of their place in distribution part of value chain. Media industry is a fair example of how disruptive technologies may revolutionary change basis of competitiveness. Threats from new entrants, substitute services, power of buyers and users and threats of suppliers dramatically changed the competition in this industry. Same, with different levels, can be seen in other industries such as telecommunication, biotechnologies, tourism, etc. for this reason, a major part of this book is allocated to chapters that provide insight about these industries to shed a light on the changes in doing business and to adapt with shifts in competitive advantages.

One importance of this book is to focus on competitiveness in the markets that are highly protected by subsidies, monopolistic rights and similar protections. Success of firms in such markets is not necessarily reflection of their competitiveness, but it comes from their advantage in using such monopolistic benefits. Understanding how to obtain and sustain the competitive advantages, empowers companies and firms in emerging economies to enhance their competitiveness capacity to expand their markets.

3 Target Readership of This Book

This book has been developed for three specific categories of readers. The first category includes researchers, academics and students in the fields of business, entrepreneurship, media management, economics, marketing and related areas of

interest. All the chapters of this book have been authored by academic professors and scientists and they have been reviewed and evaluated by academic criteria and merits. Sections such as methodology, literature review, theoretical framework or models are fixed parts of these chapters, thus they can be considered as teaching materials for students.

The second category of readers includes practitioners of the related fields. Media managers, entrepreneurs, small business owners and similar professions can learn from the experiences that have been told from the cases in different industries and in different situations. Business models, marketing solutions, customer retention, challenges and opportunities and similar practical issues have been covered by the chapters of this book. By reading these chapters, practitioners, managers and entrepreneurs can achieve new insight in regard with their businesses.

The third category of readers are policy makers. It is expected that by reading of this book, policy makers and people who are in charge of setting regulations look at the competition and emerging markets with a new perspective and to consider the requirement of more competitive firms with a new insight. A part of this book is also specified to media law and regulations for these readers.

4 Organization of This Book

This contributed book is organized in 9 parts and 29 chapters. All chapters, excluding introductory ones, have received at least one round of review. Some chapters reviewed and revised up to four rounds by reviewers from the related fields of expertise.

Forty-six authors from 16 countries involving all five continents of the globe have participated in this collection. Diversity of countries is a strength of this book, because it provides perspectives from different markets and societies. By their affiliations, authors from Canada, Colombia, Brazil, UK, Denmark, Germany, Austria, Switzerland, Italy, Poland, Iraq, Iran, Nigeria, India, Bangladesh and Australia have written for this book. Alongside the local markets, also additional markets of countries like Peru, Russia and Kirgizstan has been studied in associated chapters. Such geographical involvement is expected to give valuable insight toward the subject of competitiveness from various perspectives.

Part I, Editorials, involves two introductory chapters. After this editorial, Prof. Friedrichsen explains the effect of digital transformation on the management of media and shows how digitalization revolutionizes the media industry and how new business models develop during this evolution. This chapter shows how media managers must develop their abilities to face with.

Part II brings together two articles in the subject of 'TV Broadcasting' from Denmark and Austria. In chapter "The Implications of Programmatic Advertising on the Business Model of TV Broadcasters", Kristian Sund and Henrik Jensen discuss how programmatic advertising can be used as a business model for TV broadcasts. Paul Murschetz and Dimity Prandner in chapter "Datafying"

Broadcasting. Exploring the Role of Big Data and its Implications for Competing in a Big Data-Driven TV Ecosystem” shed a light on the TV ecosystem that emerges from Big Data. How It shows how ‘datafying’ effects on competition among broadcasting companies.

Part III changes the focus from large media organizations to small media firms. In this part, three cases from Poland and Iran provide new learnings about challenges of media enterprises in competitive and fast changing environment. Printing press are under intensive pressure of internet and web and experience tough time in customer retention. Simon Gladysz, Datis Khajeheian and Saeed Lashkari explained a case study of a Polish video-game magazine that is faced with challenges of decline phase. The focus of this case is on customers’ retention. Then, two case studies of Iranian digital entrepreneurs have been presented. A startup in music distribution (Beeptune) and an online video streamline (Filimo) startup have been presented by authors from University of Tehran to show how startups in a developing market work.

Chapters in Part IV continue the focus on the media industry, but shift the scope on micro level: how media entrepreneurs exploit opportunities of emerging markets. Two cases have been presented. The first studies how Iranian immigrants benefited from their social networks to run successful startups in Canada. Then Dinara Takbaeva from University of Westminster presents impact of characteristics of media entrepreneurs on success of their startups in post-soviet countries.

Part V presents three chapters in the subject of media law and regulation. Firstly, Edgard Reboucas from Federal University of Espirito Santo shows the role of lobbying groups in communications and media policy in Brazil. This chapter provides useful information for understanding of how powerful players effect on setting communication policy. Following him, Farborz Safari studies neighbor market and explains restrictions and legal challenges of Foreign Investment in the media market of Iran. Finally, in this part, Roslyn Layton, an experienced American expert in net neutrality discusses internet policy for emerging nations. This part provides a consolidate and consistent view of media law and regulation and how it effects on competition on media market.

Part VI continues the discussions of Part III but more broadly on startups and entrepreneurship. Aidin Salamzadeh studies startup booms in emerging markets with a niche market approach. Following this niche market approach, Ahmed Omar Bali and Hadi Zarea reveals the challenges of startup firms in Iraqi Kurdistan by using of strategic acquisition theory. Finally, competitiveness of small firms in different media sectors of Iran is the subject of chapter “Measuring the Competitiveness Factors in Telecommunication Markets” that is authored by Somayeh Labafi from University of Tehran and Idongesit Williams from Aalborg University.

Part VII of this book includes chapters on strategic issues in organizations. Veronica Duque, Juan Felipe Zuluaga and Maria Alejandra Gonzalez-Perez from EAFIT Universidad of Colombia presented a case of AJE group to show rapid internationalization of a Latin American multinational company. Amir Mohammad Colabi and Datis Khajeheian presented a multi-case study of corporate entrepreneurship to explain how strategic renewal helps enterprises to keep their

competitiveness. Then, competitiveness factors in telecommunication markets of Bangladesh has been discussed by a team of authors from Bangladesh and Australia. Similarly, competitiveness in Banking Industry has been discussed by a team of authors from Nigeria. Finally, Kianoosh Karimi and Siavash Salavatian from University of IRIB shares their findings of a project to use audience engagement in IPTV of Iranian national broadcast. The reason for not putting this chapter in Part II is that the focus of this chapter is mostly on mechanism of audience engagement, rather than how broadcasting works. Last chapter in this part is a strategic analysis of football economics in Iran that has been presented and provided by Datis Khajeheian and Amir Sedighi in the context of Iranian Premier league. They showed how by implementation of established and well-known strategies in B2B and B2C levels, club managers can enhance their club's financial situation.

Part VIII is a mix of selected papers from international conference of research in innovation and technology that successfully held in Tehran at 20th July 2016, and some received contributions with similar topics or methodologies. Firstly, Amir Emami analyzes risk disposition to show its impact on the gender entrepreneurship and opportunity evaluation. Although this chapter could place in part "media small firms", but its quantitative methodology made it in line with its following chapters. Then six selected chapters from above mentioned conference placed in this chapter. Impact of organizational innovation, learning orientation and entrepreneurship on SME performance studied by Pezhman Ebrahimi et al. Then, ethics have been considered by Somayeh Moazami Goodarzi, Yashar Salamazadeh and Aidin Salamazadeh as a determining factor in success of firms. They show the impact of business ethics on entrepreneurial attitude of managers. Then another research paper on entrepreneurship and SME performance is presented with similar methodology. Finally, Ali Salehi studied the effect of degree of competitiveness and orientation to export on marketing strategy of SMEs.

Part IX, the last part of the book, includes articles with technical themes, mainly big data and machine learning as the main theme. Arun Kumar and Siva Yellampalli show how telematics and machine learning can result a new area of entrepreneurial activity in automobile insurance. Parisa Sadat Marashi and Hodjat Hamidi reveals the business challenges of big data application in health organizations. Finally, Samira Nemati and Datis Khajeheian continue the subject of previous chapter with application of big data for identifying and exploiting the opportunities in niche markets.

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Digital Transformation and the Effects on the Management of Media Firms



Mike Friedrichsen

Abstract Digital transformation revolutionized processes, business models and value delivery to customers. This chapter discusses how digital transformation effects on media management. For this reason, firstly this trend is defined and different aspect of it has been shown. Then media industries and how they have been effected by digital disruption has been studied. Success of firms like Google and Facebook is explained under effect of digital transformation in media industry. The main contribution of this chapter is to shed a light on the way digitalized firms work in the new media ecosystem. Business models of Internet platforms in digital economy shows how media firms face with challenges such as flexibility of work, proactive support of employees, personal communication within the firms and how this forms work effectively.

1 Introduction

In the context of Internet, Media firms cannot renounce established digital process structures with IT-supported technology any more. With the digital transformation it concerned a trend in the beginnings whose effects and change processes for the value added structures draws so slowly in the heads of the decision maker.

“Digital transformation is the application of technology to raise the performances or the reach of company drastically—instead of implementing only new technologies, on this occasion, it is about the trans-staggering and advancement of the company processes, the customer’s experience and the business models.” (cf. Albrecht 2015, p. 3) Firms are confronted with new challenges: From personalized customer’s communication and the automation of business processes about the rising media convergence up to the subject Big Data. So volumes of data never were in the circulation of all systems and platforms which show a monetary as well as social capital for company.

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Therefore the digital transformation and authenticity also shows a success factor for innovative business models and process models—quintessential points of the digital economy.

In this chapter the essential aspects of the digital transformation are briefly shown at the beginning. In a second step follows the analyze of the meaning and challenges for media firms. In this context the subjects Digital Trust and Digital Workplace are considered more exactly. In a last step the implications for the business models are evaluated.

2 Digital Transformation

The concept of the digital transformation is omnipresent in the private, as well as enterprise sphere and has developed to a description for all change processes. Berman defines this misalignment as an “evolution of the digital transformation” (Berman 2011, p. 2), (Fig. 1).

Nevertheless, according to context there is a variety of the definitions which focus themselves more or less on different aspects. From the word meaning of “transformation” can be derived that it concerns a change process, so a change which is done by one or several drivers and influences the mutual respect of different subjects basically. In case of the digital transformation are these digital media and the Internet, as well as the new technologies walking along with it, like Social media, mobile, Big Data, Analytics or Embedded Devices, but also they

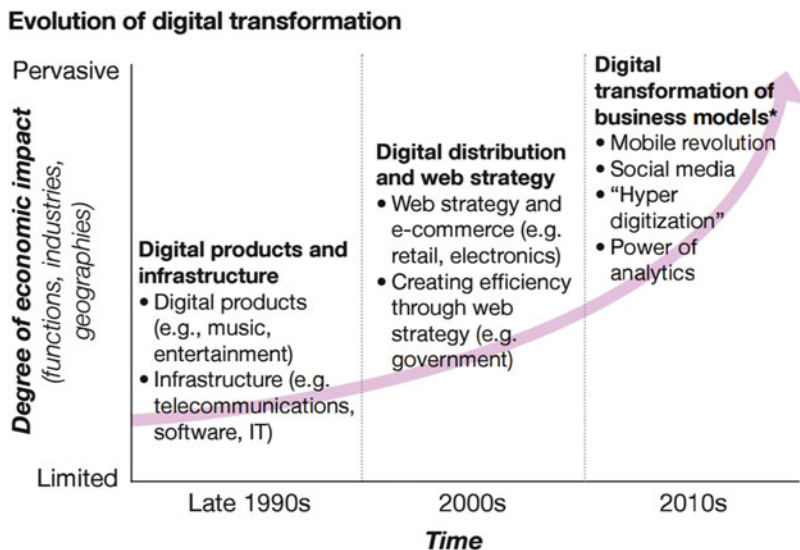


Fig. 1 Evolution of digital transformation (Source: Berman 2011, p. 2)

communicate the way, how company to customers (new requirements, new competitors) and the people to each other (cf. The Guardian 2015).

Thus allow mobile Devices, for example, new business scenarios, cloud computing raises the agility of company, Big Data helps company in innovations and Social media transforms whole core processes by new communication forms.

At traction has shown this connection of the different subjects in the following graphics (Fig. 2).

Roland Berger Strategy Consultants and the Bundesverband der Deutschen Industrie (2015) understand digital transformation “[...] as universal interlinking of all economic areas and as an adaptation of the actors to the new circumstances of the digital economy. Decisions in linked up systems enclose date exchange and data analysis, calculation and assessment of options as well as initiation of actions and introduction of consequences”. Besides, these new tools “[...] will radically change many established business models and value added processes [...]. Nevertheless, the digital economy forces not only the optimization of existing business models, they also promise new, up to now unused value added potentials” (Roland Berger Strategy Consultants 2015).

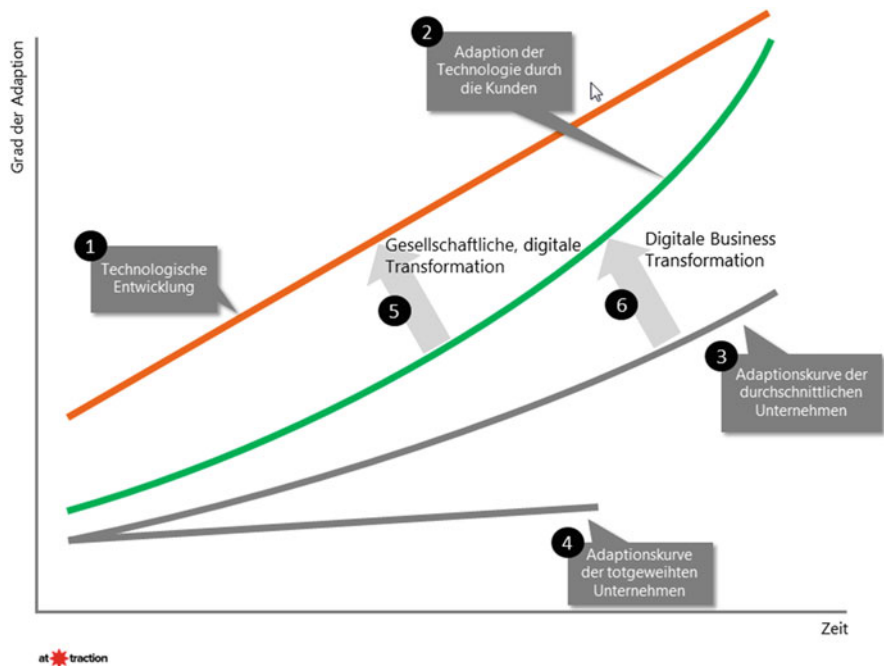


Fig. 2 Curve diagramme digital transformation (Spring: at traction 2015)

Besides, the digitization is not limited to the Internet. “Because the Internet is influencing the everyday life, in objects and places, it is a separation of the digital sphere and therefore also the separation of stationary and digital trade, private consumption and purveyance looks in the long term senselessly.” (Roland Berger Strategy Consultants 2015).

It is unclear with all considerations, when the process of change of the “Digital transformation” is closed. Because “digital transformation” describes only the process/way itself and has no universally valid aim, one is definition specifies with reference to different aspects hardly possibly. In case of the basic definition one could say theoretically that a company is transformed digital, as soon as systems are tied together so and processes are so organized that they can adapt more agile to new developments.

In the context of the digitization in firms company the most different subjects are interesting. Bitkom calls in the study “d!conomy—the next step of the digitization” as technology trends cloud Computing, Cognitive Computing, Big Data Analytics, the Internet of the things, the high number of mobile terminals and rising fluctuation margins (cf. Bitkom 2015a), while CSC in his study “digital agenda 2020” the subjects Big Data, digitization of products & services, process digitization and process automation which calls use of real time dates for decisions, Data Science and digital marketing channels (cf. CSC 2015). And Capgemini judges in the publication “Digital transformation review N°08. The New Innovation Paradigm for the Digital Age: Faster, Cheaper and Open” the subjects Collaborative Robots, machine Learning & Artificial Intelligence, as well as Open Data as especially important (cf. Capgemini Consulting 2015).

By the different market observers and putative experts are called out totally different subjects. These can be assigned to different areas and divided, e.g., into “technologies”, “methods” and “culture” and a clear demarcation is not always easy. Methods in the machine Learning context prove, e.g., only sense if suitable Big Data technologies are available. The areas are based on each other and what is today an “innovative digital culture”, belongs in a few years to the enlarged tool box of a company, until it is so everyday, finally that it is only a technology of many.

A fulcrum and pivot for the variety of new technologies and methods are an employee with suitable competence. The fact that it does not concern with this statement “old wine in new tubes”, the answers of German firms to the question show whether in her opinion the present training profiles must be adapted before the background of the digitization. Besides, 76% of the questioned companies recommend changes in the existing education and 29% of the companies hold even completely new qualified jobs for necessary (cf. Bitkom 2015b).

What remains is the question whether these investments are sufficient to remain an attractive employer and therefore in the market successful also in future. Besides, it is on the one hand about the height of the investments to be effected, on the other hand about what the companies can offer to the (possible) employees, in addition. Besides, big companies also orientate themselves increasingly by digital pioneers like Google or other (former) startup companies from California (cf. CIO.de 2015).

3 Digital Transformation as a Key to the Success

By the new technologies and trends which present themselves by the possibilities of the Internet firms must adapt themselves faster and faster to the demands and expectations of the customers not to disappear from the image plane. With this phenomenon above all big groups must fight who have properly rested on her many years' success and stand meanwhile before an immense layout. However, is the digital transformation for everybody a key to the success?

3.1 Industries in the Digital Change

A study of the consulting firm Deloitte Digitals with the title “Digital Disruption—Short Fuse, Big Bang?” points out which effect will have digitization in the future on the different industries (cf. Econsultancy 2013). It is clear to recognize that the industries are concerned whose products are already digitized or the products which can be offered by the application of new technologies faster, more for a good price and more comfortably for the end user. The latter is already since longer time by retail the case and has plunged name-like groups like Springer, Neckermann, Schlecker and Karstadt in the ruin. These traditional companies have recognized the trend too late and were sold by startup companies and competing companies. Even of the electronics reams media Market is begun only in the beginning of 2012 in the online age to exist beside competitor like Amazon or eBay (Fig. 3).

No industry is safe from digital transformation. Merely the civil engineering and the chemical industry, as well as gas groups and oil companies will note little influence on the business by the digitization during the coming years. The media industry gets the changes especially strongly by firms who enter the media market as cross-borderers.

3.2 The Success of Firms Like Google and Amazon

Google has grown in few years of a searching machine operating authority to a gigantic group which is traded beside Apple as one of the most valuable brands. A company comparable with Google is Amazon which became known by online trade of books and also has begun as a startup company. However, what makes these both companies so successful in contrast to classical companies, for example, the car industry, the telecommunication technology or the retail trade? Google as well as Amazon invest billion dollars in the growth of competence by the takeover of company and the employment of top executives from various industries. Besides Google pursues own research centre for the development of so-called moonshot

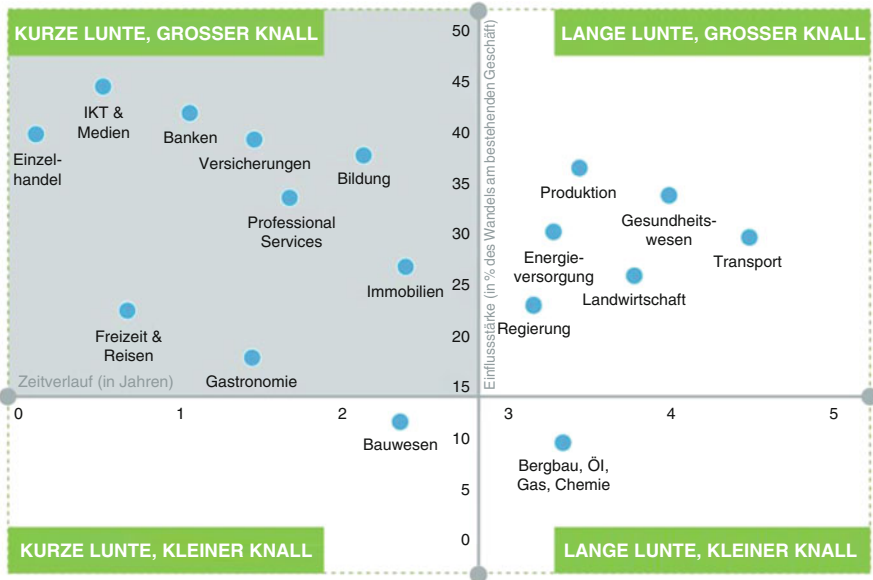


Fig. 3 Duration and effects of the digital transformation (Source: Statista 2015)

projects which should revolutionize the world. The list of the fields of research is long and promising (cf. Bluemind 2014):

- Project Loon: Should the care of rural and remote areas with Internet allow by means of a balloon floating in the stratosphere.
- Project Baseline: Changes in the body should be registered over a sensor and warn the person, before an illness breaks out generally.
- Project Wing: By means of a drone packages should be delivered in future.
- Automotive car: Development of a car which takes part independently in the traffic and reacts to events autonomous.
- Intelligent contact lens: A contact lens which is equipped with a sensor which misses about the tear liquid the blood glucose and informs the bearer about his smartphone or other Wearables about that.
- Google Brain: The investigation of neural nets for the improvement of Googles of own speech recognition.
- Makani: A special wind turbine which hangs few meters above the earth's surface and converts wind into energy.
- Brillo/Weavs: If an operating system and an interface is to the communication between various terminals in the Smart Home area.

Beside the research projects Google has positioned itself already by many products in the most different industries. Google offers smartphones with his own developed operating system Android, has recently begun the streaming service Youtube Red and supplies company with complete IT infrastructures. Now even in the politics Google wants to be involved to optimize processes and decisions on

the basis of accumulated dates. The recipe for success for Google seems to be reflected in the business philosophy (cf. Google 2016):

- “The user comes first, all other arises by itself.”
- “Good is not good enough.”

The group makes by his products the life of the people easier and, besides, collects dates and knowledge which is used for the optimization of the products and for the use in other areas. The demands of the users should be thereby recognized early and be reacted accordingly with suitable products and improvements. The example Google already shows how old value added structures can originate distraught and new digital business models can arise. The problems associated with size and power of this “giant” Google are different challenges.

3.3 Challenges and Measures for the Coping

In contrast to Google in many media firms—predominantly in the middle class lack—there is a lack of strategies to the digitization of the existing business models and to the Enabler resulting from it for new business portfolio to get a competitive advantage. Strategy approaches must be developed which support company to integrate new technologies into her company scenery. In addition companies must define, primarily, a clear vision and aims which are necessary for digitization and the application of new technologies. Without conviction from the management and his communication in all departments of the company no firm will succeed in positioning itself to this change and in generating a sustainable success.

For the coping of the digital transformation and as an additional innovation driver, for example, the so-called SMAC concept is used, which unites four different technologies from the information technology (cf. Capgemini consulting 2013).

- **Social:** Not only the presence of the company is understood by Social on social networks, but also the cooperation and communication within the company and with partners. However, Social media also serves as a source of information about product opinions and service opinions, about satisfaction of the customers and reveals new trends and demands.
- **Mobile:** It enables to users to have access to information and to use services everywhere and any time about mobile terminals. The new services can be thereby created, which already make existing products more attractively and more efficiently for the customer.
- **Analytics:** The collection of dates (Big Data) and the use of a Data Warehouse is used for the improvement of products, the marketing, to analysis of customer’s demands and to support of the management.
- **Cloud:** Reducing the paging of own IT infrastructure in the cloud around the complexity on the one hand of the IT and to guarantee reliability to the other. For firms with little capital or for startup companies the cloud is a suitable tool to invest less money in the infrastructure and to focus itself on the business.

By the combination of these four technologies innovative business models can be developed (new products), business processes optimize (reduction of costs and increased efficiency in the firm), a stronger customer's connection by personalized offers and to allow a brand loyalty.

However, the digital transformation contains not only the introduction and the application of new technologies, but even more the adjustment of the strategy and the adaptation of the firm's culture. In addition, completely new questions position themselves to the contact with the dates and with it linked trust structures.

4 Digital Trust

In the end, is an essential aspect that also personal or personal specifications can arise from an amount from dates. Established clientele dates, staff dates, financial reference numbers or private conversations within the social networks which are treated by the current situation in view of spy scandals of securities or various hacker attacks have to be handled with special care. Consequently the question is arising for company, customer and user of digital technologies which precautions can be taken or exist generally in available process structures. That's why firms stand also before the challenge of a comprehensive Security politics of her IT systems and the protection of the datasets as well as the protection before hacker and Cyber Crime attacks.

The real problems arise particularly at medium-sized firms who often dispose of no special security department which provides "for the fact that systems are not accessible and vulnerable so simply on the Internet" (Maier 2015). So that medium-sized firms win more security in dealing with the digital business models of the web 3.0 and are not deterred by the complicated IT Security topic, must be increased standardized security technologies to protect thus the chances on the competitive market. Must-haves for it are, e.g., sure encoding and authentication procedures, identity and Access management and the protection of own telecommunication networks. However, not only technical standards are tools for a reliable and widely independent contact with the digital transformation. All communication and use of innovative technologies requires some degree in trust which is demanded of employees as well as customers and Stakeholdern. The classical Face-To-Face-communication is often replaced by digital exchange of information by means of Internet-based applications to bridge spatial distances or temporal restricted slots. Also the use of mobile Devices rises with the change of the innovations increasingly in the business everyday life and therefore also the consciousness to accept risks.

Digital trust—"the trust of all partners in digital business models and office routines" (Bitkom)—shows therefore one of the mainstays of digital economy and communication. Therefore, it is so important for users, "because it is impossible to weigh all potential risks of the Internet and to determine the likelihood of the entry of these risks" (Herckersbruch 2013). From the business view, the digital trust represents a condition for interactions and cooperation of all in-house expiries, as

well as for company-engaged units—for example the customers or Stakeholder. From the technical perspective clarification and knowledge creation means departmental-covering for the employees of a company in the area of data security and data protection.

The important factors Digital trust can be divided into the core components ID, Data and information, Communication, Relationship and Technology (cf. PWC). The component ID describes brought trust from Stakeholders and customers in the security of identities. The identity refers to the protection of own identity and with it of the personal or business-related dates, but also to the trustworthiness and authenticity of the operating business partner.

In view of the date exchange and exchange of information (Data and information) the application and the use of the respective well-chosen technologies shows the probably most important factor, because dates can be success-bringing in the age of Big Data and therefore also sensitive dates. Particularly cloud applications and the data management in cloud services are looked often doubtfully. The trend of the Sharing Economy, so “the quick and efficient access to the most varied resources about mobile Devices and applications as well as about cloud-based platforms and online market places” (Simmet 2015) puts employee and customer on the trust test. Shared services and Groupware like Microsoft share point, Google’s drive system or drop box are often used in firms for the support of networked digital communication and the exchange of knowledge, documents and information. Not only the protection of the “running around dates” and information plays an important role, also the reliability in the developed services of the suppliers (Relationship and Technology).

Thus several companies like Shell, Newsweek, Pfizer—but also the NASA—use the cloud services of the Internet giant Amazon. “They shift Websites, databases or e-mail systems in the so-called cloud” and, besides, use virtual computer centers or storage spaces. Reason for it is a change of the paradigms concerning management methods and business models in the digital area. Thus companies tend—before of all startup firms—to the so-called Lean management, so to efficient and slender business processes and value added chains. Online companies like Pinterest and Airbnb could expand by the use of computer capacities and cloud services from Amazon servers their core businesses without laying a special focus on the purveyance of hardware or digital structures. Of course the magnitude is disastrous with system crashes or server financial losses, however, is also to be considered that all business processes—are Internet-based or are not connected—are associates with a certain degree in risk.

This knowledge leads to a significant aspect of the Digital trust: The trust in the communication and the used communication canals and technologies. Above all the choice of the used or used communicative devices is vital: By an exchange of confidential dates and information the communicative devices which support a high degree of security methods should be chosen. Hence, internal information or private customer’s dates should be always transferred about a sure encoding procedure and not possibly about a Social Network platform. Social media should not be still underestimated in the context of the Social business and Social Commerce. It is

gainful above all when users as well as customers develop a basic-constant trust in used methods and means and this also communicate authentically. Also companies can implement constructive criticism or ideas of the customers directly in customer Experience processes—this creates recognition and trust. A clear and transparency communication can show a valuable instrument for the business relation, also for the digital trust within organizations.

A successful-effective measure for the creation and protection of Digital trust can be, for example, the creation of compliance units which deal with the Security aspects within the firms' systems and are thus also a direct contact for internal and external concerns or questions. An authentic and clear communication can be guaranteed above all to the customer by the provision of such a contact to protect the trust and the reliability in the digital process structures. Trainings and continuing education can be helpful, also in the area of the digital Security with which employees learn to become surer in dealing with digital technologies and to transmit her dates by sure transference ways.

Also the public communication of the firms' image or the respective company values contributes to an increase of the Digital trust. Thus, for example, companies should put their digital business models in a relationship with values like lastingness, sincerity and responsibility to strengthen customer's relations or business relations. "Also firms management, decision maker, business partner and employee must catch trust in new technologies, so that an integration of these technologies can succeed successfully." (Siebert 2015) Then only if technologies are integrated successfully and the contact and the trust is lived in it on employees, executives and customers, a collective use or success can originate.

5 Digital Workplace: Digital Workforce: Work in the Digitized Firm

There is in the today's digital time a large amount in information. This poses for company and the employees in all industries a problem, because the employees suffer only a big productiveness loss by the search according to relevant information.

Moreover, important decisions must be made on the basis of information, nevertheless, the right information must be available for it. This negative effect on quality and productiveness walks along with separate position of information systems. Hence, a productive use of the available information is possible only with a logical and co-ordinated linking of approaches, executive functions and the infrastructure (cf. Schillerwein 2011).

With the so-called Digital Workplace a coordination of digital tools takes place on the responsibilities and assignments of the employees, the before described problems of the productiveness should be thereby solved and competitive advantages and innovations be increased. The Digital Workplace allows to the employees a constant and anywhere access to information and resources to work more

efficiently. Further required information can be found anywhere and be used. The staff, so the Digital Workforce, can deal by the use of natural interfaces more and more assignments which could carry out before merely IT-experts. Thus originate modern and new possibilities to optimize the teamwork of person and technology or person and machine.

Digital work requires an adaptable labor organization—whether it is about working hours, places of work or deployments of labor. For it and for the changed technological conditions firms need the employees who can steer themselves and the complicated systems. In this connection the flexibility, communication provision and provision of information must be considered, i.e. to what extent the digital transformation can already support the employees and the firm and will support in future. Following questions are central:

- Is more flexibility created by the digital workplace?
- Can the employees be supported proactively and permanently by the coping with assignments?
- How does the personal communication work and are personal meetings between the employees insignificant?
- To what extent the social connection is influenced to the colleagues?

The Digital Workplace as a central communication turntable and turntable of information offers just internationally to installed companies with distributed locations and project teams huge chances to increase the cooperation, productiveness and efficiency. (Adam 2014)

For a successful development and implementation of the Digital Workplace strategies, processes, technologies and people must be considered and be integrated. Innovation potentials can be exhausted and the employee's satisfaction can be increased. Four theses result for the digital work:

- Thesis 1—adaptable work without borders: the Digital Workplace as an adaptable approach allows to the firms and the employees flexible work without borders. Therefore, neither local nor temporal restrictions are given and the employee is defeated by a certain self organization and therefore high share of flexibility. The private life melts with the working life and the Digital Workforce has individual creation potentials to agree on family and on occupation with each other.
- Thesis 2—personalized productiveness: The Digital Workforce receives required information personalized and can thereby increase the productiveness. The provision follows independently of machine at the right time, the processes orientate themselves by the approach of the employee and the solutions are tuned to their demands. Thus are increased beside the productiveness also the employee's efficiency and the performance.
- Thesis 3—Worldwide transparent communication: On the firms networks information of the Digital Workforce, like the interest and abilities, is published. Moreover, can be communicated worldwide on these networks and platforms and about other communication canals. Further information and knowledge can

- be traded about the platforms as well as be taken part in discussions. A world-wide clear communication and a global knowledge exchange originate from it.
- Thesis 4—Collegial social distance: A certain personal, interpersonal and social distance originates from the Digital Workplace, because personal meetings takes place by the adaptable approach more and more diminished. There is the danger of the social isolation and more traditionally “office talk” is missing.

The digital transformation puts many areas and also the working life and the employees before new challenges and possibilities. Technologies, processes, work routines and employee’s requirements must be submitted to a change, so that the chances can be used and the challenges be mastered.

The communication and flexibility will also increase in future. Nevertheless the people will search the new places of the above all personal meeting to which then a raised esteem is carried for themselves. The personal exchange will become more and more important to compensate the otherwise differentiated and digital exchange. With the Digital Workplace must be paid attention in future to the fact that a balance is guaranteed between private life and working life. Fraunhofer institute has summed up it (Fraunhofer 2013, p. 11): *“We will live in future in mixed real virtual surroundings and work. The borders of real and digital world become blurred visibly, this is exciting and interesting on the one hand, but also a little bit awfully, on the other hand. However, the future does not come simply about us, we make them to ourselves, (. . .) by our own action.”*

6 Business Models of “Internet Platforms” in the Digital Economy

Due to the strong competitive pressure, the globalization, to new technologies as well as changed market conditions and competitive conditions the product innovation or process innovation is not sufficient to exist in the long term in competition. Firms must innovate rather the business models to contrast with her competitors and to be competitive in the long term.

Since “New Economy”, i.e. to the success of the commercial Internet, in the 1990s is spoken of “business models”, because with it new value added possibilities added themselves to the industrial and hardly distinguishable business models of the same kind and these were classed increasingly. In the literature there is no unity about the essence, components and figure of a business model. In the following the simplicity of a business model becomes understood as the value which a company offers to his customers, so as a company earns money, (Institut der deutschen Wirtschaft 2012, p. 6).

With the increasing acceptance and use of the Internet, firms can develop her business model building or find innovative options. Internet platforms allow the production of different added values. To Wirtz (2016, p. 585) Internet-based

business models can be divided with the help of the produced offered services into four areas (4C-Net-Business-Modell). Companies can use one or more areas in their business model:

- **Content:** The business model is based on the collection, selection, systematization and display of concrete contents which divide themselves after the types of information E-Information, E-Entertainment and E-Education and are created either by the firm or by third. Example: Focus.de, movies.com, onlinelearning.net, sport.de.
- **Context:** The business model is based on the clear processed representation of already available information on the Internet. General searching machines and vertical or specified searching services are distinguished for certain categories from products, services or information. Example: Google, Yahoo, Lycos, fireball.de, metacrawler.com, metager.com.
- **Commerce:** The business model is based on the preparation, negotiation or liquidation of business transactions. Example: eBay, Amazon, Dell, preisauskunft.de, dhl.com, visa.com, priceline.com.
- **Communication/Connection:** The business model is based on the possibility of an exchange of information between two parties, the access to networks or offer of communicative services. Example: Facebook, gmx.de, dooyoo.de, T-Online, AOL.

How can companies generate revenues by Internet platforms? Afuah and Tucci (2003) have considered the sales model and the type of turnover as a classifying criterion for internet-based business models. In the following this classification is briefly explained:

- **Advertising model:** This revenue model concerns an indirect revenue form, because online advertising-propelling pay a remuneration for the circuit of banners and other online advertising forms to reach the online users. For this revenues attractive contents or services play an important role, there with higher Traffic figures or purchase strength of the user's teams, the possibility insists for the advertising circuit on requiring higher prices. This revenue model is used by Google, Yahoo, as well as Monster.de which pulls revenues from advertising surfaces for jobs.
- **Subscription model:** This model raised on everyday, monthly or annual basis regularly fixed fees for the use by contents or functions, regardless of the amount of utilization. Because a large amount exists in free information and functions, this revenue model functions only with specialist contents or additional functions for them a user is ready to pay. Mostly 'the so-called Freemium models' with which the customers of free offers change to premium offers liable for costs are applied with this revenue model. Among the rest, companies like Xing, Huddle.net, Spotify, Netflix and Audible apply this model.
- **Commission-based model, Brokerage-or Intermediate model:** This revenue model is based on the consolidation of buyers and sellers of goods and services on a place. Besides, with every successful business transaction a small commission is paid to the "marketplace operating authority" by the seller or buyer. Examples of this revenue form are eBay, lastminute.de, Orbitz, Amazon, mondus.de and econia.com.

- Markup based/Merchant model: With this model the revenue from the sales are generated by digital or physical goods. This can correspond to a classical B2C revenue model with which the revenues arise from the price difference of buying and sales. Examples are an Amazon, iTunes and purchase court.
- Production-based model: The revenues are generated by the direct selling of self-generated products. Successful examples of this revenue form represent the companies Dell and Apple.
- Referral-based model: This revenue model is based on forwarding of customers or information. Besides, there are different reimbursement models as for example the Pay by Click, besides, a reimbursement receives of the Affiliate if users on a link or banner click. Examples are Google AdWords, Payback and Amazon.
- Fairy for service model (web services): With this model the turnover is gained after the use of services liable for costs for the users or a service. Examples are On demand models or software as a service firms like Salesforce.

Internet platforms open firms new business possibilities to exist in the today's competition. They can create or innovate rather the existing classical business models. To stick to the classical business models, can lead in the age of the digitization fast in the ruin, because companies with "new digital" business models open new markets and step in competition to the established suppliers.

The indicated classed Internet-based business models can be combined arbitrarily and different profit models can be started. There are enough successful examples which indicate how Internet platforms can be used for business models.

6.1 Example Media Industry: Streaming Services Conquer the Market

Streaming services become more and more popular and conquer not only the worldwide, but above all also the German market. Whether music streaming or video streaming, the streaming via Internet grows rapidly. According to a study of the Bitkom from 2014 every third Internet user meanwhile from 14 years and older listen music via streaming. That is a total of 18 million Germans are of use Spotify and Co. With it the number of the users has trebled in comparison to the year before. Above all with the younger generation is music listen by streaming popularly, almost every second from 14 to 29-year-old Internet user uses music streaming according to the Bitkom survey (cf. Hampe 2014). However, also video streaming services are on the advance and make serious competition to the classical television. According to a study of the coupon platform deals.com meanwhile more than every fourth German regularly used Video-on-Demand-liable for costs (VoD) or streaming services. Under it supplier like Netflix, Watchever or Amazon Instant video. With it paid-up online video-tape libraries and cost-free video streaming offers are already more popular than Pay TV and DVDs from the video-tape library.

Video streaming becomes therefore a serious competition for the classical TV. According to a study of the Bitkom from 2014 every third user of video streaming from 14 years and older substitutes for the classical television partially or also completely with streaming offers. 44% of the streaming users look less television via satellite or cable, since they head for video contents on the Internet (cf. Gsohn 2014). Above all the flexibility of the program choice inspires the users according to the [deals.com](#) survey. Also the comfort not to have to leave the house or the flat, differently than with the video-tape library or a visit to the cinema, persuades every fourth. With the choice of a suitable supplier a big choice for 83% in films and series is decisive. A high image quality and sound quality is also vital for the choice of a supplier. Of course the price and the payment also plays an important and crucial role. For 52% of the interviewees is the payment model with a flatrate, monthly base fee and a term of notice to most popular ones. Pay-per-View is clearly more unpopular there.

If the above mentioned claims of the users are fulfilled, the users are willingness to pay approx. ten euros monthly for a video streaming service. According to the study from [deals.com](#) three of ten users hold the current offers, however, still for too expensive. The consequence and the problem are present that thereby regularly free and unlawful video streaming services are used.

By video streaming services the television habits of the consumers change, because they themselves can decide, when and where they would like to see news, films or series. 59% of the interviewees from the Bitkom survey say that they must not put under pressure themselves any more timewise to connect on time to too certain consignments. Even with live transmissions more than 37% place on the Internet, instead of on the classical television.

Streaming services are to be used for the user obviously comfortably—always and everywhere access to the favorite music or the favorite film. Digital entertainment on call was the logical next step of the digitization. Amazon has begun a music streaming service for “prime-customers” in the USA. Apple has taken over the company beats. Not only, however, earphones, but also own streaming service belong to beats. Apple Music, the music streaming service, can already also refer to success in the market. Netflix is international on the advance. Also Sony shows with the Playstation 4 how they can bring films as well as music on the monitor. SevenOneSat1 has melted Ampya as a music portal with a corporation of a French competitor. Also discount shops like Aldi try to enter together with streaming suppliers into this competition.

6.2 Business Model at the Example Spotify

The music industry is always valid as an example of an industry coming down by the digitization, however, meanwhile the turnover pulls again—not least also because of streaming. The turnover this year growth by 4.4% on 686 million euros. Besides, the streaming area has increased about 87.4% (cf. Schesswendter 2015). However, the

musicians themselves profit only partly from the success of the streaming area. With the streaming service Spotify the user pays 9.99 euros in the month to be able to listen music always and everywhere. According to Ernst & Young who more exactly broke down the business model the musicians receive 68 cents per month subscription. Spotify itself also receives only 21%, that is 2.08 euros. The great earners in this business model are the disk labels, these receive 73%, so 6.24 euros per subscription. The music industry remains after deductions to script writer and songwriter 46% of the 9.99 euros, so 4.56 euros (cf. Grimm 2015). In accordance with the music industry only 5% is left from the profit, because still expenses come for studios, sound engineers, marketing and distribution. However, the 68 cents of the musicians are a pure profit. However, it is not considered the expenses of the musicians and artists (expenses for instruments or lease by test rooms).

6.3 *Potential*

The potential of the music streaming is high and an increasing market, indeed, the problems lie obviously still in the pricing. According to a study of PricewaterhouseCoopers every second consumer in Germany is not ready to spend money for music streaming. Though the younger users would pay for music transference from the net, indeed, the prize images clearly lie under the rates of the today's suppliers. Just 30% of the interviewees would be economical up to three euros monthly for music streaming. Because at the moment, however, all big suppliers appear in this market as a competitor, a clear prize reduction would be to be accepted as a consequence. Forecasts assume from the fact that the turnovers with music streaming will rise in 2019 on 426 million euros. With these revenues from the digital distribution the losses would be compensated in the business with the physical sound carriers roughly. Also the video streaming will increase in close future and edge out thus the linear television more and more. Not to have to put under pressure on account of the flexibility, itself any more timewise, to sit at a certain time before the TV, 33% of the video streaming users substitute meanwhile already for the television with streaming. According to a Bitkom-study 18% of the interviewees can introduce themselves to renounce in future completely the classical television (cf. Gsohn 2014). In particular the youngsters who use smartphones and tabloids daily, not only to communicate with friends, but above all also around web series to stream, will not use the classical television in future any more. Television does not look any more hip and is obviously dull. Today these are the Youtube stars to whom teenagers appeal. With it the television broadcasting stations lose an important and advertising-relevant target group: The 14 to 49-year-old. Thereby it comes not only to numbers of spectators to be sunk, but above all also to advertising losses.

The classical television broadcasting stations become in future probably pure entertainment transmitters or they must focus themselves on the qualitatively high-quality distribution of information. The transmitters must rethink, because they cannot provide any more for a unique film experience and standard experience.

Hence, primarily entertainment programs are offered like reality shows or casting shows to be able to reach these target groups at the market.

7 Result

The implementation makes clear that above all the media industry must position itself sooner or later to the digital transformation. However, a dull digitization of the existing processes, products and services does not reach from to be able to contrast with competitors. The company must order of a clear vision and a lasting strategy how they want to use the digitization for the increase of the efficiency and generation of new business models.

This also contains of course that a company must be more agile much to be able to adapt itself faster and more adaptably to the steady change. These changes are mostly based on the demands of the customers or recipient to whom a company must appear. Trends are lighter recognized by the nearness of the customer or recipient and the connection to the company, as well as the trust is strengthened.

The last determining factor is the creative side jump at the example of Google. This indicates to think industry-covering, to look after the edge of the plate and to use possible potentials. Therefore, the digital transformation is no key to the success, but a way to a successful company.

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Part II

Broadcasting

The Implications of Programmatic Advertising on the Business Model of TV Broadcasters



Henrik Jensen and Kristian J. Sund

Abstract Technological changes produced by the digital convergence are driving a paradigm shift in advertising and mass communication, and resulting in the emergence of a new market. Programmatic advertising is, in this context, an emergent technology that has the potential to disrupt and change the business model of incumbent media companies, such as television broadcasters. As the technology is new, we know little about the effects it will have on actors in the sector, and the definition of the programmatic TV construct is still evolving. We present the results of a predictive study of the business model implications of this new technology. Based on a combination of interviews, documentary content analysis, and the Delphi method, involving a range of industry executives, we identify 13 implications for the business model of TV broadcasters. Our findings offer a way for academia and actors in the media industry to understand the coming disruption from programmatic TV.

1 Introduction

Programmatic advertising, defined generally as “an automated, technology-driven method of buying, selling or fulfilling advertising” (American Association of Advertising Agencies 2015, p. 6), is a relatively new instrument within media and advertising in general that has the potential to disrupt the business models of the various actors in the media industry (Busch 2015). Tasks traditionally performed by human actors can be automated using programmatic solutions, and in this sense, programmatic has the characteristics of a production technology that could alter the business models of actors in the industry. In the traditional business model, advertising space is bought and sold by human actors as insertions in a media (magazines, television, and so forth) that will reach and expose a given audience to a general message. With programmatic advertising, each individual in a

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given audience can be reached, bought, and sold independently and separately from other media users (Kosorin 2016). Advertisers can target each customer with a tailored sales message with minimal human overhead costs. This technology has created a new emergent media market, that some media players are adapting their existing business models, or inventing new ones, to enter, thereby leading to media entrepreneurship (Khajeheian 2017).

The literature on advertising agrees that a paradigm shift in advertising has occurred online (Campos-Freire 2013; Cappo 2003; Nail 2013; Perez-Latre 2007). For TV broadcasters, programmatic technology represents the next disruption with the potential to change the way advertisement space is sold to advertisers and is presented to the wider society. Traditional media, such as television broadcasters, will see their businesses affected by this new technology, but exactly how remains somewhat speculative in industry reports, and we have found no academic studies examining this question.

The business model construct can help us investigate how technological changes affect an industry and its actors (Lambert and Davidson 2013). A business model describes the key components of a business (Hedman and Kalling 2003), one of the most cited frameworks being the business model canvas suggested by Osterwalder and Pigneur (2010). Examining how a technological change affects each business model component separately yields a holistic picture of the impact of that change on the business. Although many media will be affected by programmatic advertising, and have the opportunity to enter this emerging market as buyers or sellers, each media is likely to act differently with respect to the programmatic construct (Mediacom 2015). In this paper we will focus primarily on television (TV), although we recognize that some findings and discussions could be applicable more broadly. One criticism of programmatic technology as applied to TV is the uncertainty surrounding the definition of the construct and its effects (DataXu 2015; Experian 2015; SpotXchange 2015; Tradedesk 2016). Here, a business model approach can help sharpen the definition.

In this paper, we therefore explore the construct of programmatic TV and propose a methodology for understanding how programmatic TV will affect the business model of TV broadcasters, based on the perceptions of experts. Using a combination of a content analysis of industry reports and a subsequent Delphi study of a group of six industry experts, we explore what programmatic TV is, some features of the emerging programmatic market, and how programmatic advertising will affect the business model of TV broadcasters. By applying such a mixed method we achieve some degree of triangulation, increasingly seen as a necessity for studies using managers as informants (Molina-Azorin et al. 2017; Hodgkinson et al. 2017). We find that the experts agree that the influence of media agencies will decrease, as new partnerships will emerge between TV broadcasters, technology partners, data suppliers, and TV platform owners. The value proposition for TV broadcasters will still be to deliver great content that can attract audiences, but the core proposition will be more screen agnostic, as content is delivered on multiple platforms such as streaming video.

2 Programmatic TV Technology and Business Model Change

Convergence in digital physical devices has changed media consumption patterns. For television, this means that audiences increasingly view TV programs and TV content on new and additional devices as a supplement to the traditional TV set (Jenkins 2008), such as mobile telephones, or tablets. A review of whitepapers reveals that the technology is still evolving, and that there is some confusion among industry actors as to the benefits and opportunities programmatic TV offers, but a new market is emerging around the technology (DataXu 2015, p. 2). According to Khajeheian (2017) new media markets typically emerge due to changes in technology, consumption habits, societal patterns, laws and regulations, social demands, or values. The programmatic technology offers researchers an opportunity to examine how such a technology shapes the emergence of such a new media market, and how existing players in parallel markets adapt their business models to meet the demands of the new market. It also offers the possibility to examine how new market players can emerge (Jensen and Sund 2017).

2.1 *The Development of Programmatic*

The technology itself finds its roots in the 2000s in the lower end of the online display ad inventory (Gonzalvez-Cabañas and Mochón 2016) or what can be called lower value banner advertisement. Firms like Google and Facebook have been instrumental in creating this early disruption online (Klopfenstein 2011; Young 2014). Gradually, what was to become programmatic advertisement moved towards other types of display advertising, and around two-thirds of the online advertisement market was traded programmatically by 2016 (Wideorbit 2016). Programmatic advertising is now evolving into new formats and media, such as television broadcasting and streaming. The advertising expenditure on programmatic TV was nonexistent in 2014, but is estimated to reach 5% of the TV advertising expenditure globally by 2019, with the United States as the leading market (IDC 2015). This happens as TV broadcasters increasingly move their business from standard programming and broadcasting towards more program-centric and screen agnostic models, involving streaming via websites and apps.

TV viewing is traditionally measured as panel data, with a representative sample of the audience. TV advertising is then bought and sold based on age and gender demographics that are approximated for each program and time slot based on data from the sample. However, TV consumption is fragmenting and moving online, which is a challenge to the value of TV meter panel measurements (Napoli 2011). With this in mind, programmatic TV as a technology promises to deliver more advanced audience data than the traditional age and gender demographics (DataXu 2015; Doubleclick 2015; Experian 2015; IDC 2015; Ogilvy 2015; Tradedesk 2016; TubeMogul 2015; WideOrbit 2016). Table 1 provides a framework for programmatic

Table 1 Typology of programmatic TV advertising

Programmatic TV advertising framework		How much additional audience data is available?			
		Traditional TV	More automated TV	More targeted TV	Addressable TV
How is TV content viewed?	Traditional linear	Traditional TV advertising			
	Linear simulcast				
	Non-linear short-form				
	Non-linear long-form				

TV advertisement types or strategic positions. The first dimension in this framework is data availability. According to the data and analytics company DataXu (2015), there are three potential levels of availability:

1. *No additional audience data is available.* Measurement is based on age and gender from the TV panel. This cluster can be characterized as traditional TV advertising, where the same ad is shown to all viewers of the TV content. For this type, programmatic technology may help automate some previously manual tasks (DataXu 2015). We label this cluster “more Automated TV” advertising.
2. *Some additional audience data is available.* Internet-based devices and connected TVs add limited data on the specific viewer. Consequently, it is possible to show different ads to different groups of viewers of the same TV content. An example could be different types of travel advertisements depending on the weather conditions for the audience. We label this cluster “more Targeted TV”.
3. *Advanced additional audience data is available.* In this cluster, more detailed data on the specific individual or household is available. Different ads for each individual or household become possible in this cluster. We label this cluster “Addressable TV”.

The other dimension of the evolving programmatic TV definition is how viewers engage with television content. Previously, viewers watched programs at a specific time on a given TV set, which is referred to as linear viewing. The traditional viewing of television is linear but linear can also be transmitted as simulcast, i.e. the linear signal is transmitted to non-traditional devices. The consequence of digital convergence is the concept of “TV everywhere” (DataXu 2015, p. 8; Experian 2015, p. 5; TubeMogul 2015, p. 3). Viewers can now watch programs on demand, on multiple devices, which is referred to as non-linear or time-shifted viewing (DataXu 2015). Non-linear viewing can be divided into short-form or long-form. Table 1 provides a framework for programmatic TV advertising and identifies 15 new types of TV advertisements compared to traditional TV advertising. Each of the 15 new types of TV advertisements represents a strategic option for TV

broadcasters and their business model. Linear online TV viewing or simulcast is still limited, while non-linear (on demand) TV viewing is growing on devices such as computers, tablets, mobile phones, and so forth (IDC 2015). Consequently, targeted TV and addressable TV are, at this stage, an opportunity primarily within non-linear TV viewing. However, the increasing penetration of smart TVs and internet-based set-top boxes, such as Apple TV or Google Chromecast, will eventually add additional audience data to linear TV viewing.

2.2 Business Model as a Unit of Analysis

A business model describes the key components of a business that form the recipe of how the business creates and appropriates value (Hedman and Kalling 2003). The most cited list of components comes from the business model canvas developed by Osterwalder and Pigneur (2010). They described nine components or building blocks: customer segments, value proposition, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure. While the canvas has mainly been very popular as a practical framework for managers to think about their business, it has also been used as a framework for describing business models in the media industry (Chesbrough 2010; Peters et al. 2013).

Successful firms adapt their business models over time in response to changes in the external environment, such as external technological developments (Giesen et al. 2010; Pohle and Chapman 2006). Such adaptations can be incremental or a more radical switch from one model to another (Santos et al. 2015). Similarly, programmatic advertising can result in both adaptations of the existing business models and the creation of new ones (de Reuver et al. 2009). A change in business model alters the core logic of the organization (Linder and Cantrell 2000). The literature suggests that this change can be a slow process (Kaplan 2012; Markides 2013; Sosna et al. 2010), which is theorized to consist of three stages: business model innovation awareness, business model exploration, and business model exploitation (Bogers et al. 2015; Jensen and Sund 2017; Sund et al. 2016). Experiments with programmatic TV started in the US in 2014 (IDC 2015). We are thus in the early stages of change, where various components of the business model may be the subject of change and innovation (Jensen and Sund 2017).

We can assume that programmatic TV will alter both the incumbent business models and the distribution of value creation and appropriation among the various actors in the TV industry. Furthermore, a new technology like programmatic TV is likely to affect actors such as TV broadcasters in more than one way. To provide a holistic view of the effects of such a technology, we can examine how it affects each component of the business model individually. Our central premise in this paper is therefore that the business model construct provides a useful unit of analysis to predict how a technological disruption will affect an industry and its actors.

3 Context and Methodology

Although this study does not rigorously examine the ecosystem, it is useful to comment on the TV ecosystem, as it is changing rapidly. Key actors within TV advertising are (1) the advertisers, who use (2) media agencies to do their planning and buying of audiences, from (3) TV broadcasters. The media agency is the buyer, while the advertiser is the user of the audience (Ots 2009). For TV broadcasters, viewers are at the heart of the business model, paying for subscriptions and creating an opportunity for broadcasters to sell access to an audience to advertisers (Küng 2008). Historically, private sector TV broadcasters have been mostly dependent on revenue from advertising (Picard 2011), but they now have to share the market with new entrants such as Google, YouTube, Facebook, and Netflix. The move from linear to non-linear TV consumption is allowing these and other technology players to enter the TV advertising sector, and many of them have experience in programmatic advertising from display advertising (Winslow 2014).

The emerging market for programmatic advertising consists of two sides: a buy side and a sell side. On the buying side are advertisers, and on the selling side are media owners. Buyers use demand-side platforms (DSPs), and sellers offer their inventory via supply-side platforms (SSPs). Technology and data are central for both types of platforms. A DSP is the gateway to the programmatic world for advertisers, and they can handle this programmatic advertising in-house, via media agencies, or via independent DSP providers. A SSP makes it possible to sell advertising inventory in a programmatic way. The SSP connects media owners to the potential buyers' demand platforms. SSPs are designed to maximize yield using more or less sophisticated rules and algorithms. Pricing is set via auction, direct deals, or other transaction methods. The third construct in the ecosystem is a Data Management Platform (DMP). It is a platform used to collect, store, classify, analyze, and manage large quantities of data from various sources. DMPs are used by publishers, advertisers, and agencies. For publishers, it makes data-enriched inventory more valuable. Agencies can use DMPs to manage data from client campaigns. For advertisers, DMPs can make data actionable across a wide range of channels. The industry consists of a long range of technology providers that previously specialized in one area of the ecosystem, but now increasingly provide services in more areas of the ecosystem (Busch 2015; Kosorin 2016).

3.1 Methodology

We wanted to explore some features of the emerging programmatic market, with a focus on the future impact of programmatic technology on TV broadcasters. Given that this technology is still in its infancy, and that we need to make inferences about the future, we decided to adopt a modified Delphi method for a more systematic collection and aggregation of expert judgments (Armstrong 2001; Rowe and Wright 2001).

Table 2 Research design

Phase	What?	How?	Source?	When?
1	Available secondary data on programmatic TV advertising	Literature review	Whitepapers from technology companies and agencies. Trade magazine articles and consultancy reports	Q1 2016
2	Expert interviews	Loosely structured personal and telephone interviews around programmatic TV as a disruption	Three from media agencies Two from Discovery One from technology company	Q2 2016
3	Content analysis of 12 documents	Coding into the nine building blocks from the business model canvas	See Table 2	Q3 2016
4	Delphi round 1 Experts interviews	Semi-structured personal and telephone interviews based on the 16 implications identified in phase three	Two from media agencies Two from Discovery Two from technology companies	Q3 2016
5	Delphi round 2 Expert interviews	Follow up survey based on the revised implications from phase four	Same respondents as phase four	Q3 2016

However, rather than ask very general questions, we used the business model components as a structuring framework. The research design involved five phases. Table 2 outlines them. The first was a general search for and review of the available articles from trade magazines, consultancy reports, and whitepapers (primarily from technology companies). This served to identify the relevant terminology to prepare for the subsequent phases.

The second phase was a series of exploratory expert interviews conducted in person or via telephone. Guidelines for the Delphi method include the usage of more than five heterogeneous experts with appropriate domain knowledge (Rowe and Wright 2001). There are few thought leaders with knowledge of the specific implications of programmatic TV. We managed to identify six initial experts in collaboration with the relevant managers at Discovery Networks, who supported this research. The experts were executives from media agencies (three), Discovery (two), and technology providers (one). The question asked was how programmatic advertising will affect the business model of the different TV actors. We also asked the experts to pinpoint further relevant industry reports for analysis. For this phase, the purpose was to ensure that we included the most relevant industry reports, as perceived by the experts, in our documentary analysis and to formulate the initial terminology and implications inductively. This helped us to conduct the subsequent content analysis.

In phase three, we conducted a more detailed content analysis on 12 industry reports identified in the previous phases, which are listed in Table 3. The majority of them came from the review in the first phase, but a few were chosen because the

Table 3 Documents consulted in the analysis

Publisher	Title	Data sources
IDC	Programmatic TV advertising: Bigger than RTB by 2019	Interviews with 62 industry executives
DataXu	The rapid rise of programmatic television	Interviews with unknown number of thought leaders
WideOrbit	The power and potential of programmatic TV	Interviews with senior media decision makers
Experian	Addressable TV—harness the power of audience data for one-to-one targeting	Quotes from industry experts
Ogilvy	Programmatic TV: from linear to digital	Thirty references from articles in press and trade magazines, consultancy reports, whitepapers, blogposts
doubleclick	The promise of programmatic TV	Authored by two experts from Google and doubleclick
Mediacom	The programmatic future of TV	Authored by two experts from Mediacom (agency)
OOYOLA	State of the broadcast industry 2016	Quotes from industry experts
TubeMogul	An advertisers guide to programmatic TV	Not known
Tradedesk	Programmatic: The future of television	Survey with 425 respondents from agencies, advertisers and media companies
spotXchange	A programmatic TV guide for sellers part 1–4	Not known
RBC capital markets	Dynamic ad insertion and programmatic—thoughts from the channels	Interviews with “leading industry players”

interviewees pointed to them. A content analysis depends largely on document selection (Bryman 2012). As programmatic TV is a recent and evolving construct, all 12 documents in the sample are from 2015 or 2016. Some of these documents were themselves reports of previous studies examining the impact of programmatic TV using surveys or interviews. As such, our content analysis of these documents provides a type of meta-analysis.

We conducted a deductive thematic content analysis of the 12 chosen documents, based on the nine building blocks in the business model canvas. We coded over a short period to ensure reliability (Bryman 2012). For each of the 12 documents, the relevant content was color coded into each of the nine building blocks, and excerpts were transferred to an Excel file. Figure 1 illustrates some examples. For each building block, we then clustered the implications based on the frequency of appearance. If an implication had a frequency of four or more (i.e., appeared in four or more reports), it was included in the results. The analysis identified 16 initial implications for the business model for TV broadcasters.

In phase four, we applied a modified Delphi method. We conducted semi-structured interviews with an expert panel. The panel consisted of six respondents from Discovery (2), agencies (2), and technology providers (2), three of whom were

Case #	1
Title	Programmatic TV advertising: Bigger than RTB by 2019
Category	Primary
Document type	Report
Publisher	IDC
Publisher type	Research company
Launch date	August 2015
Sources	62 interviews
How will programmatic TV advertising affect the building blocks?	
Customer Segments	Improves return on advertising spending for advertisers <ul style="list-style-type: none"> • Better targeting opportunities • Easy-to-use interface integrating and simplifying their workflow
Value proposition	TV is a multisided business model platform. Viewing will change. This will make TV advertising more effective “Capabilities of traditional TV targeting as if it was the web in 1995” “With programmatic TV it’s a little like instead of your old glasses, you now have new glasses and see everything crisp and clear” (p. 17) Reach viewers everywhere and create scale. Programmatic TV makes this job easier. “No other media can offer the massive reach of TV”. Lift KPIs four times that of other media

Fig. 1 Extract (example) from coding document

in the panel in phase one. We chose to replace one media agency expert with a technology provider in order to have a balanced view between the three types of actors. We changed two additional panel members because they became unavailable. These changes do not affect the methodology in any way. The basis for the selection of all members was their knowledge of programmatic TV and the TV business model, as well as their availability. We decided not to include advertisers. This decision was made because the experts in phase two indicated that advertisers have limited knowledge of programmatic TV and the TV business model. The respondents work out of London (2), Copenhagen (2), and Stockholm (2). The 16 initial implications were sent to the respondents prior to the interview with instructions to reflect on their agreement with each of them and their wording, and on whether any implications were missing. We then conducted, recorded, and transcribed structured interviews with each expert, half in person and half by telephone, following this structure.

Based on the interviews in phase four, we reviewed and altered the implications, taking account of the perceptions of our experts. Two implications were removed due to the experts’ agreement that they were not relevant, and two new ones were added. In phase five, a revised version of the implications was sent to the respondents via an e-mail-based survey, prompting them for their level of agreement measured on a 5-point Likert scale and an assessment of whether the implications would occur in the short or long term. Again, there was the option of changing the wording or suggesting new implications. This time, the experts suggested no further changes. We therefore chose to stop the Delphi rounds at this stage, concluding that the primary implications would be those for which there was high agreement from all the experts. Implications with which only some experts agreed were labeled secondary implications.

4 Commented Results

The results section is divided into two parts. First, we present the expected effects on the TV broadcasters' business model as derived from the content analysis. In the second part, we present the revised implications derived from the Delphi method, indicating the perceptions of our panel of programmatic TV experts. We continue to use the business model components of Osterwalder and Pigneur (2010) to structure our presentation.

4.1 *Implications from the Content Analysis*

Table 4 outlines the implications derived from our content analysis. They have been grouped according to the nine building blocks. We will comment on each building block individually. Next, we will address the business model change in more general terms and discuss the corresponding barriers identified in the content analysis.

4.1.1 Customer Segments

As the actual segmentation and decisions about what segments to serve are individual to each broadcaster, we focus here on the more general implications for customers that we could find in the documents analyzed. Programmatic TV has the potential to improve advertising effectiveness, and thus, the value creation and capturing for advertisers. According to two of the studies we examined, a range of cases on programmatic TV have shown positive results in terms of efficiency (DataXu 2015; WideOrbit 2016). Furthermore, surveys confirm a growing appetite for testing programmatic TV among advertisers (Tradedesk 2016). The single most important advantage for advertisers is the improvement in targeting opportunities. According to some of the documents, this will also make commercial messages more relevant for consumers. Better opportunities for analyzing and reporting advertising across multiple media insertions are also considered a significant advantage for advertisers. TV advertising today requires long-term planning. Programmatic TV improves the opportunity to act in the short term.

4.1.2 Value Proposition

As discussed previously in this paper, non-linear viewing is growing. Programmatic TV bridges digital and traditional TV, and is considered screen agnostic. One report quoted an executive as saying: "I don't care where you watch our shows. We just want

Table 4 Implications derived from industry reports

	Frequency
<i>Implications for customer segments</i>	
1. The improved targeting opportunities are the most important advantage for advertisers	12
2. Programmatic TV will give advertisers better opportunities for analyzing advertising across multiple media	9
3. Programmatic TV will give advertisers better opportunities for planning advertising closer to real-time	6
4. Programmatic TV will improve advertising effectiveness for advertisers	4
<i>Implications for value propositions</i>	
5. Programmatic TV will redefine the value proposition for TV broadcasters into a more screen agnostic and video centric proposition	8
6. Programmatic TV will secure TV's position as the most effective media (<i>subsequently removed</i>)	5
<i>Implication for the customer relationship</i>	
7. TV must reinvent itself to stay relevant in the programmatic ecosystem	6
<i>Implications for channels</i>	
8. Selling and buying of TV advertising will be a more automated process	8
9. Media agencies and programmatic TV technology specialists will capture more value	4
<i>Implications for revenue streams</i>	
10. TV broadcasters will sell impressions instead of GRPs	10
11. TV advertising will be sold and bought in the same way as any other programmatic inventory (<i>subsequently removed</i>)	7
<i>Implication for key resources</i>	
12. TV advertising sales organizations will be restructured and have much more programmatic ecosystem capabilities	5
<i>Implication for key activities</i>	
13. The key activity for TV broadcasters will be to sell screen agnostic and data-enriched audiences	4
<i>Implication for key partnerships</i>	
14. The key partners for TV broadcasters will be programmatic technology partners and media agencies	5
<i>Implication for cost structure</i>	
15. The cost structure for TV broadcasters will be less manual and more technology and data-driven	4
<i>Implication for the general business model</i>	
16. Programmatic TV will fundamentally transform the business model for TV advertising	4

it to get counted and we want to get paid appropriately” (SpotXchange 2015, p. 5, III). A number of the reports analyzed indicated a view that programmatic TV will be a way for TV broadcasters to secure a position as the most effective media, combining content creation and broadcasting.

4.1.3 Customer Relationship

The business model for TV advertising has not changed for several decades and is considered “old fashioned” in the reports examined. Despite the benefits of reach and scale, TV must reinvent itself to stay relevant in the ever-evolving programmatic ecosystem. From the content analysis, the perception that “everything eventually will be programmatic” arises. This was stated in several of the reports we analyzed, as well as by our initial interviewees, suggesting that TV broadcasters must reinvent themselves in terms of how they deal with advertisers.

4.1.4 Channels

Media agencies buy more than 95% of all TV advertising on behalf of advertisers (Experian 2015). Very little advertising space is sold directly to the advertisers. Advertisers need a data aggregator that can bring programmatic to life. The key role is to create “actionable insights at the transaction level” (IDC 2015, p. 17). As one report stated, “agencies continue to dominate when it comes to the primary responsibility for buying programmatic TV/video advertising, with 84% of agency respondents claiming this role” (Tradedesk 2016, p. 3). Agencies will continue to invest in technology and programmatic capabilities in order to capture more value. The investors behind the programmatic technology providers have the same ambition, i.e., to “look for increased consolidation in the advertising industry as a response to all this convergence” (OOYALA 2016, p.10).

4.1.5 Revenue Streams

The trading of TV airtime is based on the viewing measured in the TV meter panels. The currency is Gross Rating Points (GRPs). The increasing media fragmentation creates the need for more and more commercial breaks, with lower ratings in the existing currency. Broadcasters aim to capture value, and thus, to get the most value out of their inventory. However, some commercials may have a rating as low as zero percent, and thus, no commercial value for the broadcaster with the existing currency. Programmatic TV, with all its data enrichments, will create a more valuable inventory from advanced audience data compared to the existing TV meter. As one report stated, “you have to tap into inventory that’s typically been deemed low value simply because it hasn’t been measured” (Tradedesk 2016, p. 7).

The inventory will be more individually “addressable,” and sales will become auction-based and closer to real-time.

4.1.6 Key Resources and Key Activities

TV broadcasters like Discovery sell their airtime inventory via manual sales forces. Broadcast selling will be a much more automated process, and thus, will create operational efficiency gains in the selling and buying interaction. The reports we examined held that all media will eventually be bought via the principles of programmatic (Mediacom 2015). On the other hand, producing premium TV content such as big sports events requires significant investments and will still include a significant amount of manual negotiations. One report stated that “the marketplace has shown that data is overwhelmingly the future” (OOYALA 2016, p. 9).

Broadcasters will have to develop their data capabilities. This means that more work flow automation capabilities need to be purchased or developed. As a consequence, the advertising sales organizations will undergo a restructuring. Joint ventures with and acquisitions of technology companies with programmatic capabilities are already taking place. The key activity for broadcasters will increasingly be to collect and sell screen agnostic data based on impressions. One report called this “big data comes to linear TV” (WideOrbit 2016, p. 4). The activity will not only be automated, but simplified as well; as one report stated: “If it is coming through the internet there is a way to stitch it together” (Tradedesk 2016, p. 8).

4.1.7 Key Partnerships

The various actors in the TV broadcaster business model will increasingly rely on programmatic technology partners. Vendors stand to gain by providing the infrastructure (IDC 2015). Media agencies are investing in programmatic capabilities, and the existing vendors of TV-meter data are also transforming more into programmatic technology partners. Mergers and acquisitions between vendors are predicted (Tradedesk 2016).

4.1.8 Cost Structure

The selling and buying of broadcasting is a manually consuming process. Broadcasters will experience cost reductions through a more automated and less manual workflow. Cost of sales in terms of labor will therefore decline compared to today. The investment in programmatic TV, however, requires some capital investments in data and data capabilities. Only 10% of the value capturing from programmatic is estimated to arise from cost reductions according to one report (IDC 2015).

4.1.9 The Business Model Overall

Finally, in a few of the reports we examined, we found a general statement that the business model of advertisement-funded TV broadcasters will transform. One report cited an expert as saying: “I am convinced that there is no path forward for TV that does not include the large scale-scale application of programmatic technology” (IDC 2015, p. 26). In fact, programmatic TV will transform the business model for all the actors in the TV industry.

4.2 *Implications from the Expert Panel*

The content analysis identified 16 business model implications from programmatic TV. The results from the first Delphi round with six experts showed that the experts agreed fully with only six of the implications. Three of the implications required minor adjustments in the wording, while five of the implications needed a major adjustment of the wording. The experts disagreed with two of the implications, and two new implications were added to the list. The ones removed were implications 6 and 11, as indicated in Table 4. The two new implications address the role of content for a successful business model change and consolidation among the existing actors and the programmatic TV technology specialists. These new implications are found in Table 5. It was possible to identify common ground for agreement and disagreement across the six experts. However, the two experts with a background as TV broadcasters were the least convinced about an overall transformation in the short term, while the programmatic TV technology specialists were the most positive. The media agencies were in the middle of the two.

The results from the second round of the Delphi survey with the six programmatic TV experts are found in Table 6. This round revealed a high level of agreement about six of the implications, which we have labeled as the “primary” implications. These were the implications with which each expert either agreed or highly agreed. A further seven implications were labeled as “secondary”. These were the implications with which all the experts either agreed or highly agreed, but with which one expert said they only somewhat agreed. The rest of the initial implications were entirely dropped, as it was deemed that the level of disagreement was high enough to suggest that they were not valid representations of the shared perceptions of this group of experts, and a consensus would be hard to reach. Table 6 also reports on whether each implication was seen to be a short-term (less than 3 years) or long-term (3 years or more) implication.

Table 5 New implications added in the First Delphi round

Additional implications	Frequency
Successful TV broadcasters will still be those who can attract audiences via great content	Mentioned by 2 out of 6
Consolidation will happen, not only between programmatic TV technology specialists but also between programmatic TV technology specialists and TV broadcaster and agencies	Mentioned by 4 out of 6

Table 6 Implications after second Delphi round

	Short term (<3 years) (%)	Long term (3 years+) (%)	Don't know (%)
<i>Primary implications from Delphi</i>			
1. Programmatic TV will transform the business model for TV advertising	0	100	
2. Programmatic TV will improve advertising effectiveness for advertisers	17	83	
3. The improved targeting opportunities are an important advantage for advertisers	33	67	
4. TV broadcasters will continue to sell GRPs alongside impressions	33	50	17
5. Successful TV broadcasters will still be the those who can attract audiences via great content	50	33	17
6. An important activity for TV broadcasters will be to sell more screen agnostic and data enriched audiences	33	67	
<i>Secondary implications from Delphi</i>			
7. Programmatic TV will give advertisers better opportunities for executing advertising closer to real-time	17	83	
8. Programmatic TV will help TV broadcasters on the journey into a more screen agnostic and video centric value proposition	50	50	
9. Selling and buying of TV advertising will be a more automated process	0	100	
10. TV ad sales organisations will be restructured and have much more programmatic ecosystem capabilities	17	83	
11. The key partners for ad sales organisations within TV broadcasters will be programmatic TV technology partners, data suppliers, TV platform owners and media agencies	87	13	
12. Consolidation will happen. Not only between programmatic TV technology specialists but also between programmatic TV technology specialists and TV broadcaster and other actors	67	33	
13. The cost structure for TV broadcasters will be less manual and more technology and data driven	17	67	17

5 Discussion

Our results allow us to comment on how the nascent programmatic technology and market is likely to affect television broadcasters in the near future. In general terms, there was high agreement between our experts that programmatic TV will transform the business model for TV broadcasters in the long term. Five implications linked to the business model of TV broadcasters were identified as primary implications, while another seven still showed some disagreement after two rounds with our experts. Our experts' view that most of the implications will occur in the long term is consistent with the fact that the disruption is still in its early stages. The short-term implications focus on value proposition and key partnerships. The value proposition for TV broadcasters will still be to deliver great content that can attract audiences, but the core proposition will become more screen agnostic and video-centric.

In the short term, our experts saw a change in the external partnerships for TV broadcasters. For the advertisement sales activities within TV broadcasters, programmatic TV technology partners, data suppliers, TV platform owners, and media agencies will all be key partners. The first three partners are new compared to the existing business model for ad sales operations, while the fourth, media agencies, could well be challenged. According to our experts, industry consolidation centered on the new actor in the arena, the programmatic TV technology specialist, will start in the short term.

A positive interpretation of the long-term programmatic TV transformation is that viewers benefit from advertising that is more relevant; advertisers benefit from better advertising effectiveness; TV broadcasters benefit from an improved pricing of the inventory; and media agencies and technology providers benefit from making the transformation happen. A situation of improved value creation could be predicted for all involved. Our results suggest that TV broadcasters are concerned about whether this is the case. An area for future research would be the specific value capturing and value appropriation among the actors. Will new industry value be created, or will value (in terms of revenues and profits) simply be shifted from one actor to another?

Programmatic TV is, for now, an under-researched phenomenon. The programmatic technology in general is not limited to any particular geography, as the devices, software, apps, and databases that enable the collection and use of the big data underlying this technology are, by now, universally distributed around the world. Similarly, TV broadcasters funded by advertisement use a consistent business model globally. Thus, the results of our study could well be generalizable to all TV advertising markets worldwide. All media will eventually be part of the programmatic advertising ecosystem. Whether any of the findings can be transposed to other media, such as radio or newspapers, remains to be examined.

In this paper, we have documented how the Delphi method, combined with a content analysis with meta-analysis characteristics, can provide an assessment and predictions of the future implications for a given technological disruption. Instead

of looking backwards at a given technological disruption and the corresponding business model change process, in this paper, we have offered a method to look forward and predict the implications of a significant new technology. This technology gives the research community a unique opportunity to examine a technological and business model transformation as it is occurring.

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‘Datafying’ Broadcasting: Exploring the Role of Big Data and Its Implications for Competing in a Big Data-Driven TV Ecosystem



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Abstract The paper explores the relationship between the concept of “big data” and television broadcasting changing toward a Connected TV ecosystem. We start from the literature-based assumption that big data is a slippery and ambiguously used term and then discuss how the term is employed in different scholarly discourses to explain the changes concerning broadcast television. We infer that the big data phenomenon requires much closer attention to research in media economics in an attempt to advance our theoretical understanding beyond technological issues that server data, social media, rich customer databases and return path data can deliver. We find that analyses into big data can help understand both opportunities and threats of its use with regard to legacy broadcasters trying to add value of audience research in order to achieve competitive advantage. While asking how big data adds value to a broadcaster’s decision on corporate strategies in Connected TV is important, we remain skeptical as to what effectively is to be gleaned from “big data” when methodologies are not transparent and audiences are sold as mere data commodities to advertisers.

1 Introduction: Television in a State of Flux

Television is reaching yet another tipping point in its industry evolution. Driven by the dynamic evolution of information and communication technologies (ICTs), transformations provoked by the convergence between television broadcast and internet broadband allow for the boundary between traditional, linear television

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offerings and the internet based online video content to disappear (Murschetz 2015; also see Jenner 2016; Obrist et al. 2015).

Yet, the issues surrounding structural change in television broadcasting are far from straightforward. The underlying economics are highly complex, but their importance to all stakeholders is evident. The seminal question of who will own the television audience and control the user interface is still an open one (see Murschetz 2015).

One important consideration therein will be the role that traditional or “legacy” broadcasters—private free-to-air (such as Germany’s ProSiebenSat1), pay-TV operators such as *Sky*, public service broadcasters (such as ORF in Austria or ARD/ZDF in Germany), will play when being confronted with new competitors from outside the television industry, mainly by *Samsung*, *Amazon*, *Apple*, *Google*, and *Netflix* (Murschetz 2015). In fact, investments in service improvements and content wealth allow these new players to operate as new TV platform providers to displace TV industry incumbents and offer online video libraries with entire seasons of high-rated TV shows mostly produced by the big Hollywood studios (ibid.). Interestingly, these companies have their origins in completely different industries, like e-commerce, consumer electronics or rental services, with ties to different customer and user pools.

As it stands, it is expected that the traditional television broadcasting networks and their most popular channels can still deliver to large audiences in the future (Murschetz 2015). But, as viewing habits have shifted and digitization has blurred the boundaries between previously distinct access networks and technologies (in media, telecom, and computing), industry architectures and business models used within this converged media “ecosystem” or “environment” (Fuller 2005) are greatly challenged (Murschetz 2015, 2016). Media managers face the need to satisfy the changing expectations of the audiences and incorporate convergence into their competitive strategy portfolio to achieve both economies of scale and scope (Hacklin et al. 2013a; Murschetz 2015).

It is clear that these disruptions encompass issues of technological change and innovation, effects of the convergence on journalism and the newsroom, effects on the industry structure and the competitive behaviour of broadcasters and their new rivals from outside the industry, the ever-more-important changes in audience structures and behaviours, and the creation of public policies to protect consumers (Murschetz 2015; see also Chan-Olmsted and Kang 2003; Doyle 2010; Hacklin 2008; Hacklin et al. 2013a, b; Kind et al. 2009; Wirth 2006).

Certainly, “Connected TV”, sometimes referred to as Smart TV or Hybrid TV, is the new buzzword in home entertainment, includes a wide range of technical solutions that bring linear TV and the internet world together (European Parliament 2013). TV sets are with added Internet connectivity, set-top boxes delivering audiovisual content “over-the-top” (OTT), connections are offered to social media and networking services (“Social TV”), and viewers have the ability to interact with gestures and voice commands or use multiple screens (“Multiscreen-TV”) for audiovisual communication, etc. (Murschetz 2015).

At the most basic level, viral phenomena such as rating, sharing, liking, retweeting, and other forms of structured and unstructured data sourced from Connected TV platforms, and their affiliated social TV media have created a dialog among programmers, distributors, and broadcasters—and even between artists and the audiences they desire to reach. This represents a huge potential data source for identifying demand through market research (provided that viewers have consented to their data being tracked, saved, and analysed), albeit one that is substantially unmediated and requires intensive processing, analysis, and integration with other data streams to yield meaningful insights. Reed Hastings, CEO and founder of Netflix, for instance, builds business decisions on “informed intuition”, i.e., the combination of big data and gut decisions (Ferenstein 2016).

However, not all is rosy. Most of these advantages have major strings attached. For instance, when *Samsung*—the consumer electronics giant and leading provider of Connected TV services—announced that a viewer’s personal conversations would be recorded by the device’s microphone, it became clear that not only privacy fears were real. Rather, Connected TV is to be associated not only with latest technology, new content wealth, and audience gratifications, but also with underlying industrial strategies of broadcasters collecting mountains of data with powerful and sophisticated analytics tools about their users and audiences. This is to gain competitive advantage in the ever more competitive environment. At the heart of this dilemma—and this is our main issue in this chapter—lies the question of what is to be gleaned from these “big data” repositories that are currently established and curated by broadcasters.

Big data—also called the “next frontier” for innovation (McKinsey 2011) in many industries—is an umbrella term for a variety of strategies and tactics that involve massive data sets, and technologies that make sense out of these mindboggling realms of data. As for the media, Stone (2014) put it succinctly: “The Big Data trend has impacted all industries, including the media industry, as new technologies are being developed to automate and simplify the process of data analysis, and as throngs of data analysts are being trained and hired to meet the demand for the analysis of these data.” (p. 2) Yet, the industry can be dramatically reshaped by the insights big data has to offer. Broadcasters, content curators and advertisers can utilize this information and make predictions that will fundamentally change business models and revenue streams (Altimeter 2014; Gfk 2015; McGrath 2013), and, notably, whether this provides a benefit for the audiences or not.

In this chapter, we explore the role of big data and its implications for strategic management of broadcasters and their data-driven corporate strategies to interact with audiences in the emerging Connected TV ecosystem. We argue that the claim that big data is a driving mechanism of media convergence requires much closer scholarly attention to research in media economics at large. Although we identify big data as a core dimension of media convergence, we have scant insight into the conditions in which it is likely to be *economically* consequential for broadcast TV and—even more importantly—for television audiences. We are convinced that media economics can deliver new insights to this to avoid cognitive blind spots and managerial misdiagnosis. Hence, to advance our theoretical understanding of

how big data adds economic value to a broadcaster's convergence strategies, we believe that further research into big data needs to stand the test of contextualization with respect to analyses in media economics.

Second, we also believe that Connected TV delivers a good example for industrial convergence in broadcasting in which we see both established media trying to capture market space and the rise of digitally based companies such as *Amazon*, *Apple*, and *Google* and others as significant content and service providers diversifying into and attacking the traditional TV domain.

Consequently, the primary purpose here is to explore the extent to which analyses into big data can help understand both opportunities and threats of its use with regard to legacy broadcasters trying to make the most of it in order to achieve competitive advantage through product differentiation and audience engagement techniques. In particular, this situation offers an opportunity to examine the strategic efforts of broadcasters by means of big data strategies in order to prevent competitive displacement, thereby reducing the pressure of direct competition from identical products or close substitutes from the new entrants in Connected TV such as *Samsung*, *Netflix* and others (Bakos 1991; Dimmick 2002; Dimmick et al. 2004).

As for methodology, we have reviewed the most topical literature on the transition of the broadcasting television industry and apply insights and evidence from a range of academic and commercial sources to demonstrate that affirmative thinking behind the concept of big data overly simplifies its impact on established media. We triangulated suggestive evidence from various sources: desk research and document analysis in order to collate and synthesize existing research on big data and TV broadcasting.

2 How Will Big Data Impact the TV Industry?

Certainly, debates about the “buzz-word” big data, circle around the key proposition that currently technological means make it possible to track both the viewers and their viewing behavior. A process that is tied to what is elsewhere called “datafication”; the automatized translation of information into quantitative datasets, largely based on material that had not been viewed as information in the past (Mayer-Schönberger and Cukier 2013). Now, when audiences time-shift and “binge”-watch programs, TV companies can trace viewing patterns and learn from them in ways previously unknown. They are able to observe whether audiences grow or shrink after the first few episodes or from season to season and adjust plans accordingly.

Large TV corporations may use big data for a range of projects or initiative. Generally, big data is associated with the analysis of large datasets, originating from different empirical underpinnings (Parks 2014). The sources currently utilized in big data driven research include automated data aggregation and mining, web and mobile analytics, data visualization, sentiment analysis/opinion mining, machine learning,

natural language processing, and computer-assisted content analysis (Buschow et al. 2014; Felt 2016; Freelon 2014; Giglietto and Selva 2014; Mahrt and Scharkow 2013; Mathieu et al. 2016; Scharkow 2013; Trottier 2014; Wagner-Pacifici et al. 2015). Thus, big data includes, but is not limited to, information from actual conversations people have over social media e.g. Twitter, contextual data like the times a specific entry point to e.g. view a series has been used, as well as the sheer number of times a certain term has popped up in the discussion (Chen et al. 2012).

Using this assessment as a starting point for the description of big data outside the academic debate, we follow Stone (2014) and posit that the “media industry can think of big data as the Four Vs, including *volume* of data; *velocity* of data, meaning it needs to be analyzed quickly (especially news); in a *variety* of structured and increasingly unstructured data formats; which all have potential *value* in terms of high quality journalism and business insights and revenue. As this broad argument shows, the term big data lends itself to, but can also be applied to different fields and problems. The variety of definitions, tied to the very liberal use of the term by different players in the industry, resulted in the fact that there is no unique definition for big data in the business world and the academia has to define it on a case by case basis (Bughin 2016).

Most working definitions tie it to the IT-infrastructure used to gather data. It is telling that, for example, Bell (2015) stated during a talk at the *Fields Institute* that ‘I shall not today further attempt to define big data, but I know it when I see it’, before going forward and addressing its impact on modern data analysis, but not limiting him to a certain field or claim associated with it. Indeed, the term big data is commonly used as a catch all term for the opportunities presented by the exponential growth of data in the media sector, including structured, internal data available through media companies’ own databases, as well as unstructured data on a multitude of digital channels, including video, audio, photos and reams of social media text” (p. 1, emphasis added). Philip O’Ferrall, Senior Vice President of *Viacom*, later stated: “six months ago we were tied to basic concepts: audience, web traffic or impact of social networks. Now, we have a team of business intelligence directed by a doctor in mathematics. Each statistic we handle allows us to increase value” (O’Ferrall 2015).

One key component for big data in the TV context is the digital trail left by viewers as they flick from channel to channel. This information is invaluable for both broadcasters and advertisers: it reveals the audience’s likes and dislikes and allows broadcasters to target their content more accurately (*Royal Television Society* 2016). However, when it comes to informing the creative process in programming, it is still in its infancy. The emerging direct market relationships between audiences and producers (via VOD platforms like *Netflix*, for instance), are, however, starting to change this (Rogers et al. 2002).

3 Competing in a Big Data Driven Broadcast Ecosystem

The challenges of ubiquitous content and connectivity to TV create strategic problems for traditional broadcasters that currently seek to refine or update their business strategy or trying to establish a new business model including Connected TV. Fundamentally, technology-driven convergence processes facilitate business model innovation, which means that the organizations need to reconfigure and reinvent how to create value in this new domain.

However, industry insiders have been quick to grasp that commercial mass media would be struggling to find new revenue streams for the converged-media future. They have proposed different strategy perspectives for organizations (Daidj 2011; Downes and Nunes 2014; Khajeheian 2016).

On this basis, the executives, supported by a fleet of affirmative experts, proposed that the broadcasting industry's future can only be safeguarded by large-scale experiments in product innovation and market development (Dogruel 2013), the invention of new strategies for distribution (such as, for example, the “platform” strategy replacing TV channels), viewers as consumers and their’ willingness to share personal data (Evens and Van Damme 2016), monetization activities and the search for new business-models (such as the “Paid-Owned-Earned” strategy described below), and lately, the application and use of big data analytics and its potential impact on company performance (Bughin 2016; Chen et al. 2012; Gfk 2015; McKinsey 2011, 2016).

We estimate the potential for big data and analytics to create value in three specific domains:

- ***Big data as audience analytics tool.*** Studies on how broadcasting organizations create value from their ever increasing datasets combined with powerful and sophisticated analytics tools and the challenges they face in doing so show how they minutely capture audiences’ viewing habits which allows them to target advertising and to recommend appropriate content (Napoli 2011, 2014; Vidgen 2014). However, the strength of digital technologies, be it social, mobile, big data analytics, or cloud computing—does not lie within these technologies individually. Instead, it consists of how broadcasters integrate them to transform their organizational processes and business models.
- ***Big data as audience engagement strategy.*** Rating methodologies, traditional performance indicators, and metrics no longer reflect today’s TV reality (Nelson and Webster 2016). Changes in how audiences actively use and engage in television, and the ways in which these behaviours are measured facilitate the transformation of dealing with audience activity. Today, big data is often used to more or less loosely describe techniques, that are understood to “commodify” TV audiences in the digital TV audience marketplace, i.e., to target them more effectively with personalized content in order to optimize advertising revenue (Couldry and Turow 2014; Jennes et al. 2014; Kosterich and Napoli 2015). Instead, applying the right audience metrics as the new “currencies”, and tracing audience engagement patterns could be used to better understand sense making processes and emerging protocols.

- ***Big data as business model innovation:*** As for television broadcasting and its transition to Connected TV of the future, managers are faced with both the need to satisfy viewers' expectations and needs and the requirement to implement convergence as an industrial strategy. Broadcast TV needs a new business model for a converged future (McGrath 2013). Social media enhancements ("earned media") are ideally suited to complement "paid" (i.e., advertising funded) and "owned" (i.e., any property that a broadcaster can control and is unique to its brand) media revenue models. Big data patterns from social media can help to optimize earned media strategies as the legacy revenue model through paid and owned media has run into difficulties. Paid advertising has found many outlets, atomized into thousands of blogs, Facebook pages, and specialized television and radio stations, so that return on investment is becoming difficult. "Owned media", on its side, is too expensive.

3.1 *Big Data as Audience Analytics Tool*

Let us begin with an interview by Vidgen (2014) undertaken in the context of a research project on Big Data and television, funded by the EPSRC's NEMODE (*New Economic Models in the Digital Economy*, Network+) program in the United Kingdom. There, a manager responsible for business analytics at a broadcasting organization had to recognize "that data was going to transform all aspects of broadcast, and all elements of broadcast. And part of that was because he saw a big change in viewing behavior from a broadcast type relationship to mass intermediation happening . . . [the] consumer starting to watch more on their mobiles and tablets, they have a natural return of data. So, he was absolutely convinced that from a strategic perspective data enabling the organization was going to be key" (p. 11). In fact, developments toward Connected TV are driven by the interplay of the industry's creed in "technology push" and the viewers/users need for "demand pull" in the media. These lines between what is offered ("push") and what is demanded ("pull") are becoming more and more blurred with the continued development of digital media convergence. Data helps to in those cases to give insight into implicit consumer behaviors, creating predictors for consumer behavior that help companies the chance for proactively responding to changes in market environments (Day 2011). For instance, *Netflix* used big data to create its TV shows—recent examples include e.g., *House of Cards*, *13 reasons why*, *Daredevil*) by analyzing and predicting preferences of subscribers, instead of relying on a human decision making process (Erevelles et al. 2016; Bughin 2016). And it is no secret that today big data is rewriting Hollywood scripts that perfectly fit the viewer demand (Bughin 2016; Haughton et al. 2015; Lycett 2013). Recent case studies show that those changes are driven by investments into human resources and software that is based on pattern identification (Bharadwaj et al. 2013).

Still, it has to be stressed that the proposition that convergence would result from a "techno-economic paradigm" (Perez 2010), a term to depict the notion that media

development and change would stem from the constant interplay of technological innovations and entrepreneurial strategy for media to grow profitably, remains problematic or is, at best, speculative, and analyses based on it are not able to give valid inferences.

If it is true that the success of Connected TV shall take place in the consumer's interest, then it is about audiences creating value out of broadcasting rather than the broadcaster's efficient use of big data. Certainly, there is a tension between visions of societal benefit and the industry's use of big data technology that undergirds all viewer interactions with new TV technology. However, as Gillespie (2014) has rightly stressed when analysing the role of algorithms in the digital era, "there are specific implications when we use algorithms to select what is most relevant from a corpus of data composed of traces of our activities, preferences, and expressions" (p. 168). From the perspective of the techno-economic paradigm big data technology comprises the devices, tools, and techniques needed to transform inputs into outputs in a way which enhances the economic performance of the organization (Bughin 2016). As described by Gandhi et al. (2015), "the resulting ecosystem of big data technology is made possible by the evolution of TV application architectures from dedicated hardware-centric functionality to a combination of hardware appliances and modular software services. As a result, big data technologies can support rich, interactive TV experiences by collecting, storing, and analysing federated events and by creating usable information for end-consumers, operators, and programmers" (Gandhi et al. 2015, p. 1). In sum, these technical tools let broadcasters not only capture existing structural and behavioural data, but also predict models for viewing behaviour, monitor cross-media viewing habits, and cross-analyse viewing with purchase behaviour and social media trends. "It also shows them how to schedule programs to lower costs, rev up ratings, and build audience flow; single out the most impressionable viewers and engage them to watch more; target promotional spots to convert more viewers while consuming less airtime; and direct the right ads to the consumers most likely to respond", Dennis Kneale, analyst of *Broadcasting & Cable* (2016) reported.

However, there is more to big data than being a mere tool for audience commodification (Kosterich and Napoli 2015). We also have to ask what audience value is and how big data technologies can contribute to it. Information deriving from big data could be used to enrich audience engagement and user experience, for instance. Cultural studies have long been arguing that audiences make active use of the technologies offered to them to create individual value and meaning. Confronted with a new appliance, individuals develop practices (protocols) that are socio-culturally bound. The *Mobile Phone Appropriation* (MPA) model (Wirth et al. 2008) helps to understand the adoption circle of innovative ICTs and could easily be adapted to Connected-TV. It integrates elements derived from a quantitative perspective on adoption and those from a qualitative perspective on appropriation. The implementation of the latter concept stresses the importance of the social negotiation of meaning within the process of innovation adoption, something which cannot be understood by big data alone. As appropriation is modelled as an active and creative process embedded in the culture of every life, context is crucial

for its understanding. This also includes restrictions of technology appropriation (Wirth et al. 2008). Typically, when it comes to convergent media and the role of big data, privacy issues and data security are felt as key hurdles restricting appropriation.

Communication is a vital part within the appropriation process, both on an interpersonal level and via media. The MPA model highlights the symbolic value of a new ICT like Connected-TV that adds to its use value. Thus, deconstructing symbolic meaning adds context in order to better understand patterns of audience behaviour derived from big data analysis. For instance, if channels and schedules lose their orienting power, other concepts have to fill the void like the reliable content of serials or techniques like ad targeting or personalization using big data and algorithms. The notion of quality TV as meta-genre (i.e., discursively constructed concepts that support selection, frame comprehension, and channel interpretation akin to brands; Schlütz 2016), for instance, helps to explain why the term "quality TV" can work as a USP in market relations where high-quality television series are sold directly to fans as one-off transaction as with as Pay-Per-View (i.e., the consumer pays on demand for a specific show), electronic sell-through (title is downloaded by the viewer) or on subscription.

3.2 Big Data as Audience Engagement Strategy

Broadcasters increasingly realize that television deals in very large amounts of data. From viewing numbers, household data, and television ratings, the ability to analyse large numbers is a necessary and timely advancement. They can see how many minutes of a show a viewer watches, whether they watch a single episode in one sitting, or whether they run through three or four (or more) episodes per night. Netflix, for instance, uses data like this to evaluate their policy to publish whole seasons instead of weekly episodes (Kastrenakes 2015). Thus, broadcasters can now collect a wealth of information from increased viewer engagement that far exceeds traditional ways of data collection. We understand viewer engagement with Askwith (2007; Bobineau 2014) as an overall measure describing both the depth and the nature of an individual's specific investments in a given object (p. 49). Thus, engaged viewers are more prosumers or users than consumers. They create (additional) meaning by engaging with television content in several ways like, for instance, using "paratexts" (i.e., professional or user-generated ancillary content that adds to the sense making process; Gray 2010) and interacting in social media (thereby creating even more data traces). These activities enhance involvement in the text, identification with its characters, participation in follow-up communication, and motivation to seek out similar content. Integrating big data with such contextual information will provide a depth of knowledge that complements current measurements such as ratings (e.g., as with GfK in Germany, Nielsen in the U.S., or BARB in the UK). While those ratings project whole numbers based on a sample, new ways to track engagement and tie data to users on a more granular level will

give both broadcasters and advertisers greater insight (*videa* 2016). It could also be used to better understand audience engagement and its implications for the creation of meaning. None of the traditional dimensions—who, what, where, when, how—are stable or inherently predictable. Big data analysis, derived from Connected-TV viewing behaviour and affiliated social media technology and use, by contrast, combines viewer metadata, device-level data (views, completion of episodes, and whole seasons), distribution-level data (TV, mobile, computer, game consoles, etc.), web traffic data (volume, click-throughs, page views), geo-location (postal code), or data from third-party sources (e.g., TV ratings and credit card data). These data let broadcasters develop personalized relationships with their audiences, which until now have been unimaginable. They are now able to:

- understand how, where and when people are enjoying programming content and services;
- reveal exactly who is accessing which content at what time and where;
- open new channels for personal interaction and dialogue;
- extend influence far beyond existing geographies and target audiences (e.g., to acquire new audiences such as millennials); and
- aggregate individual data for insight and intelligence across platforms (i.e., as input for further programming decisions, new distribution decisions, optimizing programming plans, ad targeting, and real-time marketing).

Again, a fundamental limitation of big data is the lack of contextual data, for instance with regard to attitudinal information. Big data tells you who is watching, but not why, and with what effect. Classic market research—such as panel measurement—alongside return path data (RPD), and social media data will thus retain importance accompanied by qualitative data that aim at understanding individual readings and the sense making process of audience engagement.

So, what does big data do for the audience in order to be attractive? According to the MPA model mentioned above (Wirth et al. 2008), viewers allocate symbolic meaning and value to media that are derived from meta-communication: “Television is not only what producers assemble, nor only the particular text on the screen, nor only what viewers make of it, but consists of all of this: all the institutions and practices that surround, produce, and contextualize those moments, i.e., all that makes the very idea of ‘television’ meaningful.” (Kompere 2011, p. 97) Social media have become an important platform for engaging consumers in meta-communication. The ensuing dialogue among programmers, distributors, and broadcasters, and even between auteurs and their audience add to the sense making process. This is evidently of big interest for the media industry as a whole. And to no surprise McKinsey research shows that they are active in this part field since the beginning of the decade (McKinsey 2016). But once again, it is evident that this only works when a large amount of user data can be generated and for this a critical number of engaged users has to exist (Erevelles et al. 2016; Napoli 2016).

3.3 *Big Data as Business Model Innovation*

The mass media industry's future will presumably be defined by experiments in monetization. New publishing business models are indeed already evolving. Companies are looking for new revenue streams, while also using cost-cutting strategies as a tool to drive their business toward innovation (Baumann and Hasenpusch 2016; Khajeheian and Friedrichsen 2017; Küng 2017). The advertising and subscription business models that supported traditional media companies in the past, however, appear to fail to do so in the digital age (Khajeheian and Friedrichsen 2017). Addressing this capitalization gap raises the fundamental questions of how commercial media will manage to survive as traditional sources of revenue (paid display ads, subscriptions, and direct sales) shrink (Murschetz 2015). Solving this issue is vital as the legacy revenue model through paid and owned media is starting to fail. We have already discussed that. Consequently, broadcasters look out for other sources of revenue. To that end they develop sophisticated "Social-TV" integration tools that aim at driving viewer tune-in, audience engagement, and loyalty in order to boost ratings, live viewing, and user involvement (Horst et al. 2018; Pardo 2013).

In addition, Social TV apps and multi-screen solutions open new avenues for usage. These apps let users:

- see what their friends are watching and invite them to watch it simultaneously;
- chat, share and tweet around TV programs;
- register through Facebook or Twitter;
- get additional information on anything they see on screen—topics, people—through direct links in the app to Wikipedia, IMDb and others;
- purchase products (i.e., from product placements) and download content (songs, series, books);
- download apps to their mobile phones; and
- interact with the enabled adverts to enter competitions, votings, polls, gaming etc.

Additionally, as a result of these new dynamics, the television industry gains access to another currency: data. The broad range of data traces can be used to inform decisions about programming (i.e., using big data as an input to produce or commission original content that viewers really want), distribution (i.e., data used to evaluate the efficacy of various distribution models), promotion (i.e., data used to identify effective promotion strategies), ad targeting (i.e., allowing digital advertisers to analyze the massive amount of personal data that consumers share, and offer those consumers more personalized and targeted ads for products and services they would use), and business model innovation (see, below). Large data-driven companies, such as *Facebook*, *Twitter*, and *Google*, show how data stimulate the monetization of the digital space: Their platforms track and sell consumer data, thereby increasing the value of the companies with every like, share, search, or post while at the same time violating users' rights by ignoring privacy issues (Brown 2016; Evens and Van Damme 2016). However, from a consumer's point of view

this could still be beneficial, because media organizations could require readers to share personal data instead of charging them for the product. In today's big data era, online platforms, such as Facebook and Google, utilize consumers' personal data to optimize personalized offerings in return for free services. The so-called "datawall" (an analogy with paywalls) secures access to a selection of (free) personalized media content. The datawall business model requires that viewers share personal data with news organizations in order to obtain free access to a particular selection of digital content. However, the datawall's success ultimately rests on consumers' willingness to share personal information, and hence, pay with personal data. Issues of data protection and privacy, however, may undermine consumer acceptance of datawalls and hinder the implementation of big data strategies (Evens 2016; Evens and Van Damme 2016).

4 Conclusion: Impacts on Competition are Unresolved

This paper has sought to interrogate the role of big data as a key driver of change in new television broadcasting ecosystem, and of the social practices and cultural protocols (and their resistance to embracing these, respectively) that emerge in its shadows. Theoretically, we conceptualized some fundamental relationships between the concepts of big data, the media economics of television broadcasting, primarily with regard to the role big data plays in strategizing about the right level of audience engagement.

Given the findings of our discussion, we can reasonably conclude the following: First, it is important to note that big data is not a mere buzz-word to describe the technology and the associated software solutions used by broadcasters to dream up viable new business models. Rather, it is a social practice: Audiences employ technology in order to actively influence if not shape television broadcasting (behavior) in their *own* favor. However, while theorizing on "digital traces" itself is subtle and sophisticated, skepticism as to its value for analyzing changes in television broadcasting within the digital marketplace prevails. Ultimately, however, research into "datafying" broadcasting needs to confront this deficit because, as it appears, big data changes broadcasting in ways that may be more beneficial to the industry than to the audiences.

Second, we observed that theoretical conceptualizations on how to contextualize big data remain largely underdeveloped when it comes to the appropriation of ICTs. We therefore view big data as a concept that is in need of much *deeper* theoretical explanation in media economics in order to aid integrating the concepts into a more holistic theoretical assemblage. This will provide a better comprehension of the diverse, interrelated processes at work and the interconnections with human systems of meaning. Furthermore, it can be used to guide models and simulations for predicting long-term trends and possible adaptive strategies of all actors. For the moment, no such model is in sight. It seems to be crucial, however, that such a future model integrated strands from both media economics and audience research

in order to account for the techniques as well as the protocols (i.e., social and cultural practices that are the outcome of viewers' appropriation of a technology) convergent media are comprised of.

And third, when looking into identifying "digital strategies" in new TV broadcasting ecosystems such as Connected TV, much deeper insight into the role of big data and viewer "datafication" as well as audience engagement in changing broadcasting is necessary. Obviously, there is still a lack of critical analysis in media economics research that would go beyond euphoric industry rhetoric and challenge notions of viewers as commodities. Analyses into direct, unmediated market relations between broadcasters and audiences are a first step in this direction (Rogers et al. 2002). For now, much of the rhetoric of big data contains no meaningful analysis of its potential perils, only the promise of the glass consumer. Recognizing this key paradox of big data, i.e., showing its perils alongside its potential, will help us to better grasp the concept and the theoretical and empirical consequences.

And, finally, we confirm that it is very important to make the right strategic decisions in order to be economically successful. Legacy broadcasters may easily be 'stuck in the middle' and offer products to the mass market while missing out high margins in the niche segments. Big data can, however, well help providing new insights into these niches.

To conclude, we wish to stress one last important factor: analysing the role of "datafication" within the context of television broadcast media should include its implications for television as the most influential democratic mass medium in society. Further research into big data and its role for changing broadcast television needs to recognize this fundamental ingredient: that television should primarily serve the audiences who are supposed to actively shaping their own media future.

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Part III
Small Media Firms

War of Attrition in Polish Video-Games Printing Press: Customer Retention to Survive Printing Press in the Age of Digital Communication Technologies



Simon Gladysz, Datis Khajeheian, and Saeed Lashkari

Abstract This chapter is a case study that narrates the story of how PSX Extreme, a video game magazine with a legacy in the video game market of Poland, faced with dramatic changes in printing press market. By digitalization, the printing press entered to decline phase under pressure of internet and social media. Payn model used as a theoretical model, that involved three theories of customer satisfaction, co-creation and customer relationship management (CRM). By two surveys and three interviews with practitioners of this market in Poland, it concluded that PSX Extreme must follow a new strategy of co-creation to deliver value to its target customers.

1 Introduction

It was in the late nineties when computer games market bloomed in Poland, like many other places in the world, and consoles such as PlayStation, Sega Dreamcast and later, after the year 2001—PlayStation 2 and Xbox appeared in many houses. Soon, many of youth found a passion into games as their favorite hobby, and as a supplementary for these young users of video games, the market experienced a boom in video games magazines. The game press offered near 15 titles about consoles and another 15 about games and news related to the PCs market. To quote Martin “Martinez” Przasynski—the founder of “Secret Service”, which was the most popular and legendary magazine in those days:

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(...) it was a golden era and very profitable industry at that time. At the peak, we were selling 120 thousands of copies. Every month to our editorial office was coming around 6000 of letters. (Przasynski 2011)

As the game industry was developing, new gaming printing press appeared in the market. Between 1994 and 2004, many editors of these magazines were idols for youth and their magazines have had an impact on the culture of whole generations in Poland. However, this golden era of magazines like the whole press industry were revolutionized and challenged by appearance of the Internet. Now, video-games printing press market has changed irreversibly.

In March 2013, video games press market ended a famous cult magazine named “Neo Plus”. It was the last direct competitor for “PSX Extreme”, which dealt only with console games (no PC content). In 2014, 13 years after video games market reached to a turning point, previously mentioned “Secret Service” reappeared. But this return lasted only for two editions. If we look at the video games press market after year 2010, it may be noticed that there was also a number of entirely new magazines, created by game enthusiasts, but they fell as quickly as they appeared. Finally, in 2016, we have currently two magazines about games on the Polish market—“PSX Extreme”, a company that is subject of this chapter, and its counterpart CD Action (used as a case study), associated mainly with PC games content. It should be noted that in spite of different game platforms (mainly consoles vs. mainly PCs), these two magazines are now direct competitors. For this reason, the players are no longer divided into those who play only on one platform like Xbox or PC, rather they are multiplatform customers and they play on any device. Moreover, for a large number of games that come out on consoles, there is also premiers on the PCs. however, it should be noted that for many years on the market we have so-called “exclusives” phenomenon, when some cult games appear only on one game platform. For example, “Gothic” is a game that could be played only on PC.

In spite of optimistic view of the “PSX Extreme” board about their condition, many people speculate that this magazine is the next one which will disappear from the market as a result of war of attrition. It is because year by year, sales and circulation decrease, slightly but steadily. “PSX Extreme” thrives on the market for the longest period (almost 19 years), thanks to their unique style of writing and the great relationship with customers based on editors’ “openness”. With this regard, it is assumed that the critical challenge ahead of this magazine is retention of its existing customers, and then acquiring new ones. Such problem is a complicated and challenging, considering the turbulent market that consistently offer new opportunities for customers. “To maximize customer lifetime value, a company must not only convince customers to buy its product or service once; it must also retain them” (Hamilton et al. 2017, p. 79). In the age of disruptive technologies, customer retention is becoming harder and harder (Tamaddoni et al. 2017) and for industries like printing press that are in decline phase (Winter and Alpar 2017) it is even worse. The situation on the printing press market is similar to the aging society phenomenon (Murata 2008): The magazine has a dozen thousands of loyal fans

who read and buy it every month, but over the years, older customers are slowly moving away from buying their favorite magazine, as well as they are often moving away just from playing games. It makes a gap and to continue this path, even for currently well dealing “PSX Extreme”, it may be only the matter of a time when they will be forced to quit business.

However, “aging customers” are only a small part of the missing customers. Some of them probably move to the Internet sources; some simply lose the interest in the magazine, having no more time or interest in “reading” at all; and some other pass to the rival magazine, CD Action. This situation brings to mind the “leaking bucket” theory where the company is compared to the leaky bucket and customers to the water it drops. If water comes into the bucket less than it leaks at same time, we have to deal with situation of constant decrease/loss of customer. This will exclude the company from the market in the long run. That is the reason for importance of monitoring current clients and measure their level of satisfaction, to prevent customers declining over time.

The key aspect for surviving, developing and generating profits by a company, is to consider the issue of customer retention: to keep them loyal and build the long-term relationship with them. This is a problem which not only games press struggle with, but also whole press industry of all kinds. This chapter provides an analysis from the phenomenon of customer retention, and proposes some possible strategic solutions, which might be considered by the board of PSX Extreme to retain their clients.

2 Theoretical Model

Reviewing the theories in regard with customer retention helps us to understand problems of customer retention in such a way that we can step forward to identify and solve those issues. In case of PSX Extreme, a refreshment of their strategy and initiation of some more “customer-oriented” actions, might be the answer for “leaking” customers, and allows to retain them more efficiently.

Obviously the relationship marketing is a very broad concept which consists of many different postures, factors, theories, tools and action which may be taken. The guideline for choice, was the studying of literature in searching for solution for “leaking customers” and customer retention phenomenon.

Issues on which this chapter is primarily focused, are the customer satisfaction concept and to be more specific, its measurement (step 1), a co-creation method of value creation (step 2), and finally, the CRM philosophy implementation (step 3). Payne Model has been selected as the theoretical model of this study. As it has been shown in Fig. 1, this model is divided into three steps: (1) Determining of value (yellow), (2) Value creation process (blue), (3) Issues around relationship maintaining (green).

Consulting, changing and designing of a product together with the customers is a crucial activity. Firstly because in the market-life of print magazine, there is nothing more important than customers’ regularity. Secondly, during the

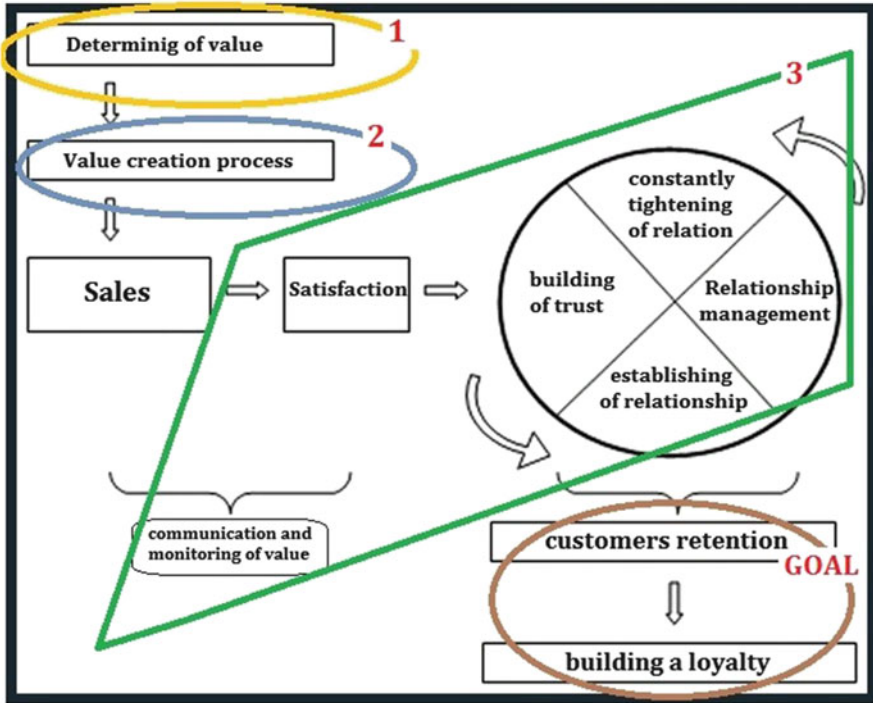


Fig. 1 Argumentation: Payne model

co-creation activities customer feels to be important (Baran 2013). To refresh relations with the customers and build a lasting relationship, the firm must re-examine the level of customers' satisfaction to know what the features of company's product or service should be, and where to put focus on. Thus, first step of enterprise should be to gain this knowledge directly from the customer group. (Islam and Liu 2016) "The knowledge should be acquired, kept up to date and the firm may develop a coherent, detailed profile (image) of the client, which will form the basis for the individual, sustainable, mutually beneficial relationship, aimed to maintain and develop a long-term contact, based on loyalty and satisfaction." (Wojnarowska 2005). Application of relationship marketing strategy requires an organization to do a continuous research and segmentation of the market and customers, to choose customers' target group, to determine the strength of the relation, its profitability and value of customer. After making a specific choice, company may design a strategy and marketing campaign for a customer target group, effect of which should be first contact with the company (customer acquisition) and then transaction (sales), buying product or service. Further actions are aimed at the customer retention and gaining his loyalty (Maciejewski 2012).

In case of dealing with the outflow of customers, the firm must examine customer's satisfaction and redefine the customers' expected value. In this research,

Kano model has been used to understand customers' satisfaction. So, the first step is to determine the value. Data should be collected directly from the customers through methods like survey and then, be grouped and analyzed according Kano method assumptions.

The second step, according to Payne model, is the value creation process. Based on the collected data in previous phase, the firm decides about changes in the strategy, improvements of the quality of services, development of products, etc. In case of such a narrow business as video-game magazine, a fair solution is to co-create the content with the end customers. The firm must learn how to listen and build relationships with customers and how to encourage process of co-creation. Besides, solutions developed in co-creation process are less risky for company; what is very important is whether its marketing is based only on one product, like in case of the company we discussed, or not (Payne and Holt 2001a).

The last step comes after the refreshment of transaction (sales) that aims to result mutual satisfaction. Again, satisfied customer, begins to regain trust in the company. Trust establishes a relationship between the firm and its customer. This relationship should be taken care of and well managed, and for this to happen, the firm needs a CRM platform. The CRM platform is already in place by the process of co-creation; so implementation of CRM is an absolute necessity for firm's strategy in relationship marketing approach. CRM allows monitoring of the market, customer behavior, changes in the perception of value, latest trends etc. Finally, a well-run relationship provides the firm with customer retention and regularity of his purchases. The customer loyalty is the highest level that this kind of relationship can reach. (Payne and Holt 2001b) This model, focused on customer satisfaction and his loyalty, could help to gain a proper understanding of process of video game press.

3 About "PSX Extreme"

PSX Extreme is a monthly magazine which treats about games and gaming industry. Established in 1997 by two friends: Przemyslaw Scierski and Wojciech Oczko. Originally published by "Group 69" located in Katowice city and since June 2011 is publishing by ADVERTIGO SA, with its headquarter in Warsaw.

The magazine includes previews and reviews of latest video games and consoles, news and essays about game trade shows, hardware tests and journalistic materials. PSX Extreme name is taken from Sony Play Station console: "PS" is a shortcut from Play Station and "X" comes from early design stage of Play Station, when Japanese who worked on hardware in Sony, were calling this project by a mysterious name "project X". Word "Extreme" in the title of magazine, refers to the hardcore style of magazine.

Magazine originally was treated only about Sony Play Station, but with the development of video game industry, expanded itself to Xbox and Nintendo consoles and also to the handhelds market. Therefore, it should be noted that it is not a magazine about computers, but about consoles and console games.

The current circulation of the magazine is about 30,000 copies and stabilized sales around 16,000 per month. To this amount it should be added also a sales of e-version of magazine. In 2009, average circulation of magazine was around 29,000 with sales on level of 19,400 units—so we can notice a decline in recent years. These figures confirm data of Press Distribution Control Association (ZKDP), which says that the computer written press market has decreased -17.2% in average sales in years 2009–2013. Decline of printing press in the era of Internet many of PSX Extreme's competitors out of the market, and in result, its most prominent competitor in Polish video game printing press market is "CD Action", which is a more PC games and hardware oriented magazine.

Catherine Zajac, the PR and marketing manager of PSX Extreme says in an interview:

(...) after the end of "Neo Plus" market existence in 2013, we experienced an increase in monthly sales. This was most likely due to that, the part of the readers of Neo Plus, passed to us when their magazine stopped being published. In the next few months (from April to October), PSX Extreme noted an increase in sales about 500 to 1000 more copies sold per month. This situation lasted for about half a year. Since 2014, we again noted regular decrease—drop about 200 units less, each quarter. The September number (2015), has been sold in quantity of 17,900 copies. (Zajac 2015).

4 Methodology

4.1 Customers Observation

To gain a better understanding of what customers need and how they think about the magazine, an internet search conducted. In related internet forums and communities' opinions and discussions among users observed and relevant parts extracted. Based on gained insight questions for a survey developed.

4.2 Survey

Survey is a good means of measuring responses to specific and exact questions. In this phase, a survey developed from observations of previous phase and presented to the community of users. Survey #1 was conducted among the PSX Extreme forum members, and declared customers/readers of the magazine. Within the period of one month (between 20 Nov. and 20 Dec.), it managed to collect responses from a sample of $n = 114$ people. The survey, its results and interpretation are presented in accordance with the Kano model of value assessment.

Then, customers/readers were again asked about their opinions in reference to new ideas in survey #2. The survey itself was a co-creation activity, because customers had a real impact on that, in which direction the magazine will develop. However, it was a disposable, single action. But still, in the list of ideas, there were

those which were based on regular co-creation principles, for example introducing “Article of the month”. Customers should be encouraged to take more active role in the life of magazine.

4.3 Interview

Interview is a valuable means of collecting of qualitative data, such someone’s narration on something or extracting ideas in mind of a person, or to collect fragmented memories and insights of an influencing player in a subject. Three interviews conducted with three practitioners in the field, one from Extreme PSX, one from CD Action, that is competitor magazine, and one from an expert in CRM.

Figure 2 illustrates the all three stages of data collection.

5 Data Analysis

5.1 Customers Observation

To understand what value users are seeking for and how is their opinion about the current value proposition of Extreme PSX, many forums and discussion rooms reviewed and most relevant and informative feedbacks collected.

In response to the question of “What kind of computer magazines do you buy and why?”, some respondents expressed that they buy these magazines in search on information. Interesting writing style and addressing current trends are the determining factors in purchasing this magazine. Some others responded that they buy it out of habit and some following their habit of collecting an archive.

Some who dropped the magazine, expressed that the value of articles is lower and very better-written and interesting articles are available online, although there are some exceptions in monographic articles, analysis and comparisons. With regard to the CDs attached to magazines, they say that in the age of the Internet, buying magazine to get a CD does not make sense at all.

Lukasamd, who has recently subscribed to the print version of “PSX Extreme”, says that “I prefer a print copy, with which you can sit comfortable in the armchair or lie on the bed, without staring at the screen.”

In another response, Ichito says that for him, buying print version of magazines is restricted to long travels by train. He observes that in the web, news appears and spreads much faster than print magazines.

Hrabia Dracula is another user who does not read any magazines and prefers to register in the various Internet forums instead. On the contrary, however, some object that the Internet is flooded by ads and useless content.

ON the website gametrade.pl, the user “NInja-mast3r” opened a special discussion about a competitive magazine, CD Action. The title of discussion was simple

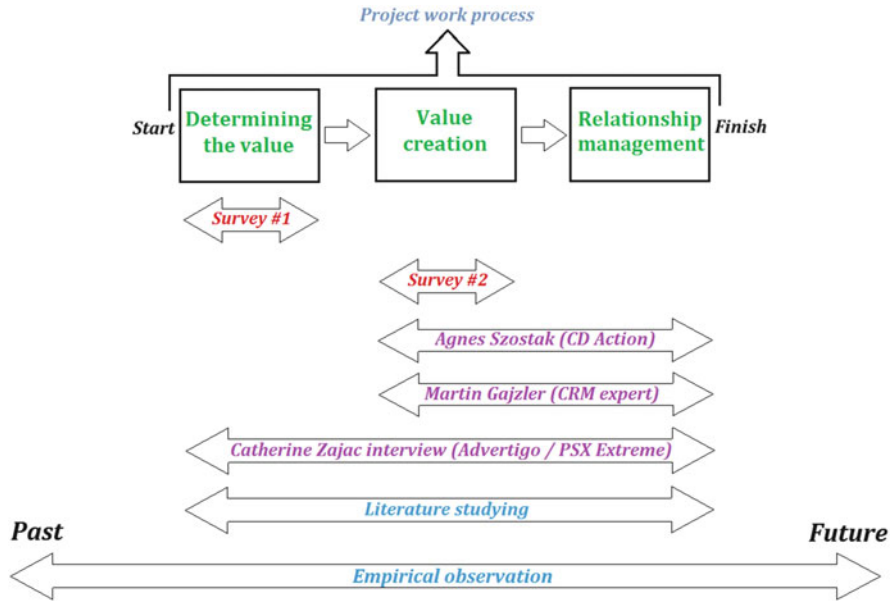


Fig. 2 Three stages of data collection

and clear: “Why do you buy CD Action?” Respondents answered that because it’s the best source of information about games and has been always a magazine of great transmission (in meaning of content). Nice atmosphere, reliable articles, the objective reviews, cool topics, and nice tests of equipment and accessories were important for some users. A user described their attitude toward games as very good and professional.

Other observations are as following:

With regard to the price, most respondents consider it appropriate. They notice that the price of magazine has not changed through years. That said, some believe that in the age of the Internet, it is “pure stupidity” to buy a print magazine even in a low price.

In part of interview with Catherine Zajac PR and marketing manager in Advertigo S.A. (PSX Extreme publisher), that comes later in this chapter, she said that their clients want to have something unique and iconic and this is true most for those who are collectors of such magazines. Her thought is supported by some observations: The “player-calendar” which was added in last December (2015) edition of PSX Extreme is a good example. It was just a simple, nice-looking wall calendar for 2016, with photos from various, popular and well-known games. See the calendar of the “October page” in the picture:

Next feature mentioned in terms of potential value determining was specific content: tests of game consoles and their accessories and giving advices if it is worth to buy them etc. Experts admit that in the Internet we can find a lot of reviews, but they add that many studies confirm that the people trust print media more than the Internet. It is difficult in the Internet to distinguish professional and

reliable comments from opinions based on personal views. People are especially “sensitive” about their money and look for professional sources to justify their choices. They are more willing to trust professional press rather than an 18 years old YouTube tester-vlogger.

5.2 Survey

Observations in previous section concluded that the customers of PSX Extreme have very different requirements and expectations according to the final value. By analyzing customers’ statements and an interview with Catherine Zajac, it was possible to distinguish many different areas of potential value, which helped in creation of Survey #1. According to Demski for each of these areas (groups) one item (question) has been developed in a survey. After obtaining the list of items, they were assigned to a specific dimensions (classes) of customer requirements. For example, the event “I could not find the new PSX Extreme issue in my living place” and “I always obtained new issue on time”, should be grouped in one place, called e.g. “availability of magazine”. Developed list of value areas based on this project research, is presented as follows: (113).

1. The value of providing information and news about gaming industry.
2. The value of providing a unique, professional journalistic content.
3. The value of providing entertainment and humor.
4. The value of easy availability.
5. The value of appropriate price in relation to quality.
6. The value of providing “extra” additions to the magazine.
7. The value of good magazine’s atmosphere, the feeling of proximity to the authors.
8. The value of belonging to the group, community of PSX Extreme readers.
9. The value of collectible value, nice design and esthetic.
10. The value of providing horizons development in specific interest areas.

According to Demski theory, one question has been developed according to each value area (item). However, for this project’s purposes, a kind of double-structured question has been developed for each item. Thus, every respondent was asked about the importance of each value for him/her, and then, about judgment of current situation within this specific value sphere. The adopted scale of assessment has been set on 1–10 in a 10-point scale. This is familiar scale for the PSX Extreme customers; because the same scale is also used by magazine in their game reviews, equipment tests etc.

This survey in this project is called Survey #1, and it was conducted among the PSX Extreme forum members, and declared customers/readers of the magazine. Within the period of one month (between 20 Nov. and 20 Dec.), it managed to collect responses from a sample of $n = 114$ people. The survey, its results and interpretation are presented in accordance with the Kano model of value assessment.

Performance of the Test (Survey #1)

Survey #1		
	How important are below mentioned features of video games magazine for you? (<i>rate in a scale from 1 to 10, where: 1 = completely irrelevant, 10 = priority</i>)	How would you rate PSX Extreme, in providing below mentioned values/features? (<i>rate in a scale from 1 to 10, where: 1 = extremely bad, 10 = perfect</i>)
1. Information and news about gaming industry, market	874	966
2. Unique, professional journalistic content	920	805
3. Entertainment and humor	805	690
4. Easy availability	782	1012
5. Appropriate price in relation to quality	880	920
6. Additions included into the magazine	345	437
7. Good atmosphere, feeling of proximity to the favorite authors	828	713
8. Feeling of belonging to the group—community of readers	414	460
9. Collectible value, nice looking design and esthetic graphic frame	230	782
10. Possibility of developing horizons in specific interest areas	759	828

With sample ratio of $n = 114$ people, the highest score could reach 1140 points and the lowest respectively 114 points. Results in order:

	The most important values for customers	PSX Extreme best at
1.	920 (Journalistic content)	1012 (Availability)
2.	880 (Price to quality)	966 (Information)
3.	874 (Information)	920 (Price to quality)
4.	828 (Atmosphere)	828 (Developing horizons)
5.	805 (Entertainment & humor)	805 (Journalistic content)
6.	782 (Availability)	782 (Collectible, design)
7.	759 (Developing horizons)	713 (Atmosphere)
8.	414 (Belonging to group)	690 (Entertainment & humor)
9.	345 (Additions)	460 (Belonging to group)
10.	230 (Collectible, design)	437 (Additions)

The results of Survey #1, showed some disparities between customers' expectations in relation to provided value, and value provided by PSX Extreme magazine. Differences bigger than 100 points are marked in the table above by red color—these are spheres in which the company should necessarily consider some improvements. In turn, the features in which PSX Extreme significantly exceeds the expectations of customers/readers are marked by green color. With reference to the model of the characteristics value evaluation of Kano, the division is as follows:

1. One-dimensional quality: journalistic content, information, price to quality
2. Standard (must be quality): atmosphere, entertainment & humor, availability
3. Attractive quality: additions, collectible & design
4. Neutral: belonging to group, developing horizons

Performed study allowed to determine where the value lies for the current customers of gaming press industry in Poland. Moreover, it was possible to discover where the problems of case company lie and in which area they should seek for improvements.

5.3 Interviews

Selected parts of interviews with Agnes Szostak and Martin Gajzler are related mainly to concepts of building and managing relationship techniques, value creation and co-creation. Not relevant statements have been omitted intentionally by authors.

5.3.1 Interview with Agnes Szostak

Agnes Szostak says that the quality of writing is the core value of their magazine:

(...) we focus primarily on quality; the quality of our writing and individuals we work with. We are not "dull" and readers feel it. We try to create a magazine that we ourselves would like to read with the greatest possible attention. We take subjects in which we are good—not necessarily those which are currently "hot".

CD Action style is based on an open dialogue with the readers in which customers are encouraged to interact. They have a competition for an "Article of the month"—everyone write his own article which has a chance to be published in next numbers.

There is a section called "Action Redaction" in which they interact with readers. They also search for B2B cooperation outside the gaming market—in exchange for a "gifts", they offer them advertising space.

They often ask clients about their opinions on many issues on all social media platforms—like Facebook, Twitter and YouTube. Some popular, individual editors create "oases" around themselves, through those media. It helps in creating a close community. There is a lot of sections, focused on building relationships with editors—e.g. "Easy going", where they drop the official, journalistic tone and write, as they want—loosely.

Interaction should be continuous, because proper CRM is a long-term process. For this, they try to develop some qualities as their “extra” features. These features should be something that the competition never think/dream about. That way, they can be always a step further than others. Companies should also consider the terms creativity/innovation & CRM. It is worth to think about the CRM in the meaning of attracting new customers. Consistency, exceeding customers’ expectations, involving them in process, responding to their requests, increasing dialogue should be their goals.

5.3.2 Interview with Martin Gajzler

Martin Gajzler believes that when customers leave, something is wrong. He suggests that we should first examine what the company is doing wrong. In his view, customer satisfaction measurement and determining of their expectations is a fundamental step. Then, re-organization of work and creating appropriate value and strategy are important. Gajzler proposes now that the Internet has shaken the written press industry, it is time for industry to learn how take benefits from the Internet medium.

One of the techniques he offers is to build tension in anticipation of the product. He mentions TV series like “Game of Thrones” or “Lost” as an examples in which producers use this technique:

Throughout the watching, you wait for something to happen and the event continues in the next episodes; so you have to wait for it and you become a regular customer for the film. In the next episode, the tension is relieved at the beginning and you feel satisfied. Then, a “new” tension develops, and the story continues. In the case of magazine, they may use social media to build tension, or they may publish at least 1 page announcing hottest content.

With regard to CRM, when customers complain about the quality of journalism, Gajzler proposes that we should ask them which sections or authors they do not like and why:

You may also ask them about their favorite sections and then you should consider to expand or cut relevant material.

Gajzler notices that computer games press has very different customer targets: from nerds to serious and educated people. He believes that performing humor and entertainment for such a diverse target is very difficult but not impossible. He proposes the method of trials and errors to know what fits with such a diverse group of customers. What he considers important is to realistically assess chances, resources and opportunities. He says: “Customize your product to the client, not the customer to your product! Initiate interaction!”

Asking customers for sending their best jokes or materials is another suggestion by Gajzler. He insists that a company like PSX Extreme needs to experiment and see what works, to lead an active dialogue and ask for feedback.

He says that customers should have much power in specific activities/areas. He continues:

We are talking about the issues of the final value/content of the magazine, e.g. innovation—you want the PDF E-book version of the magazine, read by the editors and their own voice—yes or no—say it, period. (Gajzler 2015)

Survey 2: Value creation (Co-creation & CRM Solutions, Survey #2)

To propose the solutions for problematic issues within the PSX Extreme, another survey developed and conducted among the customers about potential changes, improvements, developments of final value/product/magazine etc.

All eight items of the survey are designed on the basis of the Internet research, interviews with Agnes Szostak and Martin Gajzler, empirical observation and theories. In addition, the propositions were formulated under the supervision of Catherine Zajac from the PSX Extreme.

	Would you like . . ./would you be interested in. . . ?	
	Yes	No
1. Publishing of “article of the month”, written by reader	82	16
2. Expanding of the most liked & popular sections, by shortening/removing those which you do not like	33	65
3. Expanding the content (e.g. from 100 to 130 pages), but with increase in price (from PLN 10 to PLN 13)	79	19
4. Bigger activity of editors on the social media (open dialogue)	39	59
5. Reporting up to date work in the new issue, through the social media (pictures videos, trivia regarding the content, funny situations from the life of editorial office)	34	64
6. A comprehensive presentation of every new editor who starts to write for PSX Extreme in the magazine	86	12
7. The introduction of more entertainment sections (jokes, riddles, puzzles, crosswords, thematic comics)	50	48
8. The introduction of the PDF E-book -read by the voices of the authors of particular articles, pages	67	31

With sample ratio of n = 98 people, the highest score could reach to 98 points and the lowest to 0 points. Results in order of the most “yes” answers:

1. A comprehensive presentation of every new editor who starts to write for PSX Extreme in the magazine.
2. Publishing of “article of the month”, written by reader.
3. Expanding the content (e.g. from 100 to 130 pages), but with increase in price (from PLN 10 to PLN 13).
4. The introduction of the PDF E-book -read by the voices of the authors of particular articles, pages.
5. The introduction of more entertainment sections (jokes, riddles, puzzles, crosswords, thematic comics).

6. Bigger activity of editors on the social media (open dialogue).
7. Reporting up to date work in the new issue, through the social media (pictures videos, trivia regarding the content, funny situations from the life of editorial office).
8. Expanding of the most liked & popular sections, by shortening/removing those which you do not like.

By analyzing the survey #2, it appears that connection with content generator (A comprehensive presentation of every new editor who starts to write for PSX Extreme), Reader Generated Content (publishing of ‘article of the month’, written by readers) and more content for consuming even in charge of higher price obtained the biggest support from the customer side. These choices can be interpreted that readers seek the value of “interesting content” in different types: from well-known editors, from other readers and in more articles in charge of higher price.

On the other hand, not many people are interested in changes, such as: bigger activity of editors on the social media (open dialogue), reporting up to date work in the new issue, through the social media (pictures videos, trivia regarding to the content, funny situations from the life of editorial office) and expanding of the most liked & popular sections to shortening/removing those, which you do not like.

One might conclude that pervasiveness of social media doesn’t mean that all contents are proper to consume in social media. Reader of this magazine prefer to read magazine in its traditional form: in print rather than online, in charge rather than free but low-quality, in long articles rather than short chunks of social media.

Understanding of the value customers seek can lead the magazine managers to fit and reorganize themselves with their customers’ wants.

6 Conclusion

From the emergence of digital media, the print industry has been faced with “leaking customers”. For this reason, customer retention is one the major concerns for the firms stayed in this industry. The PSX Extreme Company has been taken as an example of such firms that are still operating in the print industry in Polish market. This article has been conducted to answer the following questions:

- (a) What relationship marketing approach can retain “leaking” customers?
- (b) What relational marketing methods are crucial in creating a loyalty?
- (c) What changes may assist PSX Extreme to retain its costumers more efficiently?

Findings of this research suggest that the model designed by A. Payne might answer above questions. Following this model, relationship marketing can be a key. To perform it, firms must follow some steps:

1. The first and starting step is to examine why customers leave. This should be performed by a proper customer satisfaction measurement and interpretation of results, according to a model like Kano model. This first step is crucial because it

is impossible to establish a good relationship, and in consequence loyalty, if the consumers do not feel satisfied.

2. After understanding of customers' demands, value creation is the next step. co-creation understood as the best option because it customizes final value, with simultaneous deepening of relation, building trust and so on. For performing a co-creation, as well as for monitoring customers' behavior, it is necessary to get a platform. social media can be used as one of the common platforms of co-creation.

Philosophy of company should be based on the customer relationship management' attitudes. The company has to adjust the product and itself to expectations of customers (Velcro strategy). The customer retention is a long-term process and it requires continuity. The main assumptions of co-creation and CRM, complement each other. In relationship marketing approach, the internal understanding of this philosophy within the company is also very important. The actions should be performed carefully and not by the method of trials and errors.

3. Co-creation: An important trend in media industry after digitalization is the involvement of users in the content. While user-generated-content is the main content of social media and many internet and mobile platforms, increasing the involvement of users into the process of content production in printing press must be considered too. Many of printing press have followed this strategy and consistently increase the share of their readers into the process of value delivery. Following such strategy for PSX Extreme might enhance the interaction of the readers with this magazine. Publishing of "article of the month" as well as other reader-generated-contents is suggested.
4. Digitalization: Many of readers, especially millennial who are generation of using digital content, are willing to consume the content digitally. They need to read the content on their handheld devices, to share it with their friends in social media and to discuss on it. Thus introduction of digital version of content in different formats such as PDF E-books or audio books or other formats will increase the customer reach.

It might be concluded that customer churn is an inevitable trend in media market. For a small media firm like PSX Extreme, the strategy of making a bigger "water inflow into the bucket" is worth to consider to replace the strategy of preventing from "leaking customers". In this perspective acquiring new customers would make more profit rather than trying to save the existing ones who are in diminishing markets.

Measuring customer satisfaction, implementation of co-creation strategy and solutions, following CRM philosophy and establish of CRM platforms are some of most important suggestions for this media firm to retain its clients in such a challenging and turbulent market that video-game printing press are operating in.

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Media Innovations in Digital Music Distribution: The Case of Beeptunes.com



Taher Roshandel Arbatani, Hooman Asadi, and Afshin Omid

Abstract Distribution is the center of music industry in new media context. The main scoping of this chapter is to shed some light on the overall innovative activities of a new Iranian digital music distributor (i.e., *Beeptunes.com*). Further, it seeks to add to our understanding of how different types of media innovations in digital music distribution can successfully make an efficient media market in Iran. Based upon the analysis of an Iranian case, here, we show that an online music business should consider digital platform as a new way for engaging the audience to its business, instead of considering it as a space to merely selling musical digital products. Eventually, our studies indicate that digital platforms are not the only technical objects, but rather they create complex social networks that are heavily dependent on the user's innovative activities. Taken all, it can be concluded that media innovations should not be limited solely to technological innovations, and online businesses should take a more humanistic consideration. Conclusively, the theoretical and practical implications of this present study will be discussed for media scholars and entrepreneurs, specifically in emerging media markets.

1 Introduction

In the late 1990s, several factors such as increase of the Internet speed, expanding of Internet connections with universities, businesses and other institutions, ease of storage and file transfer, the emergence of attractive online businesses in the music industry (like Apple's iTunes), and etc., increased significantly the popularity of digital music services (Hull et al. 2011). Overall, the internet and digital technologies have become the motivation of music firms for creation of new business models continuously. Following this trend, some new media environment has been influenced on ways, and intensity of music distribution (Vaccaro and Cohn 2004).

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In other words, since advent of the internet, digital technology can be considered as a “transformative player” in the music distribution (Rogers 2013).

The first legal online services in the music industry began to arise in 1990, although none of them did not win a resounding success in their own businesses. Apple’s iTunes that launched its business in 2003, was able to agree with major music publishers for the first time and in its turn, achieved to great success in the music industry; since then, in 2004, competition in online music services intensified and more than ten online music service raised in the market (Vaccaro and Cohn 2004). The emergence of new online businesses continued to grow at breakneck speed, and accordingly Rogers noted, “the volume of digital platforms for music has mushroomed with over 400 such licensed services operating around the world by 2012 offering 20 million tracks to music fans” (Rogers 2013, p. 82).

As emphasized by Kjus (2016), distribution is the center of music industry in new media context. However, along with all the benefits of digital technologies, the internet is noted as a sort of “crisis” factor for music industry in some researches (Preston and Rogers 2011), and some researchers have noted the dangers of music digital “piracy” (McCarthy 2013). Eventually, based upon the strongly explanations, Koh, Murthi, and Raghunathan showed that, in the presence of “legal” distribution channels for digital music (like Bceptunes in Iran), the negative effect of online music piracy on physical music sales has weakened and finally “digital music, not online music piracy, substitutes for physical music” (Koh et al. 2014). According to Aguiar and Martens (2016), over the last decade, purchasing of the “licensed digital songs” has changed alternatives of music consumption for individuals.

Over time, the digital music markets have grown significantly and as reported in the research of Rogers (2013), in duration of 2003 and 2011, online digital music sales increased from 0.02 to 5.2 billion dollars. In relation to Asia’s media markets, the volume of online music sales in Japan is estimated at 990 million dollars (Hull et al. 2011). Moreover, in South Korea, as “the single biggest digital music market in Asia”, three million people have been subscribed to digital music online services in 2011 (Rogers 2013).

These new opportunities will be of great importance, especially for a country like Iran that suffers a lot of problems in the music industry (Mirzamani et al. 2015). In other words, online market of digital music in an emerging economy, i.e., Iran, can be considered as a key facilitator in achieving to an “efficient media market” (Khajeheian 2013); although until now, there exists no accurate statistics reports of digital music sale in Iran. In this regard, media innovation, as mentioned in Kung (Küng 2013, p. 10), “is critical to success in media markets”. This is important to note that the internet and new media technologies are changing “the rules of the game”, and music businesses in general, and digital music distributors in particular, must be innovative in all of innovation types for surviving in such a new environment (i.e., products, processes, positions, paradigmatic and social innovation) (Storsul and Krumsvik 2013).

The main scoping of this chapter is to shed some light on the overall innovative activities of a new Iranian digital music distributor, “*Bceptunes.com*”. More

precisely, this research work seeks to add to our understanding of how can five types of media innovations (i.e., products, processes, positions, paradigmatic and social innovation) (Storsul and Krumsvik 2013), in digital music distribution make successfully “an efficient media market” (Khajeheian 2013), specifically in an emerging market, i.e., Iran.

In order to achieve the purpose of the present work, this chapter is organized as follows. First, with a brief review on the terminology of media innovation, we show that what are the main dimensions of media innovation, based upon the work of Storsul and Krumsvik (2013). Second, the theory of “efficient media markets” will be described according to the research of Khajeheian (2013), that his theory is based on the work of Eliasson and Eliasson (2005). Third, in order to provide an appropriate context for deep understanding of online business music, music is defined as a creative industry, as a service, and as a copyright industry. Then, the typology of music distribution will be described. Finally, after analyzing of *Bleepunes.com*, as an Iranian case in digital music distribution, the theoretical and practical implications of this present paper will be discussed for media scholars and music practitioners, specifically in emerging media markets.

2 Literature Review

2.1 Media Innovation

The concept of media innovation has been described in various ways by different media scholars. According to Westlund and Lewis (2014, p. 15), media innovation “refers to change not only in media technologies but also in media practices—i.e., practices carried out by media professionals as well as practices associated with user innovations”. In another study, as noted in Lomborg and Helles (2013), media innovations belong to today’s online environment. In a detail description, they explained that:

We understand media innovation to encompass not only the activities of legacy media on digital platforms, but also the activities of new media businesses that have developed online, such as online games and social media. Common to both forms of media businesses is that they face a new range of opportunities for innovation that spring from the online environment (Lomborg and Helles 2013, p. 146).

Dogrue (2014) offers a broader definition of media innovation and tries to consider the important aspects of this concept. She describes that media innovation encompasses:

not only new media content or technology products, but also organizational changes, new services, and new mental models of media businesses and organizations are covered as media innovations. Furthermore, the term ‘media innovation’ is not only limited to addressing new media products, services or concepts, but also describes the whole innovation process, namely the exploration and exploitation of opportunities that result in these new or improved objects (Dogruel 2014, p. 54).

Storsul and Krumsvik (2013), as we have used in this paper, introduced the appropriate definition of media innovation as a kind of change in four aspects of media landscape. Their proposed framework considers a variety of media innovations including the development of new media platforms, creation of innovative business models and production of new media texts. Having used the findings of Francis and Bessant (2005) regarding four types (four Ps) of innovation, Storsul and Krumsvik provided a proper categorization that a range of different media innovations embedded in their framework as follows: (i) *product innovation* that it includes new changing in the products and services offered by a media business, while (ii) *process innovation* relates to changes in the ways in which products or services are created and received; (iii) *position innovation* tries to create changes in how products and services are positioned within specific contexts, by some activities such as “management of identities, advertising, marketing, media, packaging, the manipulation of various signals and addressing a new target audience”; and (iv) *paradigmatic innovation* refers to changes in whole mindset towards business, values and business models; for example, in relation to music industry, we observed drastically changing in CD sales to different music streaming services and therefore, it can be considered a kind of paradigmatic innovation. Nonetheless, as Storsul and Krumsvik (2013, p. 17) mentioned:

the four Ps are not sufficient for describing all kinds of media innovation. The innovative use of media and communication services for social purposes does not necessarily imply new product or services, but could also concern using existing services or products creatively to promote social objectives.

Moreover, they added the fifth type of innovation in a media business as “social innovation”. It includes new social ways of media services for different social needs, and finally it will be an innovation in order to improving of people’s lives. Therefore, for analyzing of media innovations, we need to know about five aspects in every media businesses, including product, process, position, paradigmatic and social innovation.

In addition to all the works that go into understanding of the nature of media innovation, some researchers have pointed to main facilitators or obstacles of media innovations. For example, as Doyle (2013) emphasized, legislation for media organizations in this digital age, is a hinder of businesses to be innovative. Doyle mentioned that, “the problem is that while some sectors of the media are still regulated as cultural entities, what they really need in the digital age is a looser regulatory environment that supports innovation and allows the development of large companies that can become successful global players” (Doyle 2013, p. 122). However, the results of Bustinza et al. (2013) encourage policy makers to provide powerful intellectual property rights regulation which weakens file-sharing across the digital media.

2.2 Efficient Media Markets Theory

According to Eliasson and Eliasson (2005), the music market is made up of large companies (e.g., a major music publisher) and innovative artists and audiences. On the other hand, the direct connection of large companies with artists and audiences is not feasible or cost-effective. Therefore, there are demands for intermediary music businesses to link high corporate budgets with creative artists and audiences. These music firms can be considered as a “facilitator” and also, they can have different functions in cases such as legal, technical, distribution affairs and etc. As explained by Khajeheian (2013), a media market in the music industry is efficient when there are enough intermediary businesses; which these firms, appropriately, can build a connection between large corporations and creative artists and audiences. In the another recent research, Khajeheian and Friedrichsen (2017, p. 348) noted that, “facilitators create a match between large companies and small ones, make space for value adding and synergetic cooperation and also provide exit markets after success of innovations”.

In particular, the digital music distributors in the music industry are the same “facilitators” which were described in the “efficient media markets” theory; they obtain the agreements of major music publishers regarding the copyrights of their musical products. Moreover, these distributors bring digital products to the audiences through specific mechanisms, which can be a kind of motivation for the novice artists in order to introduction of their musical product. Without such action, they have to engage in contracting with large corporations; as well as the discovery of talents for two important groups, major companies in order to “invest”, and for eager audiences in order to “spend”.

2.3 Understanding of the Music Business

As Strasser (2009) defined, a music business consists a full range of necessary activities for production, promotion, performance and distribution of music products and services. After this section, with a more detailed review of literature related to the nature of the music industry, there will be a deeper insight into the music business. For this purpose, we will provide some explanations regarding music industry as a creative industry, music as a service and music industry as a copyright industry. Then, typology of music distribution will be articulated.

2.3.1 Music Industry as a Creative Industry

In order to better understand the concept of the creative industry, two phases of technological change must be taken into account. The first one refers to the concept of “cultural industries” that emerged as a result of technological change in the early

twentieth century. In this period, the focus was on combination of “arts” with the commercial media (like music or broadcasting); apparently, the researchers have been took a pessimistic view of the art in the modern age (Adorno 2001; Horkheimer and Adorno 2006). The second phase is related to the technological change of the late twentieth and early twenty-first centuries. As Cunningham (2002) pointed out, this new technological change and digitalization has transformed the previous old view of “cultural industries” as “big corporation mass produced entertainment”. He asserts that individuals are able to make creative use of new technologies, specifically in this new digitalization context.

Based on these discussions, one can conclude that the music industry is considered as a “creative industry”; because artists and audiences can have their own creative use of new digital technology. In this regard, Preston and Rogers (2011) argued that Internet and new digital technologies have enhanced opportunities for independent artists, and this new digital environment encourage a “do-it-yourself” approach, even for audiences. On the other hand, independent artists can more easily use from the new digital media in order to advance in the path of their promotion. In other words, as Campbell (2013, p. 54) mentioned, “For the artist, the digital dimension provides a means of music distribution, and importantly a means of building a fan base. Further, the internet can be used to get feedback and support from fans”.

As stated by Li (2015), the integration between different creative industry and music industry can led to the outcomes like “The digital music, music book publishing, recorded music (physical), music media (such as music radio, TV, film)”. However, there should not be a short-sighted look at the production of products in the music industry. Lorenzen and Frederiksen (2003) argued that “creative industries consist of complex networks of specialized agents. How such networks are organized and facilitate product innovation often differs between market contexts”. Moreover, they noted that because of “ambiguous customer tastes”, in the creative industries, like music industry, it’s very difficult to sell products to a large scale of people.

2.3.2 Music as a Service

According to Wikström (2009), with the advent of new technologies over time, “music will be like water or electricity” and because of this, “the commercial value of providing access to an individual track is infinitesimally close to zero”. In such new media landscape, we have faced with a kind of “friction-free network” and there is a lot of information in this environment. Wikström (2009, p. 7) explained that:

In a world where information is abundant, people may not be willing to pay a premium for basic access to that information, but they are most likely willing to pay for services which help them navigate through the vast amounts of information.

In this new digital age and the new world of social interactions, music businesses must be comprehended that the audiences desire to have something more than an only music file. For some music business scholars (Liikkanen and Åman 2015), Music as a service was in the center of focus instead of devices, products and etc.

2.3.3 Music Industry as a Copyright Industry

The revenue streams from the copyright in the music industry is so important that emphasized in Wikström (2009) by labelling “the music industry as a copyright industry”. Music industry is used copyright law increasingly, in order to protect itself against the threats of new technologies (Preston and Rogers 2011), such as illegal downloading music files on the internet.

For example, Towse (2016) discussed about how music publishers revisited their copyright law for adapting to the new streams of royalty due to arising of the successive technologies. In this regard, through a historical approach, she showed that how music publishers in the UK survived from the effects of market changes, by shifting from the long established sales model to that of rights management.

Fortunately, some findings underline that digital music purchasing behavior dose not affected negatively by digital music piracy; this indicates that “although there is trespassing of copyright, there is unlikely to be much harm done on digital music revenues” (Aguiar and Martens 2016, p. 28).

2.3.4 Music Distribution Typology

The typology of music distribution, as Wikström (2012) proposed, consists of three models; (1) *the ownership model*: this model refers to the time when the customer has a sense of ownership after buying music products (e.g., physical CD or Music file by downloading) (2) *the access model*: in this model, music is seen as a service (like music streaming services) rather than a product; in other words, “there is a steady flow of information about their real-time musical experiences”, therefore, “experience replaces ownership”, and (3) *the context model*: since the advent of digital era and arising the age of “hyper-competition”, Online music servies must move beyond the only access model and provide a “context”; Wikström (2012, p. 11) states, “that context may for instance enable music listeners a way to search and easily find the song they are looking for at a particular time, to share their music experiences with their friends, to organize their favourite music experiences in convenient ways, etc”. Eventually, as mentioned by Wikström (2012, p. 7), “these models are not substitutes for each other and may co-exist serving different market niches”.

Specifically in relation to digital context, Premkumar (2003) presented a detailed set of strategies for digital music and the major issues related to successful implementation of each of these strategies. He believes, upon which various opportunities have been created by the digitization of music. Digital technology

has brought its own distribution methods and it is expected to become the only way to distribute music in the future. As Kjus (2016, p. 2116) noted, “developments in music distribution are often seen as following a one-way street from physical to digital technology”. Peltz (2013) identifies two methods of music distribution in the digital era (i.e., downloading and streaming) and argues that physical distribution of music (with high transportation costs and durations) is not suitable for today’s media age. Based upon the studies of Tschmuck (2013), the physical music distribution has transformed to a market of digital music service and the popularity of music streaming service will accelerate this process. In this regard, Dogruel (2014, p. 63) recalls the social implications of music streaming and noted that, “music streaming also constitutes a new media product innovation from a consumers’ perspective, bringing in new ways of consuming, discovering and sharing music”.

3 Analyzing Iranian Case: *Beeptunes.Com*

Beeptunes is one of the first online music businesses that was launched in the early 2010s, with the goal of institutionalizing the culture of protecting the rights of artists and promoting legal music in Iran (Atashi 2015). Generally, this online firm legally sells digital music in both single track and full-album modes. The financial success of this business was very significant that it could attract attention of several country’s most important news agencies (Fars News Agency 2015). In the following section, some examples of media innovations in *Beeptunes.com* will be presented in five important aspects, including product, process, position, paradigmatic and social innovation.

3.1 *Product and Process Innovation*

In addition to selling single song and full-length albums, *Beeptunes* offers other creative products for sale in its website. For example, through selecting a series of songs in particular genres (e.g., traditional, pop, rock, etc.), it has created new albums that can attract the attention of the audience interested in that genres. Moreover, except selection of songs in accordance with their genres, *Beeptunes* has provided new albums based upon the specific events (e.g., for breakfast, lunch, dinner, study, etc.).

Along with offering of such digital music files, this online firm has prepared other digital products, including audio books (in various fields such as educational, entertainment, etc.), radio podcasts and video files (e.g., concerts, clips, interviewees, etc.). These activities can have a positive impact on the number of potential customers in various segments. In addition, this website allows users to create their own custom play lists and then buy them. Perhaps the “over-

classification” of digital files on this site (based on genres, styles, products, occasions, sales, etc.) will make the audience confused for choosing a product. It seems that *Beeptunes* should offer their digital products in a more innovative process for each target audience.

Audiences on this website can purchase their digital products in two ways: credit enhancement or immediate online purchase. Nevertheless, in those two cases, it is necessary to registering of the user on the site; in this way, due to the more length of the purchase process (for mandatory registration), it does not seem to have a positive effect on purchases of “passing” customers. Another problem with this online business is that a target audience group, i.e., “Iranians living abroad”, has not been considered in the process of purchasing digital products. In order to allow these individuals to buy the digital products of this site, it is necessary to build a connection between the purchasing mechanisms of *Beeptunes* and international financial ports (e.g., Paypal).

3.2 Position Innovation

Beeptunes defines its sale position through beautiful graphic design (as a main strategy of position innovation in *Beeptunes*) of some specific digital products (often their newest albums) on the first page of the website for audiences. The following screenshot (Fig. 1) from the first page (home page) of *Beeptunes*’s website indicates how this company want to define its position in relation to certain digital albums.

Another important factor in defining the favorable position of this business for Iranian society is the reports of products sales that are published by various news sites (e.g., *Fars News Agency*, *Honaronline*, etc.). In fact, with the help of a digital platform and recording all the activities in it, *Beeptunes* can publish “attractive reports” or “creative storytelling” from its product sales statistics regarding a large number of diverse digital products. Such activities can enhance the company’s position not only for buyers of products, but also for other media and academic institutions.

Sharing the vision of *Beeptunes*, clearly and transparently, with the audience’s website can improve the “overall position” of this business continually, and it identifies its nature to others and even competitors. But, unfortunately, this online business has not given any details about the identity and prospect of this business up to now (July 2017); therefore, its overall position and also, its identity will remain “untouched” for the audience.



Fig. 1 The screen shot of BeepTunes's first page (July 13, 2017)

3.3 *Paradigmatic Innovation*

Prior to the advent of *Beeptunes*, all of the legitimate music distribution websites sell their musical products only physically (not digital files). With a paradigmatic innovation and in a legal context, this online business was able to change the nature of business models in music digital distribution in Iran. If the company wants to continue its paradigmatic innovation, it should be considering the importance of all other innovations, specifically social innovation, and, by their creative combination, *Beeptunes* can create a new paradigm in the industry. Now, the company's whole effort is to best represent its digital products to the audience and sell them as much as possible. If in the future, the musical files atmosphere of Iran saturated with digital files completely, like "electricity", it is expected that this online business will inevitably have a paradigmatic change in the nature of its business through new innovative ideas.

3.4 *Social Innovation*

As mentioned in the previous section, selling products as much as possible has clearly been the main goal of this website. Except that the site allows users to write their comments on different digital products, the social interaction of the audiences has been considered in no other way. It seems that *Beeptunes* has not been able to provide a "social context" for its audience: where the audience finds more than the "only" digital files. Perhaps, this online firm's lack of attention to the social innovation is that there are still no serious rivals regarding digital music distribution for this business in Iran; although some similar online businesses are emerging and progressing (e.g., the website of *Ritmo.ir*). It is expected that in the near future, social innovation will become one of the key sources of digital music distributors to achieve sustainable competitive advantage.

4 Discussion and Conclusion

Digital technologies opened up new windows for music businesses and largely changed the role of key actors in the music industry. We believe that, as Rogers (2013) and Peltz (2013) have highlighted, the digital platform in the music world has made decentralizing the power of major companies and instead, has empowered independent artists; based on the evidences, these changes never been seen by artists in the past. In this regard, Rogers (2013, p. 191) asserts that, the emergence and increase of digital business in the music industry "has enhanced opportunities for independent labels and performers to pursue a 'do-it-yourself' approach". Moreover, Regarding the distribution of music, Peltz (2013, p. 114) noted, "never

before in the history of the music industry, have content providers had such a vast variety of distribution models at their disposal as they do today”.

As a “facilitator” in the music market, *Beeptunes* for first time in Iran, was able to collect copyrights from large companies in a “legal” context, and with a well-designed website, bring digital music products with ease to customers. As a result, through “copyrights management”, this online business in Iran has played an important role in creating an efficient media market especially in the music industry.

On the other hand, through analyzing a case in Iran, we showed that the basic model of music distribution in this online business is in accordance with the “ownership” model (Wikström 2012). While, according to Wikström (2012), we believe that the “context-based” model, which provides more creative online environments for its users, will create a more rich media market in an emerging economy.

As discussed in the previous sections, most of the media innovations in *Beeptunes* have been aimed at selling digital products to their audience as much as possible. In consistent the work of Küng (2013), this online music business should consider digital platform as a new way for engaging the audience to its business, instead of considering it as a space to merely sell of musical digital products. The innovative strategy for this business will not be sell digital products at lower prices, because based on the research of Bourreau et al. (2017, p. 598), “in the music industry, consumers search more for finding a product that fits their taste than for lower prices”. As noted in McCarthy (2013), music has been a basic need for humans in all ages and will always be; as a result, the key to the success of online music business is to pay more attention to the main actor in the music industry, namely “human beings”. As Vaccaro and Cohn (2004) noted, digital music distributors need to compete for “consumers’ hearts, minds, and wallets”.

One of the key sources of creativity for digital music distributors is to pay more attention to the importance of “user innovation”. Although in accordance with some studies in relation to the other sectors of the media industry (Khajeheian and Friedrichsen 2017; Khajeheian and Tadayoni 2016), the importance of user innovation has been shown in order to have an “efficient media market”. However, in the our case study (i.e., *Beeptunes*), it became clear that there was no particular strategy for harnessing of user innovation. On the other hand, user innovation in an online music business can provide a suitable situation for having a “superior user experience”. In this regard, according to Peltz (2013), if digital music distributors can provide such a circumstance for their users, the “piracy” of digital music will be reduced.

This chapter contributes to the discussion on the types of media innovation in digital music distribution, focusing on an Iranian case. We showed that how media innovations, as are classified by Storsul and Krumsvik (2013), in the distribution of digital music create an “efficient media market” (Khajeheian 2013) in an emerging economy like Iran. Based upon these findings, in consistent with another researches (Doyle 2013; Küng 2013; Liestøl 2013; Shtern et al. 2013), it can be concluded that digital platforms are not the only “technical” objects, but rather they create complex

“social” networks that are heavily dependent on the user’s innovative activities. Eventually, as emphasized in Liestøl (2013), we indicated that media innovations should not be limited solely to technological innovations; instead, online businesses must take a more “humanistic” look at it.

4.1 Practical Implications and Future Studies

This current research has a number of practical implications in the music industry, especially for emerging economies like Iran. As Khajeheian (2017) and also Hang (2017) emphasized, the advent of new technologies and social media has created many opportunities for value creation in emerging media markets. Therefore, in the first step, based upon the work of Achtenhagen (2017), practitioners in digital music distribution should strengthen entrepreneurial orientation in their entire business in order to make the best use of these new opportunities. In the next step, it is suggested to media entrepreneurs that, in addition to introducing their digital products to audiences, it is better to focus on creative ideas for reinforcing of social innovations. In other words, entrepreneurs in the digital music distribution need to create a “context” in which the audience find something beyond a music file.

Based upon the findings of this present work, conclusively, it can be inferred that researchers investigate how digital music distributors can enhance social innovations in their businesses as well as user innovation. It is also recommended that media scholars, along with using the other attractive theories in the field of strategic management, especially the dynamic capabilities theory (Eisenhardt and Martin 2000; Teece and Pisano 1994; Teece et al. 1997). Having combined them with the theories used in this research, model may be established for achieving the sustainable competitive advantage of these online music distributors.

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Competitive Capabilities in Film Distribution Market: The Case of Filimo



Ali Hajmohammadi

Abstract In the Iranian film industry, movies have been traditionally distributed for many years through a physical market in the form of CDs or DVDs after they satisfied their theatrical exhibition. Virtual space however has provided rival companies with an opportunity to gain a share in the movie distribution market. A notable rival here is Saba Idea Company. As a small media entrepreneur, the company has launched a film distribution website, dubbed ‘Filimo’, in a bid to fetch a portion of the distribution market. Having enjoyed the assistance of two cell phone companies and a major ADSL service provider in Iran, Filimo has already presented a major rivalry to the physical movie distribution system. This paper follows Kranenburg and Ziggers’ innovation-centered business model to discuss a set of capabilities that might have helped the small media entrepreneur in I.R.Iran to develop a strategy that is promising for its competition in the film distribution market. In the meantime, I discuss the business environment of film distribution in Iran with a focus on challenges facing the traditional models of distribution following the emergence of the Internet.

Most opportunities in the field of media can be traced back to their roots in technological invention and/or innovation (Hang 2016: 20). But, it remains a major hurdle for media firms ‘to choose a particular organizational mode for the development of new business opportunities’ (Emami and Khajeheian Forthcoming: x). In Hang’s view, venture capital investment helps ‘incubate’ more opportunities and create or discover future opportunities with a view to ‘spread risks from the company’s existing product lines’ (2016: 20). The venturing process, on the other hand, would serve as a challenge to economic bases and sustainability of established media (ibid).

There are several organizational modes for engaging in such venturing investment; a new business creation may occur either within a hierarchical framework or

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through market modes. In the former, the new entities start and develop within an existing corporate body, either by establishing the new business inside or by acquiring another business to merge with the firm's own operation. In the latter, venturing may be conducted by setting up new business entities outside the company's boundary or making strategic alliances in a cooperative base (Venkataraman 1997: 131). The choice of mode may depend on several factors, including cost (transaction cost and agency costs), speed and market power (strategic behavior) and/or appropriability (resources and capabilities view of the firm) (ibid, 132).

Either way, the venturing process is led by technological advances that help attend to customers' demands, and in order to maintain the capability for innovativeness, the key is to acquire information about changes in consumer patterns as well as technological changes and possibilities (Achtenhagen [Forthcoming](#): x). These technologies are 'disruptive' (Funk 2005: 98) in that they improve some aspects of the product performance while sacrificing others, thus making the new technologies appropriate for a new set of customers. As Funk states (97), lead users of the old technology are largely the initial users of the new technology. Funk also notes that incumbents in the new technological market are often the winners since they can use their existing processes and business models to introduce products that are based on the new technology.

Internet has emerged as a major case of the new technological advances that lead the new media business. Feldmann and Zerdick argue that a central feature of the Internet is its nature as a network, 'which fosters the emergence and development of positive externalities' (2005: 19). They consider these positive externalities as 'the rapid attainment of a critical mass as a first mover' and 'the opportunity it presents for expanding essential basic functions of communication' (21).

In Feldmann and Zerdick's argument, the film business serves as a major branch of the media industry that is subject to major changes on account of the Internet, with small, independent companies having the capacity of using the Internet for marketing and distribution purposes (25). And, as Kehoe and Mateer put it, the Internet has helped transform the conventional rules of film distribution (2015: 94). An example of the transformation may be seen in a shift from physical distribution of films to virtual distribution through the Internet as is the case in the Islamic Republic of Iran.

This transformation of distribution rules however has never been free from the challenges involved in a stiff competition between traditional distribution companies and the emerging ones on the Internet. Such challenges, among others, arise from how media companies organize the new business activities that seize the opportunities and how to develop 'new competences' through these opportunities and, ultimately, generate profits (Hang 2016: 20–21).

Taking the account of such challenges, some argue for an 'adequate adaptation' to the changing environment that involves a strategy meant to 'to obtain, integrate and reconfigure resources and capabilities' (Kranenburg and Ziggers 2013: 239). Media firms, under the strategy, are supposed to 'simply build capacity to manage a

customer responsive network' (ibid). The strategy is treated as part of a business model called innovation-centered business model.

Kranenburg and Ziggers note that digital technology has eroded the benefits of scale to media companies. They approve Oh's argument (1996) that the existing resources and capabilities available to traditional media companies are no longer sufficient to deal with the new demands and requirements in the changing market (ibid). They argue that media firms would no longer need to make the 'three-pronged investment' that involves manufacturing, marketing and management as Chandler once offered in 1990; instead, they may simply build capacity to manage a customer responsive network (ibid).

Kranenburg and Ziggers argue for the formation of capacity-building 'network firms' and note 'flexible specialization and contracting may today yield greater advantages than economies of scale and scope generated internally' (240). Accordingly, media firms have to rethink their traditional manner of revenue generation, the structure of their organization, their core competencies and the way of creating value through new opportunities; actually, they have to redesign their business model by which to create, deliver and capture value (ibid). This may, among others, be accomplished through new forms of collaboration.

Media firms, as Kranenburg and Ziggers put it, must actively work to disrupt their own advantages as well as the advantages of their competitors by continuously challenging the existing capabilities. To that effect, they argue for a strategy of both exploiting the existing businesses and exploring new ones, calling it 'a strategy of ambidexterity' (ibid, 244).

According to the researchers, a set of 'dynamic capabilities' are required to become an ambidextrous organization, run an innovation-centered business model and obtain a sustainable competitive advantage (245). These dynamic capabilities are meant to help the company to create, adjust and keep relevant stock of capabilities.

Kranenburg and Ziggers define a 'dynamic capability' as a deeply embedded set of skills and knowledge exercised through a process, enabling a company to stay synchronized with market changes and to stay ahead of competitors. It entails the capabilities that enable organizational fitness and help shape the environment advantageously.

They consider two main functions for dynamic capabilities: (1) sensing environmental changes that could be threats or opportunities, by scanning, searching and exploring across markets and technologies ('market sensing capabilities'); (2) responding to the changes by combining and transforming available resources through partnerships or acquisition ('relational capabilities'). These dynamic capabilities would help the media companies to select the business model reconfiguration for delivering value and capturing revenues (ibid).

The present paper applies the innovation-centered business model and the concept of 'dynamic capabilities' to discuss and explain a set of capabilities that might have helped an online film distribution company in Iran to design an environmentally-advantageous business model for successfully competing with traditional, physical distributors. It studies the case of the newly-launched Iranian

film distribution website ‘Filimo’ as well as a corporate venture (or collaboration) between several digital media companies that underpin its development and competition.

First, the business environment of film distribution in Iran is discussed with a focus on challenges facing the traditional models of distribution following the emergence of the Internet. In the meantime, the author discusses how a digital company reconfigured a business model based on the Internet and innovated a virtual solution for the distribution of films. A discussion of the business model of the digital company follows with a focus on the capabilities that might have helped it to advance the innovation. The data were gathered through a combination of observations and study of related website.

1 Building on Advantages of Digitalization

In the Iranian film market, movies are usually placed in a physical home distribution network after they satisfy their theatrical sales. Every week, average two domestic movies and five foreign ones hit the distribution chain, according to latest figures at hand (Rezvani and Marhamat 2012: 186). These movies are available at video clubs, supermarkets, and many retail shops nationwide.

The distribution business has growingly become promising as customers, especially those who have failed to cover the theatrical sales, show an increasing tendency for watching their favorite movies at home (ibid). At the same time, the value of patents for home-produced movies has grown strongly over the past few years and even outperformed those of the theatrical sales, further making the movie distribution business profitable (ibid). The situation has prompted media entrepreneurs and particularly movie producers to pay attention to the distribution network as a major source of profit to the extent that some producers primarily focus on the network as their target market.

Movies have been traditionally purchased by certain institutes in charge of the physical distribution network before being distributed nationwide in the form of CDs or DVDs. Figures released by the IRI Ministry of Culture and Islamic Guidance show that nearly 35 million copies of domestic or foreign movies are distributed through the network nationwide every year (ibid, 187). Movies are mass copied and distributed at 200–500 thousand copies and some are even mass copied at double the number. The mass-copying figures may logically stand for the extent of those customers who prefer to watch movies outside the theatrical sales cycle.

The emergence of the Internet proved a source of motivation for the Iranian entrepreneurs in film distribution business. They had for a while kept an eye on the profitable business and at the same time, were aware about the advantages of digitalization, including in film distribution. The Internet left its impact on the market with customers growingly showing an appeal for the advantages of virtual space. In the course of several years, the physical distribution network suffered a

blow with one third of the copies never sold in 2012, only to be returned to warehouses (Rezvani and Marhamat 2012: 187).

Numerous large and small digital media companies started to operate over the Internet with an eye on the advantages of digitalization including Saba Idea Company. Founded in 2005, the small media company started work as a media industry entrepreneur in the virtual space with a stated goal of 'value creation in the Internet-based business,' according to its website at www.sabaidea.com. The company developed and launched several Iranian portals that absorbed high levels of hits. These included a free of charge video sharing website dubbed 'Aparat'.

Billed as the Iranian version of Youtube, the video sharing service quickly grew popular among the Iranian customers and was even welcomed by the Farsi-speaking populations in the neighboring countries of Afghanistan and Tajikistan. It was appreciated as the top video sharing digital service in the Internet in the I. R. Iran with over four million hits a day, back in 2014.

Aparat as an Internet-based digital video sharing service enjoyed several advantages that actually mend for disadvantages of the physical distribution market. These are discussed below.

The Internet removed the need for the customers to go to shops or video clubs to buy their favorite movies in the form of CDs or DVDs. It also facilitated access to a wide range of movies at a single time while the physical market's possibilities were much more limited.

Customers had to operate special devices to play the CDs or DVDs while they easily watch movies on the Internet through auto-run applications. Also, they may watch movies online in private on their smart phones while it is much of a group work to watch CDs or DVDs at home. They may also save their favorite movies in their smart phones and retrieve it whenever wished unlike the constraints facing the home devices. It is notable that the advantage was actually a co-advantage of personal data storing devices and the Internet.

One more co-advantage of the combination of Internet and storing devices was that the customers could decide to watch specific points of the movies they wish more conveniently and share them with larger groups of friends or colleagues. The co-advantage was especially interesting in that it helped satisfy the demand of customers to quickly retrieve a specific point of the films for relevant use in social communication.

Additionally, customers holding smart phones may enjoy the entire already discussed advantages anytime anywhere as they have got free from the constraint of plug and socket. This is also a co-advantage of the Internet and portable, tiny power storage devices.

Add to these the low cost and minimal wear and tear in film materials in the form of compressed files that are available through the Internet and stored in smart phones unlike the relatively higher costs of CDs and DVDs and extensive wear and tear in the hard material.

There are two more key advantages of film sharing through the Internet that are related to media economics. For one thing, the Internet thank to media convergence has enabled the customers to watch films while being able to pause to check their

SMSs or do other media-related jobs unlike traditional film play devices. And, it has enabled the customers to share their movies with one another without losing access to their own material. As public goods (Reca 2006: 183), films on CDs or DVDs may be shared with others but holders would have no access to their material as long as they are used by others. Storage of films on smart phones or desktops through the Internet however enabled the customers to share them with others without losing access to their material.

Building on these technology-driven advantages, the Aparat video sharing service gained a growing share of the film distributing market over time. Customers were actually developing a habit for using the virtual space for watching their favorite movies at the expense of the physical distribution market. They were further motivated due to the fact that the Aparat content was free of charge, though advertisement accompanied its content.

The habitual evolution intensified amid an expansion of the Internet and mobile phone services nationwide. The Aparat video sharing service had helped the Saba Idea company to appropriate a growing portion of the critical mass of film watchers available in the physical distribution market.

As said earlier, the video sharing service was acclaimed as the top service of the kind on the Internet in I.R.Iran, having received over four million hits a day back in 2014. The media company appeared to have gained a critical mass to create a capacity for capturing value in the market. This led to the creation of the Filimo innovation in February 2015 by which to offer the customers a platform for watching Iranian and foreign movies online.

While having combined the digitalization-driven advantages of Aparat, the Filimo had its own advantages as well. For example, the digital distribution service was offered through an application compatible with the speed of the Internet in Iran. The service started to run in 2015 under the motto of ‘watch films without a break.’ The motto alluded to an intermittent break in the Internet services offered by some service providers in Iran. By the motto, Saba Idea Company actually promised its customers to provide them with an unbreakable service. The motto also alluded to the access of a small portion of Iranians to high speed internet. An official report says only four percent of Iranian users had access to high speed internet back in 2013 (Itna, URL). Much more Iranians at present have access to high speed internet however the internet services nationwide are largely low-speed and face intermittent break.

Adding to its own advantages, the digital service could be accessed via smart phones and smart TVs through a special application that allows the customers to adjust the quality and resolution of their favorite movies or download them.

Moreover, Saba Idea Company premiered the film distribution service with a debut series titled ‘Dandoun Tala’ (the golden toothed) that was directed by the acclaimed Iranian director Davoud Mirbagheri. Interestingly enough, the series were simultaneously distributed through the physical distribution market nearly at an equal cost.

Filimo was launched in 2015 but only came in vogue a few months ago when the Saba Idea Company received a joint venture by three large media companies,

including two cellar phone companies (namely Hamrah-e Avval and Irancell) and an ADSL service company, called Asiotech. These companies hold internet services in Iran in large part. The appeal of the video sharing service among film watchers had served as a motivation for the companies to join the venture investment.

As of February 2017, the two mobile service providers offered free of charge traffic data to any customer who wished to receive video content from the Filimo website (Isna, URL). Subscribers to the mobile service providers may log on a digital shop titled 'Filimo home cinema audio and video products' and receive access to the entire available content at the shop with free of charge traffic. Irancell however demands its subscribers to pay 3000 rials (nearly 10 cents) a day for the service.

The free of charge traffic service is slated to run until September 2017 with likely extensions. It has already been extended once.

Irancell also sends its subscribers promotional items on the Filimo content. For example, when a client applies for charging his or her Simcard, Irancell sends him/her a notification message that ends up in a promotional content, encouraging the subscriber to use the Filimo content free of charge.

For its part, Asiotech, as the largest internet service provider in Iran, has offered a range of discounts to its subscribers for the use of the Filimo content. The Filimo portal at www.filimo.com opens with an ad that promotes Asiotech's discounts for those subscribers that visit the film distribution website. Asiotech only charges its subscribers 10,000 rials (nearly 30 cents) a month for the service.

Asiotech's portal too has a series of promotional items on the Filimo content. When a subscriber enters the website at www.asiotech.ir to check his or her status or apply for related services, s/he would be treated with a large-size looping gif that promotes the Filimo content. Also, subscribers to Asiotech may find a VoD icon at the bottom of the portal that is linked to a separate page on video-on-demand services. Six VoD services are promoted there, including the Filimo content.

2 A Business Model Focused on a Platform Shift

As said earlier, movies in the physical distribution market in Iran have been mass copied and distributed at 200–500 thousand copies and some are even mass copied at double the number. The author also took the figures as a logical parameter for estimating the extent of those customers who prefer to watch movies outside the theatrical sales cycle.

The author would like to argue that a critical mass for creating a new market was already available at the physical distribution market in Iran before the Internet services were focused on as a source of market capabilities. It follows that the Internet only helped to *move* this critical mass to another market sector by convincing the customers to choose for the virtual platform for watching their favorite films. Therefore, besides the situations where the Internet helps the rapid *attainment*

of a critical mass, as Feldmann and Zerdick argue (2005: 21), we might consider cases where the Internet helps the *appropriation* of this critical mass by moving it from one market sector to another; actually, the critical mass already exists before it is appropriated (rather than attained) by a competitor. In the case of the present paper, Aparat was actually gradually appropriating a critical mass that was already attained by the physical distribution market.

It follows that Aparat innovation helped the holder company to appropriate (or attain, anyway) the critical mass because it was a 'first mover' in the digital movie sharing market, to use Feldmann and Zerdick's concept (2005: 21).

Also, Aparat was actually used as a capacity 'to disrupt the advantages' (Kranenburg and Ziggers 2013: 244) of competitors in the physical distribution market. This capacity, as discussed above, was created thank to new advantages offered by the Internet for film distribution. This disrupting initiative took a boost from the fact that the Aparat content was free of charge, though advertisements accompanied the content on the company's portal as a strategy of attention economy (see Napoli 2001).

Furthermore, having been an 'incumbent' (Funk 2005: 98) in the video sharing services online, Saba Idea Company enjoyed the capability to start to create and capture value in the digital film distribution market on the Internet.

Also, as a small media company, it achieved the capacity to create value in the digital distribution market through forming a capacity-building 'network firm' (Kranenburg and Ziggers 2013: 240) that involved three large media companies as well.

These large media companies joined a venture investment with Saba Idea based on the mode of 'making strategic alliances in a cooperative base' (Venkataraman 1997: 132). Under the venture investment, the small media company made for an inadequacy in its organizational capabilities while the large companies advanced the innovation in the digital film distribution market in a bid to disrupt the physical market and create a profitable business on the Internet.

Taking the account of the Aparat service launch, Saba Idea Company appears to be among the first media firms to sense the environmental changes that followed the emergence of the Internet ('market sensing capabilities') and was, apparently, the first to respond to the changes by combining and transforming its available resources through partnerships with several large media companies ('relational capabilities') before the Filimo launch.

The Company's available resources included 'digital application compatibility' and 'easy access via smart devices' that were combined with the capabilities of 'reach to massive customers' and 'promotional discounts' of the large media companies under collaboration. These dynamic capabilities helped the small media company to select a business model reconfiguration for delivering value and capturing revenues. The Company responded to the environmental change by developing an innovation and joining collaboration in a bid to create a capacity in response to the customers' demands amid the emergence of digitalization.

With a critical mass already at hand in the physical distribution market, the Company might only have to run an innovation-centered business model that would

help it appropriate the critical mass. So, it apparently run a business model that focused on a strategy of *motivating* the customers in the physical distribution market to shift to a new, digital platform on Internet for watching their favorite movies. Filimo innovation was intended to do the job. Movie customers however needed first to change their *attitude* concerning the physical distribution market. This mission of attitudinal change was carried out through the Aparat video sharing service several years before the Filimo was launched.

The Company capitalized on the advantages of digitalization in its bid to change the attitude of the customers towards watching films online. Aparat's free of charge services were also instrumental in having the customers to change their attitude towards digital film services on the Internet. And, it only took a few years to accomplish the mission; as said earlier, in the course of several years, the physical distribution network suffered a blow with one third of the copies never sold in 2012, only to be returned to warehouses (Rezvani and Marhamat 2012: 187).

But, to have the customers to pay for watching movies online through Filimo, the Company has had to obtain more capabilities. For one thing, it has to attain access to and encourage a massive range of potential customers who might be willing to pay for online watching. The access and encouragement were provided by the large media companies which offered the digital services at major discounts to their massive clientele. Furthermore, it has had to facilitate the film watching possibilities to the customers and the mission was to be accomplished through a digital application that was compatible with the technical features of the Internet nationwide and its easy accessibility on smart devices.

Content-wise, the Company premiered Filimo with a debut series (Dandoun Tala) that was directed by a famous Iranian director in an apparent bid to further motivate the customers to pay for watching films online. In doing so, the Company sought to apply 'brand leverage strategy' (Reca 2006: 194) in the competition for film distribution. The simultaneous distribution of the series through the physical distribution market would have provided the Company's managers and other market experts, including those with the large media companies that started collaboration with the Company, to weigh the levels of motivation among customers for watching films online.

Whether or not the Filimo innovation may win the rivalry against the physical distribution market remains to be seen, however, a promising Filimo innovation would absolutely serve as a strong source of motivation for the large media companies to start a new business on their own accord in terms of a 'strategic acquisition' (Eliasson and Eliasson 2005).

The large media companies enjoy resource and operational competitive advantage while the small entrepreneurial company enjoys 'the strength of its innovation and new idea' (Khajeheian 2013: 128) in the digital film distribution market. The large media companies may concentrate on the Filimo idea and consider a strategic acquisition once it proves to be a lucrative deal.

Of note is that the large media companies have actually filled a gap of 'financial and technical facilitators' that are supposed to 'invest or lend for commercialization of new innovations,' 'evaluate and filter best innovations offered by media

entrepreneurs,' and 'introduce them to larger media companies' for purchase, acquisition or joint venture (ibid, 129).

The large media companies seem to have been launching a temporary, low-risk joint venture with the Filimo holder company in a bid to appraise its potential competitive advantage; I'd like to call the process a *hitchhiking effect* as they are giving the holder company a free lift intended to gain an appraisal about its potential competitive strength.

3 Conclusion

To conclude, the author would like to discuss the probable future trends ahead of the small, entrepreneurial company behind the Filimo innovation.

In terms of dynamic capabilities, the company's available resources, including 'digital application compatibility' and 'easy access via smart devices' combined with 'reach to massive customers' (attained through larger media companies) may easily be threatened by new entrants in the digital distribution market. Actually, these resources and capabilities seem not to be 'intensive' (Khajeheian 2013: 134) enough to help it stay the course and endure the competition.

On the other hand, new entrants may help the company to advance the strategic goal of platform shift in the distribution market as part of a 'collaboration to increase selling power' (see Johnson et al. 2005: 262). Accordingly, the company may join its dynamic capabilities with those of new entrants in a collaborative venture aimed at advancing a shift of platform from the physical distribution market to the digital one.

In terms of strategic options, the competency-orientation theory (Eliasson 1996, 1998) appears relevant for it discusses the situations where small firms are supposed either to grow aggressively on their own or being acquired strategically. Accordingly, the small media company may either sell the innovation and start a new one, or cede entirely and work as part of larger media companies, or 'aggressively continue to act as an independent firm which aims to grow' (Khajeheian 2013: 128). Nevertheless, should the company decide to stay the competition as an independent firm, it would logically face a heavy challenge arising from new entrants in the Iranian digital market as mentioned earlier. These new entrants are expected to arrive in at high numbers due to the existing low levels of barriers in terms of costs, regulations and market opportunities.

A growing number of entrants, on the other hand, would lead to an aggregation of entrepreneurial companies in the digital space, followed by an accumulation of digital innovations. Though risky for the Filimo holder company, the likely situation would prove instrumental for the development of 'exit markets' as an essential part of a viable media market. Exit markets serve as a bed for strategic acquisitions, offering a supply of radically new innovations embodied in 'small new firms', with these innovations having been moved beyond the entrepreneurial stage by venture maker, which in turn supply the exit market with strategic investment opportunities

(Eliasson and Eliasson 2005: 102). Exit markets prove essential for an efficient media market and their absence may force media entrepreneurs to carry the process of commercialization of an innovation from A to Z, which is practically inefficient and results in heavy pressure (Khajeheian 2013: 130).

An aggregation of entrepreneurial companies in the digital distribution market, as discussed, may also provide a ground for the emergence of technical and financial facilitators, as a major determinant of the media market's efficiency. These facilitators may 'evaluate and filter best innovations offered by media entrepreneurs and introduce them to larger media companies' (ibid, 129). Facilitators serve as a key element in the development of entrepreneurship as they 'bridge between the innovation advantage of small companies and operational advantages of large companies' (Khajeheian and Tadayoni 2016: 128).

The very emergence of the Filimo as a digital platform for film distribution offers evidence of an emerging exuberant media market in Iran full of potentials for media entrepreneurs. Further researches might offer more insights into the dynamics of the market as a developing media market.

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Part IV
Individual Level: Media Entrepreneurs

Social Networks of Immigrant Entrepreneurs in Media Industry: The Case of Iranian Immigrants in Canada



Mahdi Tajeddin, Amir Emami, and Abas Ali Rastgar

Abstract Entrepreneurs connect with people in their networks to help them pursue their entrepreneurial activities. This article describes the results of a small pilot study focused on how Iranian immigrant entrepreneurs in Canada use their social networks during the process of starting and developing a business. Through in-depth interviews, qualitative data were collected from five Iranian entrepreneurs in the media industry. We analyze the members identified were in the entrepreneurs' social networks, how these individuals supported the entrepreneurs, and what the effects of the support were in both phases of the business lifecycle: start-up (phase I) and growth (phase II).

1 Introduction

With the revival of immigration to North America over the past four decades, research on immigrant adaptation and the attendant issues of assimilation has grown rapidly (Marger 2001). On the other hand, before the 1979 revolution, Iranians in Canada were mainly guest students. The 1979 revolution, and the outbreak of the war between Iran and Iraq caused a huge emigration of Iranians, voluntarily and involuntarily, to the Western countries, including Canada (Khosravi 1999).

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From 1990, the majority of people who immigrated to Canada each year were young (under 30 years old) (Citizenship & Immigration Canada 2011). On the other hand, Canada and other countries are faced with the problem of increasing unemployment which influences employment conditions for the immigrants as well. For instance, in 2012 the unemployment rate of the immigrants who landed more than 5 or less years earlier was 13.5%, considerably above the native Canadian average of 6.5% (Statistics Canada 2013). For more established immigrants who had been in Canada between 5 and 10 years the rate fell to 9.8%. This figure suggests that immigrants may choose self-employment when they cannot find employment. However, there are some issues that make life very difficult for all entrepreneurs, but more so for immigrant entrepreneurs (Sanders and Nee 1996): (1) language difficulties; (2) different business cultures and markets, regulations, and rules; (3) lack of networks—"who you know;" and (4) financing. Ardichvili et al. (2003) mentioned social networks (SNs) influence the development of small firms/entrepreneurial firms.

Some researchers believe that many of the personal attributes typical of the entrepreneur, such as self-confidence, perseverance, resourcefulness, risk-acceptance and achievement motivation, merge in networking competency (Ardichvili et al. 2003; Johannisson 1988). The interpersonal aspect of a social network is always fundamental because inter-organizational networks are maintained in practice by interpersonal communication between representatives or leaders of the respective organizations (Casson and Giusta 2007). It is generally accepted by entrepreneurship theorists that opportunities are recognized by individuals, not firms (Ellis 2011), and it is a cognitive and not a collective act (Shane 2003 cited in Ellis 2011) Furthermore, top managers who recognize and exploit opportunities in entrepreneurial processes of small firms are the principal force behind the initiation, development, sustenance and success of Small and Medium-sized Enterprises (SMEs) (Li et al. 2009). Furthermore, the findings of researchers show that the social network is a vital resource enabling immigrants to find their economic and social niches in the host society (Marger 2001).

The bulk of research on SNs in the field of entrepreneurship focuses on the network content and the network structure usually at a given moment in time (Ardichvili et al. 2003; Elfring and Hulsink 2003; Ellis 2011). The majority of prior research studied start-ups. In other words, researchers consider the function of SNs in forming a new firms such as identifying opportunities and mobilizing resources. However, the entrepreneurs in growth stage/development stage still use the SNs to identify opportunities and secure resources. Furthermore, the study of Elfring and Hulsink (2003) considered only obtaining legitimacy in the growth stage of business Therefore, we found a gap in prior study which did not explore SNs in the growth stage of a firm, even in terms of identifying opportunities for new products and mobilizing resources to develop business. We consider the starting up stage, identifying opportunity, and mobilizing resources and forming a firm, and the growth stage, the years after creating the firm. This study seeks to contribute new understandings in this area. The main research question and sub-questions are:

- How do Iranian immigrant entrepreneurs in Canada use their SNs in the different phases of their business lifecycle?
 - In the start-up phase (I) of a business, how do the managers of the Iranian small businesses of Canada employ their SNs for identifying entrepreneurial opportunities and mobilizing their resources?
 - In the growth phase (II) of a business, how do the managers of the Iranian small businesses employ their SNs for mobilizing their resources and even identifying new ideas?

To understand how SNs are employed by managers in each phase, the study seeks to realize who the members are of the entrepreneurs' social networks, how they provide support to immigrant entrepreneurs and what the perceived effects are, and finally whether is any difference between the stages of the entrepreneurial processes in terms of SNs.

2 Entrepreneurship and Social Networks

Brass et al. (2004) defined a network as “a set of nodes and the set of ties representing some relationship, or lack of relationship, between the nodes.” They point out that the content of the relationships between nodes is “limited only by a researcher’s imagination” (p. 795). Furthermore, Borgatti and Foster (2003) argued that a network is “a set of actors connected by a set of ties. The actors (often called “nodes”) can be persons, teams, organizations, concepts, etc.” (p. 992). The connection of pairs of actors through ties can be directed (i.e., potentially one-directional) or undirected and can also be dichotomous (present or absent, as in whether two people are friends or not) or valued (measured on a scale, as in strength of friendship) (Batjargal and Liu 2004).

In networking literature, egos are single factors that are crucially under consideration. In addition, alters are the set of nodes that ego has ties with “The ensemble of ego, his alters, and all ties among these (including those to ego) are called an ego-network. Since ego-networks can be collected for unrelated egos (as in a random sample of a large population), ego-network studies blend a network-theoretic perspective with conventional, individual-oriented methods of collecting and processing data (Borgatti and Foster 2003, p.992)”. In this regard, Provan et al. (2007) addressed that theorizing about networks can come from two different but complementary perspectives: the view from the individual organization (actor level) and the view from the network level of analysis or micro-level versus a macro-level network focus (Galaskiewicz and Wasserman 1994 cited in Provan et al. 2007) or the egocentric network versus the whole network (Kilduff and Tsai 2003 cited in Provan et al. 2007). In fact, theories based on the individual or organizational actor have a long tradition in social research. These views are often referred to as egocentric, and Provan et al. (2007) argued that this view tries

“to explain how involvement of an individual or organization in a network affects its actions and outcomes” (p. 483). Provan et al. (2007) stated that egocentric level theories can help to answer questions such as “(a) the effect of ties on performance, (b) which types of relations are most or least beneficial, (c) which network positions might be most or least influential, and so on.

Brass et al. (2004) provided a pervasive look at organizational network research at the levels of analysis including interpersonal, inter-unit, and interorganizational. They also studied the phenomenon of SNs with a broad approach which focused on antecedents and the consequences of networks at each of these levels. However, the network members in each level can be linked by many types of connections and flows, such as information, materials, financial resources, services, and social support. Connections may be categorized as informal, for example, totally trust based, or more formalized, as through a contract (Emami et al. 2011).

Social network theories are of growing significance in various literatures and the most recent entrepreneurship research in the creation and sustaining of new ventures (Anderson and Jack 2002; Huggins 2000; Zhou et al. 2007). Social Network Theory is a social science concept that discusses the connection and relationship in a social structure (Jaafar et al. 2009). SN is defined as a manager’s relations and contacts with others (BarNir and Smith 2002). Lechner et al. (2006) defined the SNs as “relationships with other firms based on strong personal relationships with individuals such as friends, relatives, long-standing colleagues that became friends before foundation, and so forth” (p. 515). Peng and Luo (2000) used a broader approach. They mentioned the business ties and political ties of managers/entrepreneurs. Their ties may be based on conversation, affection, friendship, kinship, authority, economic exchange, information exchange, or anything else that forms the basis of a relationship (Jaafar et al. 2009).

With regards to the difference between social networks and social capital, social capital is as an asset that inheres in social relations and networks, which consist of the actual ties between individuals or entities (Burt 1997; Leana and Van Buren 1999 cited in Casson and Giusta 2007). The central proposition of social capital theory is that networks of relationships constitute a valuable resource for the conduct of affairs (Nahapiet and Ghoshal 1998).

3 Methodology

To address the research questions, the study utilized In-depth interviews (qualitative approach—semi-structured interview) with five Iranian immigrant entrepreneurs-Iranian immigrants that voluntarily immigrated to Canada—selected through a snowball sampling technique to gather data on SNs of entrepreneurs.

The context of this study is media sector. Media markets are the markets where media products including news, entertainment, communication, advertising,

creative talents, dream and user information are exchanged (Khajeheian 2017; Okada and Dana 2017). The media industry has always been characterized by a high level of entrepreneurial activity, even before the digital era began (Naldi and Achtenhagen 2011). Risk (Doyle 2016; Picard 2004), uncertainty (Medina et al. 2016; Napoli 2016), innovativeness (Khajeheian 2017; Price Schultz and Jones 2017; Van Weezel 2010), competitiveness (Gershon 2013; Mierzejewska et al. 2017), and new business models (Gerpott and Niegel 2002) are among the specific characteristics of this industry that help align its operating firms with the entrepreneurial orientations (Emami and Khajeheian 2017).

Five entrepreneurial firms considered for the purpose of this study: (A) Film and Animation Studios, (B) Commercials, (C) Electronic games and interactive TV, (D) Magazines, and (E) Targeted media (marketing).

Two interviewees are experienced woman entrepreneurs about 50 years old, and three are male, the oldest being an experienced entrepreneur 58 years old, while the other two are young entrepreneurs-about 25 years., The age of two male entrepreneurs' companies was about 5 years old, so we call them young entrepreneurs, but the age of other entrepreneurs' companies was more than 7 years.

4 Data Analysis

In this study, the level of analysis is individual because we were studying entrepreneurs/managers, and the units of analysis are the activities, interpersonal connections, of managers. That is because we focus on social networks of managers/entrepreneurs. After transcribing all the interviews and field notes, we conducted a theme analysis to extract the information on social networks of managers utilized in the start-up and growth stages.

First, we attempted to find each sentence or phrase related to social networks. We wanted to answer this question: how did entrepreneurs use interpersonal connections to solve their problems or facilitate the Phase II process of business? We conducted an open coding regardless of different dimensions of social networks in which we found 55 sentences and phrases related to social networks. In fact, we were looking for stories or believes of entrepreneurs which show when they faced difficulties, whom they relied on and they were helped, and finally what was the effect of this support.

Once we separated the relevant sentences, we realized four themes which were almost obvious in the data. They include (1) phases of business lifecycle (2) "who" are in the entrepreneur's network such as customer, family and so on (3) "how" did their SNs help the entrepreneurs? For instance, when colleagues of the entrepreneur provided some administrative information for him/her (4) the "effect" of social networks' supports has been seen. So we needed to know what exactly was the effect of this information.

Then we analyzed the sentences and phrases related to SNs based on emerging main themes in two different ways (see result section). Before this, we explain the

phases of the business lifecycle by presenting some examples. First, we analyzed each case in terms of members of the SNs, the kind of support and the effect of SN support. We also provide a table for each case to make it easier for ourselves and readers to understand the condition of each entrepreneur and relationship between these main themes. For example, we explained who (member of SN) supported the entrepreneur in terms of information or advertisement in phase I and its differences with phase II.

Second, we had an across case analysis which compared the cases regarding their SNs. In this part, we were looking patterns between the entrepreneurs from different dimensions. To find patterns, we needed to compare the case on several levels. (1) We compared each main theme between cases with regard to the phases. For instance, we attempted to find who the majority of members of entrepreneurs' SN were in phase I or to what extent was the source diversity of SNs of the entrepreneurs in phase II. Furthermore, after analyzing and comparing cases in both phases we could provide some subthemes for some of last three main themes, members of SN, kind of support and effect of SN support. For example, we found information support divided two subthemes information related to input and information related to process. These new subthemes and patterns helped us to find gap among prior studies. (2) At this level of analyze, we considered relationship between main themes, phases and entrepreneurs (their characteristics). For instance, is there any difference between young and experienced entrepreneurs to have advertisement as a kind of support? If we add phases I and II to last question, how we can analyze these factors together? If also add other new factor to last question, new factors such as who supported the entrepreneurs in terms of advertisement and in which phase and what will be their effects, now what will be our analysis and results. In this example, we analyzed the factors such as entrepreneurs (young or experienced), advertisement, phases, who supported simultaneously.

5 Results

Although our cases had had a good lifestyle condition before immigration to Canada because of their rich families, they still faced many problems in establishing their businesses when they immigrated to Canada. In order to solve the difficulties during the establishment of their business, they attempted to employ their previous interpersonal connections and make up a series of relationships in Canada (Iranian or non-Iranian). Understanding of SNs regarding the stages of the entrepreneurship was the purpose of the study, so we analyzed and compared the social networks of whole cases together in each stage to make a conceptual picture. Our findings can be explained in three sections. First, we needed to identify a clear classification of the lifecycle of businesses. Second, each small firm and entrepreneur were studied to give information in relation to their SNs. Finally, we explained the patterns across cases on different dimensions of SNs of entrepreneurs in Phase I and II.

Social networks and lifecycle of business—regarding the assertion of the entrepreneurs, two businesses were in a risky stage and they needed time to be established. In fact, they were young entrepreneurs with the businesses of young ages—business “A” with 5 years old and business “C” with 3 years. Other businesses achieved to a constancy stage—business “B”—18 years, business “D”—33 years, and business “F”—8 years. When we reviewed the interview data, it was hard to identify SNs in each stage of the business development. However, we could recognize two stages: start-up/phase I and growth/phase II (i.e., increase in sales, employees, or market share).

5.1 Case Analysis

In the first and second series of iterations, we identified three main themes and subcategories of those main themes. This includes: first, the life cycles of the business (born vs. growth) as mentioned above.

Second was “Who” are in the entrepreneur’s network which influences the businesses and entrepreneurs—positive or negative. In this category, we found six groups of people consisting of family/relatives, customers, colleagues (previous), government officials, own employees and friends. For clarity, we used this classification; otherwise all those people could be the friends. The entrepreneurs utilized these people in forming their businesses and growing them.

The third main theme was “support”. In other words, “how” did these SNs of entrepreneurs help the entrepreneurs? Regarding the second series of the iterative process of moving back and forth between the data, we found five types of supports by SNs including “time”, “information”, “financial resource”, “emotional/motivation”, and “advertisement”.

Although research questions (who supported, how supported, where supported) were almost answered by analyzing the interview data, a new theme—namely the “effect” of social networks’ supports—has been seen. In other words, “what” were the “effects” of social networks’ supports on the businesses of entrepreneurs? These effects have been seen in several parts of business including inputs (recognizing opportunities and ideas and financial support and equipment. . .), process (hiring employees, facilitating the administrative process. . .) and output (increasing market/customers). Therefore, there are three subthemes—input, process and output—under the main theme of “effects”. We could not break these subthemes down into precise units because the interview data did not give us more information. Regarding these emerging themes, we currently explain the themes in terms of each entrepreneur and their firms.

A: Film and Animation Studios This company was a family business owned by two brothers. An interview was conducted with the older brother who was the main

Table 1 SNs of entrepreneur A

	Members of SN	Kind of support	Effects of SN support
Phase I	Family Friend	Information Financial resource Emotional support–NO	Input-(financial support)
Phase II	Family Friend Customer	Information Advertisement	Input process

founder and current manager of the firm. He is studying marketing (part time) and managing the firm simultaneously despite the fact that he is only 26 years old. He immigrated in 1998 and registered their company in 2006. At the beginning, he wanted to have their own business, so he was looking for business ideas with low cost. He experienced some service business related to the TV. In 2008, he began their current business. To develop their new idea and mobilize financial resources, interpersonal connections and consultation with his friends played an important role. He found and employed an experienced accountant with a low wage through his social networks. Furthermore, he avoided some mistakes through information, consulting his friends and social networks. He believed in SNs for meeting financial sources and attracting the costumers. He is interested in using technology, so his business is web-based and his future plans emphasize technology and would like to increase the market by applying new technologies. Regarding his expression, the business still is in the risky stage and not stable. However, his net income is rising and the business is increasing steadily year by year. His family and friends provided information support, financial support and advertised his company as shown in Table 1. We can see these members of SN in both phases, and the majority of their support was information support, for instance,

First we had an accountant; he was so busy and did not spend sufficient time for our business. Then my friend recommended his father as accountant... he was a good option for us because he was professional with a lower wage. Also, he (accountant) was connected with the Canada government and could guide us correctly. Furthermore, he consulted us about managing business in terms of financial issues. He also helped us to receive our loan sooner [6 a M].

Furthermore, his customers advertised his products in the second stage. We could find the effects of SN support only in input section at phase I and in input and process sections at phase II.

... he (his father) introduced me to an institution which supports businessmen—English language—we could have both free consulting and financial support. For instance, this institution introduced us to a financial institution for loan and competition of young entrepreneurs which led to \$35,000. Also, this institution asked some successful and famous entrepreneurs to consult us about managing our business free of charge. However, this consulting by such entrepreneurs would otherwise have been too expensive [1 a M].

This entrepreneur also had relevant academic knowledge—marketing. Furthermore, he benefitted from each opportunity for introducing and advertising his

business to attract new ideas and customers. In this regard, he had a different SN unlike other entrepreneurs of this study. This new SN was the professors of university as stated:

I also consider the student opportunity as I am a student. For instance, I connect to the professors and present my business and they tend to take my business as a case for their class. Consequently, I will present my business and problems, and the student will give their opinion without any charge [9 a M].

However, this entrepreneur did not have an emotional support from his family as he said “My father disagreed with us for working and he attempted to change my opinion. . .” [1 a M].

B: Commercial She was from a rich family, and she wanted to immigrate Germany, but fate directed her to Canada in 1990. At that time, she was a young girl who was studying computer science and working at factory. Starting a common life led to changes in her life style and her major (from computer science to marketing). She and her husband decided to have their own business. They registered a firm for exporting and importing in 1995 because of their experiences and familiarities with two communities (Iran-Canada). They launched with importing Iranian handicrafts. In this regard, her colleagues in Canada, her friends and families in Iran helped them to find a good place, suitable products, and have financial resources. After saturation of the Iranian handicrafts market, they decided to start a new business to provide two types of services (1) radio advertisement and (2) marketing consulting services because of their access to a big market and their familiarity with market assessment. She stated that the work style and the type of connection are different in comparison with Iran. Her business was in an established stage generally. The currency transfer section faced some problems after new sanctions for Iran, and stopped the support of her family. However, commercial services are in a good state with some new branches. To understand how this entrepreneur employs SNs, we put relevant information into Table 2. In addition to family, friends and the colleagues, the entrepreneur was supported by her customers and employees in phase II. In other words, she had the highest diversity of SNs (all kinds of SNs).

Regarding the study of Peng and Luo (2000) related to managerial ties with government, we designed an interview protocol to ask about ties with government

Table 2 SNs of entrepreneur B

	Members of SN	Kind of support	Effects of SN support
Phase I	Family Friend Colleague	Time Information	Input Process
Phase II	Family Friend Customer Colleague Government Employee	Information Financial support Advertisement	Input Process Customer

officials as well. In this regard, the entrepreneurs did not receive any support from government. For instance, entrepreneur “B” said “We cannot make a relationship with government broadcasting employees because of conflict of interest. So, no support from government.” [16 b F].

In the early part of my business, my sister, younger brother and father helped me as the secretor of my firm because my husband had to go Iran for. . . and he was not here [18 b F].

Furthermore, she had much information supported in both phases through all members of her SNs with the exception of her customers. As such,

The owner of the last businesses where I worked there helps me a lot. He helped me to find a place and appropriate office equipment as well my brother [17 b F].

Additionally, her customers and friends advertised her services only in phase II. Finally, by looking at kinds of her supports, she had all of them with the exception of emotional support (though we realized, her husband was as a good motivation). We found the effects of her SN supports only in process and input section in both phases.

C: Electronic Games and Interactive TV He was interested in computers and relevant issues; for instance, he created his own website individually at the age of 12. After living in Iran and then Dubai with his family, he came to Canada in 2007 to study Computer science at Canada. He and his friend had also worked on IT projects since high school. He decided to follow media activities professionally, so he registered a firm in 2010 when he was student. He confronted administrative issues and language difficulties at the beginning; For instance, filling out French forms, opening a banking account, unsupported by a government or bank in terms of information and financial resources. His early customers were Iranian people because of langue limitations (French). Currently, he tends to work with non-Iranians because Iranian customers compared the cost of services with Iran, so he had difficulties with receiving his remuneration. His family did not agree with him working instead of studying, so he did not have serious support from his family, with the exception of his sister in filling out the French form. Now he has four employees in Canada, of which three of them are Iranian and one was Canadian (and knows the French and English language), there are also two employees in Dubai because support of the gaming services is 24-h, so it was useful idea to have employees in other countries with time zone difference. In Table 3, we addressed some information related to his SNs. First point was that we did not find any support in phase II. Second, he had a low diversity of members in the SN, only his family and friends. Third, we found that his SNs provided only information support. His family did not support him in terms of emotional support:

My parents disagreed about my working because my father is an engineer and my Mather is a doctor, so they wanted me to study [1 c M].

Table 3 SNs of entrepreneur C

	Members of SN	Kind of support	Effects of SN support
Phase I	Family Friend Government	Information Emotional support No support	Process
Phase II	–	–	–

Table 4 SNs of entrepreneur D

	Members of SN	Kind of support	Effects of SN support
Phase I	Colleague Friend Family: no support	Financial support Information	Input Process
Phase II	Employee	Information	Output

D: Magazines He immigrated Canada in 1974 to study Financial Management. To pay his tuitions and cost of living, he began working at a newspaper. Therefore, he gained considerable experiences of writing and editing because he worked at different positions and got familiar with different parts of the publishing industry. In 1980, his friend introduced a bankrupted magazine for buying. He found that magazine was suitable and said “I can revive it”. Finally, they bought it, and he had managed and developed it since 1980. He had nine employees who were mainly his colleagues at the previous newspaper. His employees mainly are bilingual—French and English—, especially in the customer relationship part. His friend (investor) helped him in terms of administrative issues and employing an accountant (accountant of his friend’s factory). His employees also are loyal especially his chief editor, and it is essential for a magazine because the quality of work increased erratically. The entrepreneur was supported by his SNs in phase I more than phase II as shown in Table 4. Although he was not supported by his family, his friend provided good support in terms of information and financial support. Here are some examples

My wife does not like the works of publishing, and just she signs some checks when I am not in Canada. . . my older daughter is studying in X country. . .” [5 d M] “One of my friends-my classmate—had a business here and he told me, hey x there is a magazine being sold, go and look at it and examine its condition, if it is appropriate, we can launch it together. . . I visited it (same place), it was good and I told my friend that I can manage it (at the same time, I was the manager of another company). So, he invested in it and gave financial support and I managed it because I had experience. . . Now I am managing this magazine. . . [1 d M].

My friend who had factory introduced his accountant in order to do the works of tax and accounting of my business [3 d M].

His SN support affected the output of his business in phase 2 because of his loyal employees as he stated

I employ persons who are bilingual . . . “I have an employee who has worked for me about 15 years, and my chief editor is working about 5 years. They know their work well and are loyal. This is an important point to keep the quality of work high [4 d M]”.

E: Targeted Media Targeted marketing or Targeted media is a kind of direct marketing where online advertisers can employ modern techniques to target the most receptive audiences with certain traits, based on the product or person the advertiser is advertising. These traits include demographic, psychographic, or behavioral variables (Plummer et al. 2007).

Demographic variables are focused on race, economic status, sex, age, the level of education, income level and employment. Psychographic is focused on traits such as consumer’s values, personality, attitudes, opinions, lifestyles, and concerns. And the behavioral variables, including browser history, purchase history, and other recent activity.

Targeted marketing is focused on certain traits and the consumers who are likely to have a strong preference will receive the message instead of those who have no interest and whose preferences do not match a product or service’s property.

When she immigrated Canada in 1992, she had graduated from a university in Iran in Laboratory Sciences and English literature. Then she studied management at a university of Canada, and finally she decided to study marketing. This is because she was interested in this field and she practiced operational auditing, so she could utilize her knowledge well. After graduating, she worked with an experienced business consultant for 4 years because she needed to gain more knowledge about managing a marketing agency. She had to work 6 days a week to pay off her debts—loans. She bore many difficulties during her study because she had two kids—one suckling—and she had to learn French. Her husband, who has since passed away, said to her “many new single immigrants expressed that we want to start a business, but they cannot do it while you have two kids”. She believed that living in a foreign country will lead to be a realistic human and she did not let herself to be a spoiled person. She was a very active person and played different roles and was involved in different communities related to her professional and other communities. She believed that her business is high-tech because she attempts to utilize new technology such as machine learning algorithms and marketing automation and link with customers through the web. Regarding more experts and new technology, her customers have increased, and she experienced 78% growth in her incomes.

In phase I, she was supported by her family and previous colleagues, but over time, she could increase the diversity of members of her SNs, friend, customer, colleague and employee in phase 2. Here are two example related phase I and II respectively.

When my colleague wanted to sell this agency to me, he gave me useful guidelines and information about administrative process of Canada and also managing such business [7 e M].

Table 5 SNs of entrepreneur E

	Members of SN	Kind of support	Effects of SN support
Phase I	Family Colleague	Time Information Emotional support	
Phase II	Friend Customer Colleague Government Employee	Information Emotional support Advertisement	Output

I have a loyal employee, and she introduces me to new customers. In fact, when her husband had cancer and she was involved in that problem, also she could not do her duties well; I helped her until she could stand on her own feet. . . [8 e M].

Furthermore, some of these SNs played roles in both phases. The Entrepreneur stated that her mother always did some of housework of the entrepreneur, and she could focus on her works more as you can see here

When I was a student, my mother came to Canada for 7 to 8 month and took care of my children. She always supports me for study and my goals in my career path . . . [12 e F].

With the increasing diversity of members of her SNs, she gained more diverse support than at an earlier stage of her business such as information support, time, emotional support and advertisement (see Table 5). For instance,

My customers are my capitals. In fact, I have specific behavior with my customer. . . for example I always spend 15 min more for each customer and speak with them. . . they introduce me to new people [9 e M].

5.2 Across Case Analysis

When we compared the cases, we found some new emerging themes according to across case analysis. These are the members of SNs, kinds of support, and their effect regarding phase I and II.

Members of SN In phase I, the interview data revealed that all entrepreneurs were supported by their family, with the exception of entrepreneur D, and friends. In phase II, it is hard to address a specific member of SN supporting all the entrepreneurs since entrepreneur C did not mentioned any SNs in phase II of his business, and entrepreneur D was supported only by his employee in phase II. Generally, SNs played a weaker role in phase II of the entrepreneurs’ businesses. Another point related to members of SN is that customer and employees emerged as SNs only in phase II. On the other hand, the role of family became weaker in phase II or by

passing time, as did previous colleague. Finally, no entrepreneur was supported by the government.

In terms of members of SN, we can point out some more detailed explanation. First, employees and colleagues were only in SNs of three experienced entrepreneurs—B, D and E. Second, The customers were in the SN of three entrepreneurs, B, E and A. Entrepreneurs “B” and “E” were experienced in attracting customers, but entrepreneur A was a young entrepreneur. The reason for the success of this entrepreneur was among his interviews

I am so aggressive. For example, when I face the janitor of the building, I make friends with him. I need this friendship because sometimes I cannot find a parking spot, but he lets me park my car in front of the building and do my works [8 aM].

Third, B and E were female entrepreneurs which had the highest diversity of SNs (all kinds of SNs), but entrepreneur C had the lowest diversity—family and friend. In this regards, entrepreneur C said

I prefer to find solutions of my problems myself through searches on the web and not ask friends or professors. Maybe I like learning by myself when there is no person to help for example my professor [8 c M].

Fourth, it was hard to find differences or similarities among these entrepreneurs in regard to the types of their business or their educational backgrounds, by analyzing members of their SNs.

Kind of Support After analyzing the member of SNs, we need to have an across case analysis in term of kind of support. Information was the only kind of support which was observed among all entrepreneurs in both phases. Customers did not provide any information for the entrepreneurs. Then we found “advertisement” and “time” kinds of supports only in phase II. In regards to emotional support, there was a negative feedback, particularly for young entrepreneurs by their family. Finally, all entrepreneurs did not have this type of support. The experienced female entrepreneurs (B and E) had more diverse kinds of supports, information, advertisement, time, in comparison with the male entrepreneurs. Friends and customers played an important role for advertising, and as colleague and family do for time support; in other words, they are complementary parts.

Financial support was not found when we looked at whole cases in terms of information support, we found some sub-themes. These sub-themes include information related to *the input* part of a business and information related to *process*. The last kind of information, process, is divided into two subparts including information related to administrative issues and the technical information or specialized knowledge. Here are some examples,

Information—input. Entrepreneur “B” started their business of an opportunity introduced by one of her relatives. “A cousin of my husband had a big advertising company in Tehran. He suggested us this business to us (commercials). He was looking for a person to establish a base in North America. On the other side, he was

a fulcrum point for us because he had many relationship and high credit in the market.” [13 b F].

Information—process—*Administrative issues*: information related to administrative issues such as law and rules, hiring employee, administrative process of government, and introduction to financial institutions, for instance, “When my colleague wanted to sell this agency to me, he gave me useful guidelines and information about the administrative process of Canada, and also how to manage such a business” [7 e F].

Information—process—*The technical information or specialized knowledge*: this kind of information can include information related to products, technology and so on. In this regards, entrepreneur “D” cited their employee as valuable forces because of their knowledge, which led to the development and stability of business. . . “I have an employee who works for me about 15 years, and my chief editor is working about 5 years. They know their work well and are loyal. This is an important point to maintain the quality of work”.

Although we found some evidence related to information for output and feedback sections of a business, they were not sufficient to convince us and be accounted as a sub-theme. However, the data show that all entrepreneurs had information supports through their SNs in both phases. Furthermore, the information was from both non-Iranians and Iranians. However, we found the majority of members of SNs in phase I were Iranian people.

After analyzing information support regarding the entrepreneurs and phases, now we consider the member of SNs to have a better understanding of information support. In other words, we would like to consider interaction between the members, phases, and entrepreneurs in regards to information support as shown in Table 6. This table does not mention the number of information support appeared among entrepreneurs’ interviews, but presents the diversity of source of information.

Table 6 shows that entrepreneur B had more diverse sources for gaining information than entrepreneur C. In other words, entrepreneur B received help from her

Table 6 Information support regarding the members of SN, phases, entrepreneurs

		A	B	C	D	E
Phase I	Friend		X	X	X	
	Family	X	X			
	Colleague		X		X	X
	Customer					
	Employee					
Phase II	Friend	X				
	Family	X	X			
	Colleague		X			X
	Customer					
	Employee		X		X	X

Table 7 Advertisement regarding the members of SN, phases, entrepreneurs

		A	B	C	D	E
Phase II	Friend	X	X			X
	Family					
	Colleague					
	Customer	X	X			X
	Employee					X

friends, family, colleagues and employees, but the only source for entrepreneur C was his friends. Furthermore, we can see friends and colleagues provided more information support for the entrepreneurs in phase I than phase 2. On the other hand, employees played an important role in terms of information support in phase II. Finally, customers did not play any role in providing information support for the entrepreneurs.

A second kind of support mentioned by the entrepreneurs was “advertisement”. The entrepreneurs had new customers through advertising by their SNs. For example,

My customers are my capitals. In fact, I have specific behavior with my customer. . . for example I always spend enough time for each customer and speak with them. . . they introduce me to new people [9 e F].

Like the information support analysis, we provide Table 7 for Advertisement. As you can see, there is no advertisement support in phase I. Second, entrepreneurs A (young entrepreneur), B (experienced female entrepreneur) and E (experienced female entrepreneur) benefited from advertisement. Finally, friends and customers of entrepreneurs played a highlighter role in introducing the entrepreneurs’ products, but their family and colleagues did not.

A third kind of support was “time”. In fact, members of SN spent time without pay. The time support has been only seen in phase II. These SNs were a combination of Iranian and non-Iranian. Entrepreneur B and E, experienced female entrepreneurs, had this kind of support by their colleague and family. Here is an example

The owner of last business in which I worked there helps me a lot. He helped me to find a place and appropriate office equipment. He came with me to make a contract for renting . . . as well my brother. . . [17 b F].

A fourth kind of support was “financial support”. All entrepreneurs did not have this type of support, and it is hard to present an analysis in terms of phases and members of SN. A last type of support was “emotional support”. It is important because the entrepreneurs not only did not have this support, but also they faced negative feedback at times, particularly by their families. Two young entrepreneurs (A and C) in the study stated this issue. For instance,

“My parents disagreed about my working because my father is engineer and my mother is a doctor, so they wanted me to study” [1 c M] . . . “My father disagreed with us for working and he attempted to change my opinion” [1 a M].

Effects of SN Support SN support of the entrepreneurs impacted on input and process of their business in both phases though most entrepreneurs (A, B, C and D) benefited from them in phase I. In other words, their effect on input and process were stronger in phase I than in phase II. On the other hand, their effect on output of the business has only been seen in phase II. In terms of members of SN, it is hard to give further analysis in relation to this theme—“effect” regarding different aspects like other themes discussed because of lack of sufficient data.

6 Discussion and Conclusion

The findings of the study listed six types of members of entrepreneurs’ social networks including family, friends, colleagues, customers, employees and government. The findings showed entrepreneurs had a larger proportion of kin in their network during the earlier stages than in later stages of their business like the study of Greve and Salaff (2003). On the other hand, there was no certain kind of member for all entrepreneurs in phase II. Three experienced entrepreneurs (B, E and D) showed that their colleagues—people the actor knows, or who are known by others that the actor knows—were as SNs for both stages in line with the study of Burt and Ronchi (1994). Therefore, some of these relations may be formed on the basis of professional networks, reaching friends, and colleagues from earlier jobs (Hansen 1995). Before creating the business, other entrepreneurs (A and C) did not work for other companies, so could not find colleagues as members of their networks unlike three above entrepreneurs.

Furthermore, customers and employees emerged as SNs in phase II, and family and colleagues played a weaker role in this phase. If the entrepreneurs before creating their business became senior-level employees at established firms, they typically built extensive networks relevant to their domains of work. Consequently, work experience in the other’s companies can extend variety and number of members of social networks. It is necessary to distinguish between age and work experience.

The last member of the entrepreneur’s network was government officials. The study of Peng and Luo (2000) and Li et al. (2009) emphasized on the political ties of the managers that cause small firms to achieve supports such as interpreting regulations, settling negotiations, and enforcing contracts in emerging countries. Therefore, here was a question: what about the entrepreneurs from emerging countries in a developed country? In other words, will they have the same procedure in Canada? The answer was no. Government officers were not in their networks because of conflict of interest as said by entrepreneur “B”.

In terms of gender, the female entrepreneurs of the study had more variety of members in their social networks than the men. This difference may be derived from several reasons, in our opinion; we need to consider the business environment and even social condition for women in their home countries and in the new environment (Emami 2017). In other words, these female entrepreneurs had limitations in terms of cultural and religious aspects (in Iran) and rules to make connection with others easily, and they do not face this problem in the new country. Entrepreneur “C” (young entrepreneur) had less variety in his network than entrepreneur A (young). That means type of character can be more important than age of the entrepreneur.

Consequently, we found that the effects of SN in phase II is less than in phase I. However, there is SN in phase II along with changes such as the kind of members and the extent of their participation.

The next finding of the study was how the social network members supported the entrepreneurs. We addressed five types of supports including time, information, financial support and advertisement. The most supportive element that received by the entrepreneurs was “information” in both phases which is in line with prior studies (Casson and Giusta 2007). Furthermore, the entrepreneurs gained most of their information through their colleagues and friends in phase I. On the other hand, employees played an important role in providing information on relation to input and process sections of a business in phase II. That is because the entrepreneurs need technical information over time. We did not find sufficient evidence for output section of the business. Additionally, customers did not play any role for providing information. We can say the entrepreneurs neglected to use this source of information to increase their market and quality of their products and so on. In the next finding, the entrepreneurs used Iranians in phase I for information support because of language difficulties and common culture.

Another type of supportive element was time which only has been seen in phase I. The entrepreneurs received this support from their family and colleagues. In fact, only these strong ties can lead to these sacrifices. Prior studies did not mention this type of support.

In terms of financial support, almost all entrepreneurs did not have financial support in this study. To access financial support the entrepreneur needed to live for a long time in their new country and build their connections and credit.

The entrepreneurs did not have the motivation or emotional support, particularly young entrepreneurs from their family. Despite the lack of the emotional support and having negative feedback, the young entrepreneurs continued their activities. Their reactions may be derived from favourable conditions of work in the new country and the social influence of their social networks established in the new country regarding their norms.

The last main theme was “effect”. Elfring and Hulsink (2003) argued that instead of linking the network structure directly to performance/effect, it will be useful to distinguish entrepreneurial processes that are affected in a positive or negative way by the presence of weak and strong ties. In other words, they emphasized that types of supports such as introduction of opportunities, securing resources, and obtaining legitimacy were identified before we consider their effects as we considered this

point in our study. However, we found some evidence related to the SNs' effect which derived from the type of support and who supported. We found the effects of SN support in input and process parts of a business in both phases, but there were these effects on the output part of a business only in phase II.

7 Limitations and Future Research

This study examined SNs for Iranian immigrants in the context of media venturing. In other words, we studied the entrepreneurs who experienced at least two environments with different cultures and norms. As mentioned, the social influence of the home country and the new country has been seen for the young entrepreneurs and for the women entrepreneurs. However, scholars who research immigrant entrepreneurs and SNs are advised to consider cultural differences and ecosystems and their effects on forming SNs. Furthermore, we could not study the ethnic groups and their effect on SNs, particularly for immigrant entrepreneurs. We attempted to realize the similarities and differences between the entrepreneurs in terms of gender and experience among necessity entrepreneurs (individual who start small enterprises out of necessity), but the researchers need to study also opportunity entrepreneurs (individual who start small enterprises because they spot an opportunity in the market) and find out if SNs impact immigrant entrepreneurship differently. Furthermore, the effects of subjective (perceptions, attitudes and behavior of the entrepreneur) and objective (how many languages known, educational background) characteristic of entrepreneurs on SNs should be explored by scholars as our study mentioned some findings in this regard. Future studies need to have a precise classification of different kinds of information in the phases of the entrepreneurship process and gaining information related to output and feedback sections of a business.

In terms of the effect of SNs, there is no idea about the effect size of each type of support in the short term and long term. Furthermore, what is the effect of high value social capitals on the performance of firms and what will happen, if such supports are stopped? Finally, there is a critical question that is the existence of SNs is always as an advantage or an opportunity. In other words, can we consider the lack of SNs as an opportunity sometimes? If so, when?

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Impact of Leaders' Characteristics on Competitiveness of Firms: Applying Weber's Charismatic Authority Theory to Leaders of Post-Soviet Media Businesses



Dinara Tokbaeva

Abstract This research applies Max Weber's theory of charismatic authority to the leaders of media companies and explores the origins and dynamics of media leadership in Russia and Kyrgyzstan in 1991–2016. Two case studies of leaders of financially viable privately-owned media businesses—Abak-Press in Russia and Computer Press Kyrgyzstan—are compared and contrasted. Abak-Press's Alexei Kharitonov and Computer Press's Kylychbek Sultanov founded their media companies after the fall of the Soviet Union having no prior management expertise and grew them from small “one-man army” businesses into self-reliant media holdings. Based on qualitative data from 54 interviews with leaders themselves, company employees, competitors and industry experts, the paper argues that charismatic leadership helped these firms grow and become financially sustainable. As charisma is eventually routinized, the charismatic authority of two given leaders is transforming into a legal-rational authority or the authority of managers. This process is influenced by specificity of media market dynamics. This research contributes to the theoretical framework on media entrepreneurship and media leadership in the post-Soviet space.

1 Introduction

This is an exploratory comparative-case study research (Yin 2014) of leadership in the media companies in the post-Soviet context. This research traces a 25-year period (1991–2016) of two media companies' development from a small business run by a single person to a current state media holding employing up to 1000 people. Two cases, one from Russia, former Soviet Union's largest economy, and one from Kyrgyzstan, one of the smallest economies of the post-Soviet space, observes maturation of privately-owned media companies in different economic settings with a shared Soviet past. Even though the discussion takes a chronological narrative

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of development of two businesses in Russia and Kyrgyzstan, this is not a ‘rags-to-riches’ story. Privately-owned media holdings are rare in Russia’s regions, and they are even rarer in Kyrgyzstan. This is a study of a media market phenomenon and the reasons behind its existence and rarity. This is a study about people who ventured to start a media company as soon as entrepreneurship opportunities became available after the fall of the Soviet Union and how they managed to lead their businesses up to present condition of media holdings. The Weberian theory of authority is discussed in this research alongside Kotter’s (1982, 2012) model of appraisal of general managers. Using Kotter’s method of analysing personal and background characteristics of company leaders, this research provides a detailed analysis of maturation and transformation of the leadership of privately-owned media businesses in Russia and Kyrgyzstan. Empirical findings are based on two cases of media businesses in Russia and Kyrgyzstan—Abak-Press and Computer Press. Both are privately-owned media holdings in Ekaterinburg, Russia and Bishkek, Kyrgyzstan respectively with no involvement from the state in financial and editorial matters. They are also still run by individuals who founded them. As this research has found, there are 13 companies meeting these criteria in both Russia and Kyrgyzstan. The empirical data came from 54 in-depth semi-structured interviews with company founders and owners, senior and junior staff, media experts, academics, representatives of competing businesses and failed media entrepreneurs.

2 Media Entrepreneurs and Media Leaders

Media companies operate within fast-changing media environments. The entrepreneurial intensity or the degree and amount of entrepreneurship in each organisation has a positive relationship on organisation performance (Morris and Sexton 1996; Murphy 1996). The levels of entrepreneurial intensity and market competition depend on context, type of media industry and cluster within which an organisation operates (Cooke and Shòvarts 2007; Brown 2008; Delgado et al. 2016).

Academic field of media entrepreneurship is young (Hang 2017; Khajeheian 2017a, b). Research on media entrepreneurship includes studies of entrepreneurial firms practising in technology-intensive environments (Bingham and Haleblan 2012) and the studies aimed at understanding the specific country and industry contexts in which entrepreneurial activities take place (Welter 2011). Hoag (2008) compared challenges of media start-ups in the U.S. to the start-ups outside of media industries. Khajeheian (2013) researched the impact of commercialisation on the digital startups in Iran. Raviola and Dubini (2008) analysed the ways incumbents and newcomers of the Italian digital music industry cooperate with each other. Furthermore, the entrepreneurial experience differs depending on whether one’s media company is rural- or urban-based. This aspect was discussed by Price Schultz and Jones (2017) in their study of an online news organisation in Wyoming and a similarly-sized print publication in New York. Academics have noted/found out that since early 2000s media entrepreneurship research almost fully concentrates on

digital media including tech companies (Zboralska 2017; Khajeheian 2016), online news start-ups (Gleason and Murschetz 2017; Nel et al. 2017) and social media (Khajeheian 2013). There is a lack of studies “[. . .] focusing on entrepreneurship in traditional media markets, such as TV, newspapers, books, or radio.” (Dowing and Mellewigt 2002, p. 201, cited in Achtenhagen 2017a).

Business challenges of media entrepreneurs are precarious, insecure work (Gill 2011); while some start-ups succeed, others fail which results in short-term periods of employment. A ‘formational myopia’ is one of the challenges of development and sustainability of news start-ups founded by novice entrepreneurs (Naldi and Picard 2012). The ‘formational myopia’ refers to a state of mind when novice entrepreneurs are stuck with their own misconceptions about the industry and the market they are about to enter. Apart from that, compared to managers, the new media entrepreneurs enjoy more significant levels of informal power as they “control [. . .] both primary (material, technological) and secondary resources (relations, information)” (Bourdieu 1993, cited in Grätz 2013, p. 4). The study by Grätz (2013) confirmed that it is possible to start-up certain kinds of media business without significant amount of funds at one’s disposal.

The studies focusing on more experienced internet entrepreneurs that have prior entrepreneurial experience (Compaine and Hoag 2012; Achtenhagen 2017b; Mack et al. 2017; Powers and Zhao 2017) found that they face similar challenges to the managers of established firms. They aim at financial stability, business integrity and implementation of strategic plans. For this reason, there is a strong relation between sustainable entrepreneurial activity and managerial activity. Once the entrepreneurial firm becomes sustainable, an entrepreneur de-facto transforms into a manager. From a business point of view, it’s an achievement. But in a way this transformation also leads to a loss of informal power (Bourdieu 1993, cited in Grätz 2013).

Leadership needs to be distinguished from management just like vision needs to be distinguished from a simple strategy (Bryman 1992). For instance, for some leaders their broad aims are stylised as vision whereas they involve not more than creating a more competitive company by reducing bureaucracy and decentralising operations (Bryman 1992, p. 168). The concept of New Leadership, however, is criticised for its failure to present a full picture of what organisational leadership can and should be. Theory and research mostly acknowledge that leaders do make a difference in organisations, however there is a need for more consistent quantitative studies on the effects of change (Bryman 1992, p. 177). Case studies on leadership have mostly concentrated on the achievements of iconic leaders like Chrysler’s Lee Iacocca (Spector 2014), Pepsi-Cola’s and Apple’s John Sculley (Malan and Kriger 1998), Scandinavian Airlines’ Jan Carlzon (Heifetz and Laurie 1997) or Virgin’s Richard Branson (Kets de Vries 2003). A superstar CEO image is largely fuelled by media attention surrounding them which includes their writing memoirs about themselves and films about them being produced. For instance, president of USA and businessman Donald Trump authored more than 20 books on leadership, fortune building, and the art of deal-making. Alongside with the hype around successful CEOs, there is critical academic research on iconic leadership. For instance, Sharma and Grant (2011) did a case study on Steve Jobs and discussed

the instruments of his public appeal through the analysis of his public speeches. Khurana (2002) contributed towards de-romanticising the ultimate myth of charismatic leadership's positive impact on organisational performance in corporate environments. Mintzberg and Westley (1992) and Küng (2000) argued that a detailed study of social relationships in organisations with the focus on charismatic leadership as well as qualitative case studies of leadership in action are needed for better understanding of organisational dynamics and the relationship between charisma and performance.

The heart of the leadership debate is the “born versus made” debate (Kotter 1990, p. 109). Having studied 200 senior executives in the U.S. through interviews, questionnaires, archival documents and observation, Kotter (1990) strongly favoured the “made” versus “born” leadership. At the same time, Kotter (1990, p. 108) mentioned the following four major leadership traits:

1. Level of drive/energy;
2. Intelligence;
3. Mental and emotional health;
4. Integrity.

While one's motivations change throughout life, it's the early years that shape one's personality. It's the values expressed by closest relatives and even elementary school teachers (Kotter 1990, p. 107). According to Freud (1975), inter-family relations in one's early childhood influence the way the personality is formed. Career experience, major events of adulthood and other circumstances can guide one's way of life, but the roots of one's drive, intelligence, mental and emotional health go back to early life. Charisma is the linking variable which unites experience and life circumstances with one's natural ability of leading (Kets de Vries 1988; Kotter 1990, p. 111). The above-mentioned elements form endless combinations in different people, making each case unique.

3 Authority and Charisma

Max Weber (1947) developed the concept of charisma for sociological analysis having derived it from its original Greek meaning: ‘the gift of grace’. The concept of charisma is important for understanding institution building. “For Weber, freedom, creativity, and personal responsibility did not lie outside the scope of the society, of social relations and activities. On the contrary, interpersonal relations, organisations, institutional structures, and the macro-societal setting constituted the arena in which freedom, creativity, and responsibility could become manifest” (Eisenstadt 1968, p. xvi). Weber defined charisma as “a certain quality of an individual personality by virtue of which he is set apart from ordinary men and treated as endowed with supernatural, superhuman, or at least specifically exceptional powers or qualities” (Weber 1947, p. 358).

This definition was presented within a typology of three different types of legitimation of authority: authority based on rational (legal) grounds, on traditional grounds and on charismatic grounds (Ibid, p. 328).

1. A legal-rational authority—it is not based on obeying a specific leader. This authority is empowered by obeying the principles of law (legal and rational);
2. A traditional authority—it is based on the sanctity of tradition and is irrational. The ability and the right to rule does not change overtime, it is usually passed down through heredity;
3. A charismatic authority—it is based on a leader who inspires others. This leader is perceived to possess extraordinary individual characteristics of divine or supernatural origin (Weber 1947).

Speaking of the organisation of labour, Weber (1947) stressed that two out of three types of communal or associational organisation of work, the army and the religious community, are “based on the direct feeling of mutual solidarity” (p. 265). The first type of communal organisation is family; however, Weber (1947) didn't consider it to be based primarily on charisma. According to Weber, the army and the religious community “rest primarily on a specific emotional or charismatic basis” (Ibid). “These types of organisation of work have been developed based on common value attitudes of primarily non-economic character” (Ibid). This definition implies that the main motivation of workers in a media company led by a charismatic leader is emotional rather than rational.

4 Post-Soviet Entrepreneurs and Media Entrepreneurs

Scholars see the roots of Russian entrepreneurs' specificity in the Russian history. Once the controlled and planned system fell in 1991, people received autonomy which was necessary for innovation. The first business leaders of post-Soviet space were the entrepreneurs of various kinds (Hisrich and Grachev 1993). Although different in types and ways of doing business, all of them were characterised by spontaneity, innovative behaviour, high organising skills, a pro-active attitude towards looking for opportunities and a strong desire for independence (Ibid, p. 492). Apart from these qualities that are arguably shared by entrepreneurs around the world there are some features typical of Russian entrepreneurs—they are described as cautious, conservative and not trusting new ventures (Hisrich and Grachev 1993). Entrepreneurs in Tsarist Russia faced distrust from most fellow Russians. They were almost seen as inferior (Owen 1981, cited in Hisrich and Grachev 1993, p. 490). High risk and insecurity were companions of Russian entrepreneurs in Tsarist Russia, since they had to pay higher interest rates than their European colleagues (20% per year compared to 4% in Holland and 8% in England) (Barbour 1950, cited in Hisrich and Grachev 1993, p. 492). This may be the reason for the conservatism of Russian entrepreneurs. “Since each tsar had

unlimited power and proprietorship of the country and its resources, an entrepreneur, regardless of ability, could not go far without government approval.” (p. 492)

During the Soviet times, the profit-making activity was criminalised and subject to arrest. However, perestroika de-criminalised entrepreneurship. In the late 1980s, the first entrepreneurs appeared in socialist countries. Kiser (1989) interviewed several successful leaders of enterprises in science and finance in socialist Russia, Hungary, East Germany and Czechoslovakia—all these countries experienced the rise of entrepreneurial activity and leadership. Research on the development of management in the post-socialist Slovakia by Ursic and Mulej (2005) showed that management knowledge didn’t exist. Also, up until early 2000s a top-down management structure was prevalent in Slovakia. It was a big stumble block for technological innovation.

Sociologists have a different opinion on post-socialist entrepreneurship. Russian researcher Zaslavskaja (1995) noted that the first wave of Russian entrepreneurs in the early post-Soviet period (1992–1994) were distinguished not so much by their high level of skills and business acumen as by their possession of advantageous connections, impudence and violation of morality and law. Quarter of a century after the break of the Soviet Union, negative public perceptions towards entrepreneurs are still in place.

4.1 Post-Soviet Media Business Leaders

Schimpfössl and Yablokov (2017a, b) assessed the Russian media market by applying elite theory and theory of ‘adekvatnost’ (a Russian term for appropriateness) to media actors such as owners of media businesses, media managers and employees. The researchers pointed at the increased control of the Russian media system by the state during president Vladimir Putin’s third term after 2012. Based on the way the media market developed in between 1991 and 2012, the increased state control catalysed the emerging of the so-called “media aristocracy” in Russia. According to Schimpfössl and Yablokov, this group includes owners of sizeable media businesses, media managers and editors-in-chief and prominent journalists. According to the researchers, while some media professionals “were forced out” of their jobs or had to emigrate, the majority “have kept their positions” and adapted to the environment (Schimpfössl and Yablokov 2017a). Based on data obtained from interviews with media managers in Russia, Schimpfössl and Yablokov (2017a, b) argued that ability to adapt to the media environment requires the following five features:

1. Being reasonably well networked;
2. Being integrated into the political system;
3. Employ in one’s work journalistic or managerial strategies inherited from Soviet times (Schimpfössl and Yablokov 2017a, p. 1);

4. Being able “to credibly play by the rules without limiting one’s professional creativity” (Ibid, p. 2);
5. Being capable of “‘correctly’ navigating permanently changing political environments” (Ibid, p. 2).

The rules are defined by the changing political environment of Russia and require one to keep connections with those in power and make new connections if new people join the power circles. For instance, these can be the regional or city heads, heads of state committees responsible for media policy etc. Being aware of changes and able to adapt to them by making the right connections on time is what the authors meant by “‘correctly’ navigating permanently changing political environments” (Schimpfössl and Yablokov 2017a, p. 2) This is necessary to keep one’s job in case of individual creative workers or be allowed to lead a business in case of owners of sizeable businesses.

As far as media managers are concerned, their function within the current Russian media environment is special. Those media managers that managed to access the key state players not only conform to the rules of the game, but also serve as a bridge between the state and the newsrooms (2017b). According to Schimpfössl and Yablokov (2017b), this agency position allows media managers to shape and modify their subordinates’ attitudes and behaviour as well as meet with approval from the state players. Media managers have a great chance of succeeding considering that they have the final say in questions of hiring and firing of employees (Koltsova 2006). This kind of agency play is viewed as one of the strategies of being a success as a media manager in Russia. Gatov et al. (2017) argued that these elements are found not only in older generation of media managers that have closely experienced the Soviet nomenklatura,¹ but also the ones who were either too young or remote from those power structures. Trifonova Price (2015) delivered similar findings on the example of nomenklatura networks and media ownership in the post-communist Bulgaria. Some former members of Bulgarian Communist nomenklatura managed to retain their influence on media environment through re-investing their capital into private media enterprises after the fall of the Berlin Wall and through maintaining their informal networks (Trifonova Price 2015). Edwards and Lawrence (2000) explained ‘nomenklatura capitalism’ in relation to Eastern European states as a market economy with a strong element of state involvement (p. 38). There is one more term coined by Edwards and Lawrence (2000), which is ‘nomenklatura privatization.’ These privatized companies are de-jure private entities but in fact they are controlled

¹Nomenklatura is a term widely used in the Soviet Union and the countries of the Eastern Bloc to refer to people who held key administrative posts within the government apparatus and who were the key decision-makers. Nomenklatura not only included the delegates of the Communist party, but also those who led state industry, agriculture, culture entities. Due to the power structure, Nomenklatura enjoyed high level of symbolic and actual power during the Soviet times (Voslenskii 1984).

through newly established state-owned banks, connected to the same nomenklatura people that were in power during the socialist times.

Studies on individual entrepreneurs in Russia suggest that persistence of Soviet traits in modern managers cannot be generalized to the entire population of managers. Kets de Vries and Florent-Treacy (2003) studied Russian self-made entrepreneur Roustam Tariko, founder of *Russian Standard Vodka* and *Russian Standard Bank*, based on an in-depth interview with him. Shekshnia and Kets de Vries (2008) carried out a similar interview-based case study on another Russian businessman Ruben Vardanian. Vardanian is a CEO and founder of *Troika Dialog*, a leading indigenous investment bank in Russia. Guilluy-Sulikashvili (2017) discussed de-hierarchizing of the Soviet value system in her research on managerial behaviour of generation Y entrepreneurs in Russia. Wielecki (2017) analysed the role of social capital and other cultural factors that form the meso-level of businesses and shape the dynamics of running small firms in Russia. These researchers argued that the persistent feature of Russian management is informal arrangements in business relations, which results in the fact that “business strategies are often embedded in non-economic factors, such as ethnic ties, family and friendship obligations, religious beliefs, etc.”.

5 Method

This paper looked at the Generation X of entrepreneurs or the ones born from the early 1960s to late 1970s. This generation is also called Baby Boomers. The Russian and Kyrgyz managers that belong to this group have experienced some influence of the Soviet value system. They were schooled and some went to the university during the Soviet times. But, since the Soviet Union broke up in 1991, these people *didn't work* under the Soviet authority. Instead, they set up new businesses which they funded themselves.

Focusing on specific moment in history is particularly acute for business studies in emerging economies. Interviewing insiders and outsiders of an organisation combined with desk research is one of the most suitable methods of studying Russian and Kyrgyz business leaders. There are three methodological reasons for that. They are:

- (A) The difficulty of accessing market information due to wide-spread shadow economy² practises in Eastern Europe and Central Asia (Edwards and Lawrence 2000; Kirpalani et al. 2009; Oxford Analytica 2011; Morris and Polese 2014; Interfax 2015);

²A “shadow economy” is a term used to describe informal economic practices in the shadow of the state. For instance, these include economic activities that are supposed to be taxed but instead they illegally remain out of taxation. The practices come in many forms and occur in the transitioning states of Eastern and Central Europe (Kirpalani et al. 2009), Latin America (Fernández-Kelly 2006), Africa and other parts of the world.

- (B) A turbulent legal base of the post-Soviet states (Edwards and Lawrence 2000; Polese and Rodgers 2011; Vartanova et al. 2011, 2016; Vartanova 2015a, b);
- (C) Lack of options to access staff directories and inner documents in Russia (Koltsova 2006) and Kyrgyzstan (Tokoev 2013).

5.1 Case Study Design

“A case study is an empirical enquiry that investigates a contemporary phenomenon (the “case”) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident” (Yin 2014, p. 16). A two-case study design was chosen over a single-case one because analysing media holdings in two distinctive Former Soviet Union states offered the opportunity to consider a greater variety of external and internal factors. Country-comparative approach allows to identify similarities and differences in media leadership patterns between a stronger economy (Russia) and a weaker one (Kyrgyzstan), the ‘centre’ of the former Soviet Union and its ‘periphery’. The study covers the two cases of Abak-Press and Super-Info in Russia and Kyrgyzstan respectively and draws a set of “cross-case” conclusions based on qualitative evidence from interviews, observations, desk research combined with review of literature.

5.2 Defining a Privately-Owned Media Holding

The subject of this research is a specific type of business entity—a media holding. It’s a company that owns and controls shares of other companies to form a corporate group. Such formation helps to reduce economic risks and increase political influence or resistance to external political influence (Rowland and Higgs 2008; Gaughan 2013; Jaksic et al. 2014).

The media markets of post-Soviet states include state-owned media (e.g.: *Rossiya TV-Channel*), privately-owned ones (e.g.: *Look at Media*) and foreign-owned (e.g.: *Cosmopolitan-Russia*, owned by Finnish company *Sanoma Independent Media*). This research concentrates on private ones to consider the ways in which they emerged in the independent states and how the leaders of these companies led them to success.

5.3 Company Selection Rationale

Preliminary desk research identified the following companies in Russia and Kyrgyzstan suiting the case study criteria that is:

- (a) a media holding;
- (b) privately-owned by home-grown entrepreneur(s);
- (c) originated after the fall of the Soviet Union (1991);
- (d) financially viable;
- (e) in case of Russia based in the regional Russia (not from the capital city, not a nation-wide media); in the case of Kyrgyzstan any company, even nation-wide, due to the limited size of the Kyrgyz market.

Table 1 shows a full list of companies matching the research criteria:

The number of companies matching the criteria for inclusion in the study is very low. There are several reasons for that. First, the Russian and Kyrgyz media markets are still being formed and it has been very difficult for private media to originate and develop. Second, state-owned media or media that are patronized by the state play an important role at the media market. There are state-owned profitable media but they do not meet the criteria of this research because they are state-owned. On other occasions, some successful private businesses that originated from scratch in the 1990s or early 2000s, were sold to state or corporate

Table 1 Media holdings in regional Russia and Kyrgyzstan meeting the criteria of this research project

City, state	Name of company	Type of assets
Rostov-on-Don, Russia	“Krestianin” Publishing House	5 newspapers, 1 magazine, 2 online projects
Ufa, Russia	Open joint stock company “Sem’ Vershin”	1 newspaper, 1 online project, 1 magazine
Voronezh, Russia	“Svobodnaya Pressa” Publishing House	4 newspapers, 1 magazine
Ekaterinburg, Russia	Abak-Press Publishing House	1 business magazine, 1 lifestyle magazine, 2 shopping guides, 4 online projects
Barnaul, Russia	“Altapress” Publishing House	7 newspapers, 3 magazines, 1 printing press
Kazan, Russia	TNV (Noviy Vek)	2 TV stations and 1 radio station
Vladivostok, Russia	Open joint stock company PrimaMedia	7 online news agencies
Bishkek, Kyrgyzstan	Computer Press	1 newspaper, 1 online portal, 1 ad agency
Bishkek, Kyrgyzstan	Vecherniy Bishkek Publishing House	4 newspapers, 1 news portal, Rubikon Advertising Agency, 1 printing press
Bishkek, Kyrgyzstan	Europe Media Group	3 radio stations, 1 franchise TV, 1 satellite TV channel

Source: Author, July 2015

groups. For instance, *NGS* (a network of leading city portals in 18 Russian cities offering culture, business and real-estate information) and *E1* (online portal of Ekaterinburg) recently joined *Hearst Shkulev Media/InterMedia Group* in 2013 and 2014 respectively. The latter is one of the leading Russian media companies which also keeps such brands as *Elle* and *Maxim* under its umbrella. *Hearst Shkulev Media/InterMedia Group* could be an interesting Russian media holding on its own, however it doesn't suit the research criteria. It is a Moscow-based nation-wide holding, which has a significant foreign capital. Its parent company is the US-based *Hearst Corporation* founded by William Randolph Hurst in the end of the nineteenth century. Both in Russia and Kyrgyzstan there are several originally privately-run media companies that later borrowed money from national, federal or municipal authorities. This makes them unsuitable for this study of 'independent survivals' (Dovbysh 2016). Several checks were carried out to make sure that the companies chosen as a case study in both Russia and Kyrgyzstan didn't borrow money from the state. First, independent media experts and university lecturers were interviewed. The interviewees could share information about the existing government sponsorships and who receives them. Second, this research relied upon existing research such as the one by Dovbysh (2016). It appeared that large regional socio-political media receive government sponsorships, while the companies observed in this research cover entertainment or business news and are not suitable for winning a government sponsorship. Furthermore, Koltsova's (2006) research on news media and power in Russia revealed that "[...] private internal ownership also exists mostly beyond large media and beyond politics, and has been more and more represented by entertainment or professional publications" (p. 84). And, lastly, interviews with media experts as well as interviews with failed media entrepreneurs revealed many cases of privately-run media in both Russia and Kyrgyzstan going bankrupt and ceasing to exist.

6 Cases of Russian and Kyrgyz Media Holdings

6.1 *Abak-Press Media Holding (1992–2016), Russia*

The *Abak-Press* media holding was founded in 1992 in Ekaterinburg. In the beginning, its activity was magazine publishing. Since 2011, Abak Press has been putting all efforts into developing business over the internet. In 2015, Abak Press had four websites and four magazines. The company offers B2B and B2C services. Abak Press serves small and medium-scale business and middle income city dwellers mostly in Russia's regions. Monthly audience of online resources is 17 million visitors (Ibid, 2015) (Fig. 1).

As of 2015, the revenue structure of Abak Press was the following: 80%—Puls Zen; 18%—*Blizko*; 2%—*Delovoi Kvartal* online and *Ya Pokupayu* online. All print divisions are not profitable, and their revenues are steadily falling (Interview with Alexei Kharitonov, 7 April 2015). The holding also expects to close all print

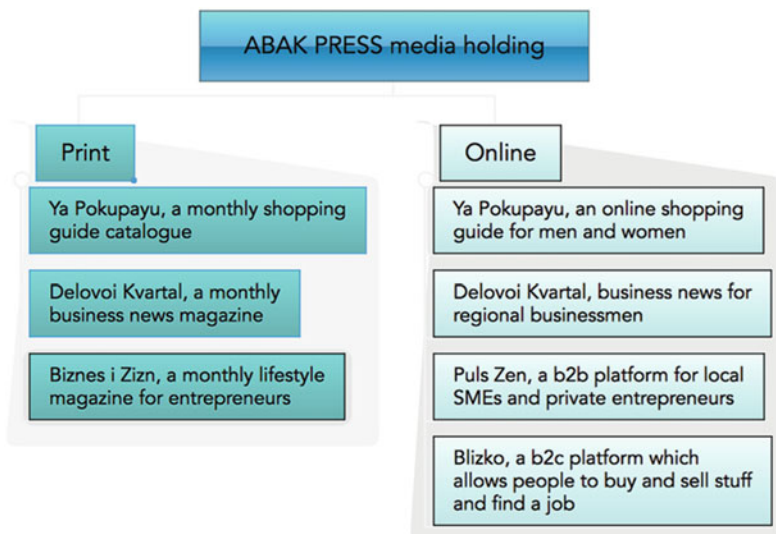


Fig. 1 Abak-Press media holding structure in 2016. Source: Abak Press Company Info (Abak Press 2016)

projects in a little while. The online B2B service *Puls Zen* (or the Pulse of Prices in English) is the most profitable division of the media holding. *Puls Zen* has got 6000 clients, and its base is growing. The B2C service called *Blizko* is an important and profitable division too.

The *Abak Press* media holding started as a publishing house. Its first products were publishing ones: *Puls Zen* directory, *Delovoy Kvartal* magazine. There were many attempts and fails during 23 years. Today the most successful products of the media holding are network products: Russia's first glossy shopping guide network *Ya Pokupayu*, *Delovoy Kvartal* city business magazine network, *Blizko Remont* weekly construction materials directory network. Premium men's magazine *Business i Jizn* is the only exception as it is not a network project.

The total staff amount is around 150 people as of 2015. The company employs 60 full-time IT developers and 20 specialists in User-generated content and web design. There are 50 sales people, around 10 heads of departments or heads of regional sales departments and 10 editorial staff. The holding's main aim is to serve the local entrepreneurial community by offering them up-to-date information and helping them make better business decisions. Within the past 5 years Abak Press cut off many of its small print divisions, that were unprofitable or didn't add up much value. The holding is also undergoing staff cuts (Interview with the source from Ekaterinburg-based news agency, 10 April 2015).

6.2 *Case of Alexei Kharitonov, the Founder and Current Leader of Abak Press*

Alexei Kharitonov is the founder and director general of *Abak Press* media holding. He graduated from the Mechanical Engineering Faculty of Ural State Technical University in 1983. In 1983–1985 he worked as a researcher at the Institute for physics of metals. In 1985–1991 Kharitonov worked at the Ural Electric Operating Mechanism plant as a programmer. In 1992, he founded the publishing house *Abak Press* together with a group of friends. Today *Abak Press* is one of the largest publishing holdings in regional Russia, headquartered in Ekaterinburg, the heart of Ural federal region (GIPP 2013). Alexei Kharitonov thinks that his programming education helps him in doing business, especially setting clear tasks and solving complex problems. The most recent major problem the holding is facing is digitalisation of media business (Apress.ru 2012). His understanding of a successful business idea is when a local idea can be scaled in other places. His firm position is to create own products and develop them instead of franchising successful foreign products such as Alibaba.com (Ibid, 2012). Kharitonov prefers to keep information about his family private (Table 2).

6.3 *Computer Press Media Holding (2001–2016), Kyrgyzstan*

This media holding was founded in 2001 in Bishkek, Kyrgyzstan. The *Computer Press* publishing house unites three assets—*Super Info* newspaper, *super.kg* online portal and an eponymous ad agency (see Fig. 2). The newspaper's circulation is more than 100,000 copies a week—the leading position among print titles in Kyrgyzstan. The readership is estimated at 600,000 readers a week among the economically active people aged 16–50. The *super.kg* infotainment portal's viewership has been growing each year since it opened. The website has got daily 800,000 hits, 2.6 million monthly page views and about 545,000 monthly unique visitors (hosts) (Super.kg 2015). 2/3 of daily hits are from abroad which represents Kyrgyz diasporas in the Americas, Europe, Asia and Oceania (Net.kg 2015).

Computer Press produces the largest infotainment media in Kyrgyz language. It originated from a few-page paper founded in 2001. In 2001, having borrowed money Kylychbek Sultanov published *Computer press* about computer technologies. It was a complete failure. Half a year later he ventured with another title *Super Scanword*. This one received a warmer welcome from the readers and allowed Sultanov to hire his first employees. In 2002, that paper was renamed to *Super Info* and it began to include not only scanwords but also news about local and international celebrities. However, the holding still bears the name of the very first title—*Computer Press*. One of the first coloured papers in Kyrgyzstan, *Super Info* became a success as it served the overlooked population of rural Kyrgyzstan as well as of the capital's suburbs. The paper became the most read title in Kyrgyzstan in 2008 and has kept the leading position since then (Akipress 2013).

Table 2 A Résumé for Alexei Kharitonov

Current position [early 2016]	General Manager and owner of Abak Press media holding. Based in Ekaterinburg, Russia
Career history	1983–1985—The Institute of Physics of Metals—2 years—Researcher 1985–1991—The Ural Electromechanical plant—6 years—Analyst/Programmer 1992—founded Abak Press company. Currently leads the company
Background	Born in Russia on October 31, 1961. Raised in Russia. In 1983, received a BSc in Engineering from Ural State Technical University, Mechanical Engineering Faculty

Source: Interview with Kharitonov and desk research

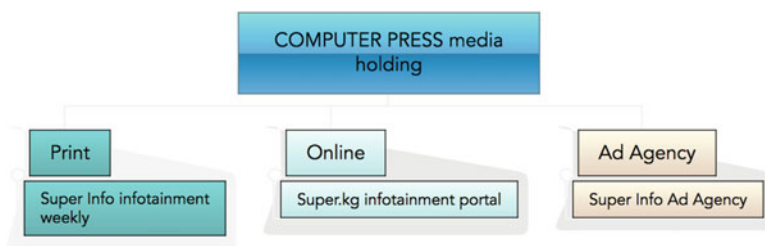


Fig. 2 Computer Press media holding structure in 2016. Source: Computer Press Company Info (Super.kg 2016a, b)

The online portal super.kg was opened in 2006 and at the time this was written it was ranked fifth among KG-zone websites (Net.kg 2015).

6.4 Case of Kylychbek Sultanov, the Founder of Computer Press

Kylychbek Sultanov was born in Myrza-ake village, Uzgen district of Osh region of Kyrgyzstan in a Soviet working class family. Kylychbek Sultanov moved to the capital Bishkek to study in the end of 1980s. He entered the Frunze Polytechnic to learn computer programming. After finishing it, he entered the Information Communications Department of the International University of Kyrgyzstan in the early 1990s. In 1989, the declaration of Kyrgyz language was adopted in the Soviet Socialistic Republic of Kirghizia. Since then there were attempts to translate official documents and literature into Kyrgyz. Sultanov recounts how in his university he was among the first ‘experimental’ group to study computing in Kyrgyz. He used these skills to get his first job at *Kyrgyz Ruhu* local newspaper. After getting married and becoming a father he felt the need for a better paid job (Akipress 2013). In 2001 he borrowed money and ventured to publish his own print title *Computer Press*. He went bankrupt but continued attempts. Few months after in summer of 2001 he

Table 3 A Résumé for Kylychbek Sultanov

Current position [early 2016]	Owner of Computer Press media holding. Based in Bishkek, Kyrgyzstan
Career history	1996–1998—Kyrgyz Rukhu newspaper—2 years—Designer, then head of IT department, then associate editor 2000—founded Computer Press company 2002—Super Info newspaper—1 year—editor-in-chief 2008—ELTR public TV channel of Kyrgyzstan—1 year—acting deputydirector general 2009–2012—Computer Press—3 years—General Manager 2012–2013—Kyrgyz Government—1 year—Social Development Minister 2013—present—Computer Press—4 years—owner/consultant
Background	Born in Kyrgyzstan on January 4, 1976. Raised in Kyrgyzstan. In 1996, received a BSc in Computer Engineering from Kyrgyz State Polytechnic University. In 2006, received an MA in Economy from Kyrgyz State University named after Arabaev via distant learning

Source: Interview with Sultanov and desk research

published another title *Super Scanword*. He created scanwords himself using computer software and dictionaries. He took out a mortgage for a house. By autumn of 2001 the circulation of the scanword paper rose twofold and he could hire first five people and rent an office in the basement with no windows. The first issue of *Super Info* was published in spring 2002. It included scanwords and news about local and international celebrities (Ibid, 2013). As newspaper grew and matured, in 2008 Sultanov received Kyrgyz National Newspaper Award “Media Manager of the Year”. In 2008, 2009 and 2010 Super Info newspaper was three times awarded the prize “Best circulation of the Year” (Vecherny Bishkek 2013). In 2012, Sultanov shortly worked as a head of advisory committee for the Public Tele-Radio Broadcaster. In 2012–2013 he served as a minister for social development. Although he has appointed other people in charge of operations, he remains the advisor for *Computer Press*. He stays in close contact with the staff. Sultanov is different from other Kyrgyz politicians that own newspapers and view them as instruments for their political fights. He views his media holding as a business, as his main job (Akipress 2013) (Table 3).

7 Discussion: Qualities and Skills of a Media Business Leader and His Subordinates in Russia and Kyrgyzstan

There are two primary research questions:

1. Which qualities does one need to have to become a media business leader in Russia and Kyrgyzstan?
2. How do subordinates contribute to the performance of media holdings of Russia and Kyrgyzstan?

There were three stages of coding: (a) descriptive codes, (b) categories, and (c) analytic codes. Each interview with company employees, including owners, resulted in 50–100 descriptive codes depending on one’s job role and vocabulary specifics. Descriptive codes were the most frequently used words by interviewees when asked on their position within an organisation, work experience and relationship with colleagues and line managers. Following the logic of grounded theory method (GTM) by Glaser and Strauss (1999), Goulding (2009) and Charmaz (2014), descriptive codes were categorised according to action verbs and adjectives. The first category, action verbs, was identified to analyse the company owners’ and employees’ thinking of actions necessary to fulfil one’s job role and contribute to the company performance. The second category, adjectives and descriptive phrases, was identified to capture the qualities and skills company employees’ attribute to a company leader for him/her to be able to fulfil the job. Top 20 words in each category were selected based on frequency of their usage in interviews. Results for each category from Kyrgyz and Russian case were compared (Table 4).

Table 4 Category “Qualities and skills of a media business leader”

	Results for Kyrgyzstan		Results for Russia	
	Quality	Frequency (%)	Quality	Frequency (%)
1	Business Savvy	0.24	Business Savvy	0.43
2	Experienced	0.17	Experienced	0.16
3	Kyrgyz-speaking	0.13	Decision-maker	0.14
4	Leader	0.09	Leader	0.14
5	Successful	0.09	Strategic thinker	0.12
6	Knowledgeable	0.08	Knowledgeable	0.09
7	Creative	0.08	Allows employees to make mistakes	0.09
8	Considerate	0.06	Demanding	0.08
9	Ambitious	0.04	Quick	0.08
10	Quick	0.04	Highly intellectual	0.07
11	Believes in Success of one’s Business	0.04	A manager	0.05
12	Influential	0.04	Supportive	0.05
13	Places confidence in employees	0.04	Successful	0.05
14	One-of-a-kind	0.04	Self-consistent	0.04
15	A Manager	0.04	Powerful	0.04
16	Friendly	0.03	Controlling	0.04
17	Prominent	0.02	Achiever	0.03
18	Dynamic	0.02	Persuasive	0.03
19	A cultured person	0.02	Strong	0.03
20	Encouraging	0.02	A remarkable individual	0.03

Source: Interview analysis

The research found out that “business savvy” and “experienced” are the top two qualities both for a Russian and for a Kyrgyz media business leaders. The higher frequency rate for ‘business savvy’ in Russia speaks for tougher business realities for media businesses in Russia that depend on government authorities, regulations and the state of Russian economy (Vartanova et al. 2011). For Kyrgyzstan, the language came up as third most necessary quality. While it is also obvious for Russia that knowledge of Russian is necessary to lead a local media business, Russian respondents considered language skills as self-evident. For Kyrgyzstan, the situation is different because this country got independence from major-Russian speaking Soviet Union, and creating a media product in the country’s own state language—Kyrgyz—is not only seen as a matter of national pride, it is also a strong business opportunity. The case of Computer Press demonstrates that. To move on, ‘a leader’ made it to top 5 both in Russia and Kyrgyzstan, which demonstrates that subordinates acknowledge dominating role of the leadership and are fine with being led. There is a trend that in both countries subordinates identified leaders with qualities of uniqueness: “one-of-a-kind” for Kyrgyzstan (frequency 0.04) and “a remarkable individual” for Russia (frequency 0.03). It means that subordinates are not quite sure they could make similar business. This is a sign of charismatic authority (Weber 1947), when a leader is perceived as possessing supernatural, almost divine qualities. Yet, lower position within the top 20 of the uniqueness code for Russia and Kyrgyzstan means that charismatic leadership is fading and slowly giving way for more pragmatic leadership styles. This is evident through relatively high position of such ‘non-emotional’ qualities as ‘quick’ and ‘knowledgeable’ in both countries.

There were other qualities mentioned during interviews, yet they didn’t make it to the top 20 due to infrequency. For instance, such quality as being a good ‘manager’ also made it to top 20 in both countries. The fact that ‘manager’ quality is way to the bottom compared to a ‘leader’ quality suggests that so far, the understanding of good media management is only developing in both Russia and Kyrgyzstan (Table 5).

Codes for Kyrgyzstan demonstrate more inclination towards being a team-player, while Codes for Russia demonstrate more focus on suiting the market. Being a team player scored 0.16 in Kyrgyzstan and 0.09 in Russia.

The Kyrgyz workers’ inclination towards being a team-player is supported through such action codes as “to work hard” (0.97—highest), scramble (0.08), create an atmosphere at work (0.06), cooperate (0.06). Based on this research results, it is believed in the Kyrgyz working culture that “meeting the requirements” of a job, working hard and being a good team player are the reasons for success of the media company that they work for. Meeting the requirements may be interpreted as being conformist, however, it may also mean being attentive to job responsibilities, which is a strategy for workers not to lose their job. Given the current economic condition of Kyrgyzstan, the latter—fear of losing a job—may well transform into the former—conformity. From another point of view, it might be the reflection of hierarchy in the workplace when one should be part of a team to show respect for line managers and other colleagues. For instance, research on management in private Chinese

Table 5 Category “Employee actions contributing to a post-Soviet media business’ performance”

	Results for Kyrgyzstan		Results for Russia	
	Actions	Frequency (%)	Actions	Frequency (%)
1	To work a lot	0.97	To sell	0.37
2	To be competent	0.24	To know the market	0.30
3	To plan	0.21	To understand the company’s interests	0.21
4	To be a team player	0.16	To understand business/political environment	0.20
5	To take responsibility	0.15	To manage oneself	0.14
6	To know the (Kyrgyz) language	0.15	To develop one’s capabilities and learn	0.14
7	To be experienced	0.12	To plan	0.11
8	To develop one’s capabilities and learn	0.11	To know the company’s business-model	0.10
9	To know the market	0.10	To be a team-player	0.09
10	To be the first-mover	0.09	To be competent	0.07
11	To be decisive in creating new opportunities	0.08	To adapt to rapid changes	0.05
12	To be educated	0.08	To be active	0.05
13	To scramble	0.08	To create an atmosphere at work	0.04
14	To create an atmosphere at work	0.06	To communicate	0.04
15	To have an eye for detail	0.06	To be frank	0.03
16	To cooperate	0.06	To be an example for others	0.03
17	To meet requirements	0.06	To cooperate	0.03
18	To have an opinion	0.05	To be educated	0.03
19	To train/mentor others	0.05	To win the market	0.02
20	To sell	0.05	To train/mentor others	0.02

Source: Interview Analysis

enterprises by Schlevogt (2002, p. 40) and Warner (2003, p. 215) viewed team-building through the prism of hierarchy and subordination.

In case of Russia, results demonstrate that there was a lot of effort within a company to make staffers pay attention to the market factors and conditions. Such action codes as “to know the market” (0.30), “to know the company’s business model” (0.21), “to adapt to rapid changes” (0.05) and “to win the market” (0.02) reveal that Russian media workers tend to keep market factors on their mind at work. Also, the most highly scored code “to sell” (0.37) means that staffers are result-oriented and they were also most likely made to understand by their line-managers that the outcomes of their selling activity directly impacts the financial health of the company. Besides, there is one more code which scored in top 5 in Russia but didn’t score in top 20 in Kyrgyzstan—is “to understand business/political environment” (0.20). This issue was also raised by almost all interviewees

in Abak Press, which means that it is on the agenda. There is also a bigger inclination towards individualisation in Russia, than in Kyrgyzstan, where people are more leaning towards group work. This is demonstrated by highly scored code “to manage oneself” (0.14) in Russia which didn't appear on the Kyrgyz top 20 list.

7.1 Doing Media Business: Reasons for the Success of Abak-Press and Computer Press

Final analytic codes were developed on the basis of interviews with company owners and employees and were validated through textual analysis of interviews with media experts, academia, representatives of competing companies, former company employees and several failed entrepreneurs in both Russia and Kyrgyzstan.

The four final codes are:

1. A Charismatic Start;
2. Knowing One's Market;
3. From Leading Followers to Team-Building;
4. Distancing Oneself from Politics Straight from the Start as a Long-Term Survival Strategy.

Based on research on Abak Press and Computer Press, these four patterns are the necessary conditions for private media business financial success in Russia and Kyrgyzstan. The research argues that chaotic media markets tend to gravitate towards more order. But while in some markets this order is reflected in more competition, in others the order means more concentration. So far, the second is the case of post-Soviet countries of Russia (Vartanova 2012) and the states of Central Asia such as Kyrgyzstan. What Koltsova (2006) identified as “profitable non-political media” companies are companies that are privately-owned financially viable media holdings covering infotainment or business spheres. A Russian example is Abak-Press, regional media holding headquartered in Ekaterinburg and founded in 1992. A Kyrgyz example is Computer Press, nationwide media holding headquartered in Bishkek and founded in 2001.

The next stage of transformation of media leadership is arguably the transition from ‘charismatic’ leadership to a ‘legal-rational’ one. The charismatic leadership is more suitable for critical situations, when an organisation struggles to survive or is undergoing major internal changes. The legal-rational leadership is more suitable for stable periods in a company's history. Kotter and Rathgeber's “8-step process of successful change” (Kotter and Rathgeber 2006, pp. 130–131) implies that any transformation starts with creating a sense of urgency. Then a guiding team is pulled together by a leader. This team decides what to do and starts to make change happen. The team in charge of transformation communicates the necessity of change to the rest of the staff and persuades the majority that the change is necessary. It is important to produce short-term wins to create some visible successes as soon as

possible so that the followers don't let up. Then the change should stick to the company as if it was a natural thing. The final step is the creation of the new culture within the organisation. Kotter and Rathgeber (2006) analysed implementing change on the example of established firms. In "Leading change" Kotter put forward an eight-step pattern associated with highly successful change efforts, based on extensive research of organisations. Drawing insights from researching 20 business organisations and various branches of the U.S. government, in "Heart of Change" Kotter stated that people are less likely to change themselves and others based on data and analysis than on compelling experiences.

Interviews with leaders of media businesses in Russia and Kyrgyzstan suggest that the new culture was created straight from the beginning, while change vision and strategy was developed and implemented only when organisations matured and reached financial self-reliance. Both Sultanov and Kharitonov have background in IT. The transformations Computer Press and Abak-Press are undergoing are related to digitisation and gradual move of business from print to online. Both Sultanov and Kharitonov believe that their business's future is in the internet. According to previous research on innovation in the media industry, technology-driven innovations are more effective than market-driven ones. "Technology-driven innovations appear to have a much better chance of effective diffusion in news organisations than market-driven projects aiming explicitly at structural changes or human resource alterations. Although computerization and digitalization of media environments may be regarded as quite complex, such developments appear to facilitate reorganization of tasks that are only marginally dependent on the technological innovation promoted." (Lund 2008, p. 206) Computer Press has a simpler business model than Abak Press. Computer Press has a highly successful newspaper, a highly successful website and own advertising agency which serves both the paper and the website. The media holding will find it easier to gradually adapt to the decrease of circulation of the paper and improve and widen functions of the website. The unique viewership figures of the website have only been growing. Besides, Computer Press already employs senior managers, tech staff and content producers that specialise in the website only. They can drive further change. And one more factor is that Computer Press' average staff age is quite young, less than 30 years. It means that it will be easier for some newspaper staffers to adapt to working for the website in case inter-company switches are necessary. Therefore, Computer Press may transfer to the Weberian 'legal-rational' authority as soon as it makes necessary arrangements. This media holding remains in control over when to make this transformation since the decrease in newspaper circulation rate is not significant and is not pressing the company as much. The case of Abak Press is more complex because the company's main business is within B2C and B2B operations. Its core employees, the ad managers, are used to working with clients over the phone or face-to-face. They also got used to much bigger budgets than the internet can offer. The psychological transformation towards the internet may be very difficult for Abak-Press. Even if the company manages to gradually close its print assets and make a move towards internet with its online project which is currently being developed by the team of IT specialists under the guidance of Kharitonov, it is still questionable how Abak Press

is going to be financially stable if it relies on internet sales only. That means that Abak Press will have to deal with change management longer than expected. It might also delay their transition towards Weberian 'legal-rational' authority. Change management in case of technology-driven innovations requires not only management tools but also charisma (Lund 2008). "[. . .] management tools and charisma [are] needed to motivate change, not only with respect to subordinates but also for bottom-up efforts influencing executive boards and top management" (Ibid, p. 207). While Abak-Press' Kharitonov doesn't deal with executive boards since he is the owner and Director General himself, but this quote relates well not only to himself but also to Abak-Press' middle managers that are an inevitable and vital part of the guiding coalition to implement change (Kotter 2006).

Transition to a legal-rational authority is only complete once the company continues to function in a self-reliant way after the main power resource is passed from its current leader to the new one (Kotter 2012). The new leader, if he or she ever arrives, will be the typical general manager. It's going to be a legal-rational manager. Qualities and leadership patterns of this type of manager are most similar with Kotter's (1982) findings on the general managers.

In a foreseeable future, neither Computer Press' owner Kylychbek Sultanov nor Abak Press' Alexei Kharitonov plan to retire. Being in their middle age, each of them are physically capable of working for 15–20 more years unless other circumstances arise and they decide to pass the leading functions to someone else. That is why it can only be concluded that the full legal-rational transition will be complete once a new person takes the lead of these companies. As this paper argues, the conditions for transition from charisma-style to a legal-rational leadership have been created. It can only be speculated that the transition is to happen within 15 years-time if all external and internal factors remain same. In both Russia and Kyrgyzstan media business owners are obliged to 'co-operate' with the political elite. While in Kyrgyzstan, this cooperation means that a media leader may be invited to take a political post, in Russia it means complete 'non-interference' with the state so that the status quo of local, regional and nationwide authorities is maintained. For both Russian and Kyrgyz media businesses, the ultimate reason for the success of Computer Press and Abak Press, is that they didn't cover socio-political situation. Computer Press focuses on infotainment, and Abak Press serves local businessmen and entrepreneurs.

Given the stable financial state of the business, the expertise and experience of media owners and their consequent teams in media business, and their ability and eagerness to learn, both Abak Press and Computer Press have a fair chance to transition from 'a charismatic' authority to a 'legal-rational' authority. It means that once Kharitonov and Sultanov decide to distance themselves from their business or pass their business to someone else, the companies they've created will still live on and develop. It's particularly the case for Computer Press, which in fact is already managed by Shatmanova, while Sultanov only formally serves as a consultant. Abak Press also has a chance to transition within the next 5–8 years, provided the current digital challenge is adequately addressed. However, there are several risks that can be a serious stumble block for Russian and Kyrgyz media businesses'

transition. First, there is a risk from the state. In Kyrgyzstan, there is an uncertainty surrounding the property of medium and big businesses. The issue of this property is raised from time to time as an instrument of pressure of political opponents by the state. Second, in both Russia and Kyrgyzstan, there is an uncertainty with legal framework of the media. The issue of taxation of media companies is undergoing many changes, and the businesses need to consider that volatile environment when making long-term plans. Third, Abak Press's ability to transition depends on its financial stability, which in turn depends on its strategy. If Abak Press is not able to scale its business further, it has a chance of remaining a robust player on the level of Ural region of Russia. In this case, it is still possible for Kharitonov to transition to a legal rational authority.

8 Conclusion

This paper discussed the cases of Kylychbek Sultanov of Computer Press (Kyrgyzstan) and Alexei Kharitonov of Abak Press (Russia) that started their business from scratch, adds to the field of media leadership, management and entrepreneurship in an emerging post-Soviet media market.

This research found that charisma, emotional intelligence and market knowledge are essential personal qualities for a post-Soviet entrepreneur to create a financially stable media business. The prevalent view in management studies before the 1980s was that intelligence, analytical skills, and knowledge of management tools, concepts and theories are essential for effective professional management (Kotter 1982, p. 132). Kotter's study (Kotter 1982) revealed that general managers largely rely on informal processes rather than formal procedures. They spend most of the time with others, including peers, outsiders, and subordinates, discussing a wide range of subjects (Ibid, p. 133) as opposed to sitting quietly in their rooms and creating formal plans and structures for their subordinates to follow. As soon as they arrive in their jobs, the general managers use informal processes such as having unplanned conversations in which GMs ask a lot of questions and seldom give orders, to create agendas and networks of cooperative relationships (Ibid, p. 133). Once they become fully acquainted with the nature of the business and get into the swing of the work within a firm (that usually happens 6–12 months after being appointed), they concentrate on execution. Then their networks begin implementing their agendas for them by influencing their own subordinates. In this regard, Kotter emphasised that ambition, achievement, and power motivation were as important for effective management of a firm as were temperamental evenness, optimism, developed cognitive and interpersonal skills, detailed knowledge of the business and organisations they are in, and many cooperative relationships with other people in that business and organisation (Kotter 1982, p. 133).

In a highly volatile media environment, such as the post-Soviet media market, the key to management success is emotional intelligence and an ability to influence other people while maintaining their respect and trust. While features of

management in uncertain environments are generally applicable, the characteristics of leadership of media businesses are more specific, depending on the part of the world and the nature of the business. This thesis argues that unlike business leaders elsewhere, the post-Soviet business leaders/owners are not only acute of the current political leadership but also try not to get involved in any relations with the people in power. Non-involvement with politics means that their business is more likely to live on, and it is the same for both Russia and Kyrgyzstan.

In Russia and Kyrgyzstan inhibiting managerial practises, promoting excellent performance and encouraging more hard work and education within a firm goes on par with maintaining a leader's status-quo. This status-quo suggests that the leader is the one who knows best how to deal with crises and s/he is the one who can be trusted and respected by the employees. Some scholars explain it as a cultural trait (Ryvkina 1989; Chhokkar et al. 2008; Kets de Vries and Florent-Treacy (2003), Walter and Bruch 2009). Others see the reason for it in the developing nature of the economy in Russia and Kyrgyzstan, and the subsequent risks of not surviving for private businesses (Pillai and Meindl 1998). There is also a limited job market, which possibly makes an employee delegate most of the decision-making to the boss and senior management. At least, this research has revealed that inter-company bonds between leaders and subordinates are quite strong and healthy. Private initiative is accepted and not punished at all managerial levels. This research suggests that employees instinctively adopt a kind of work ethic when they energetically deliver the tasks they're responsible for, and at the same time they don't challenge the status-quo of their senior managers, especially the founder or the managers who worked in the company for more than 10 years, to save their jobs and avoid conflicts. Similar behavioural features can be found across other transforming markets, such as China (Yeung and Tang 1996; Schlevogt 2002; Ngok 2007) and India (Chatterjee 2007).

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Part V
Media Law and Regulation

Lobbying Groups in Communications and Media Policies in Brazil



Edgard Rebouças

Abstract The debate concerning the regulatory framework of media is a process that involves a vast number of social actors. In this paper, five categories within this framework are identified: regulatory agencies, political class, media companies, organised civil society and intellectuals/experts. The objective is to analyse not only the complex network of relationships, pressures, interests and influences amongst these actors but also the roles they play and the impact each one has in Brazil. The complicating factor that arose from this study is that lobbying in media industries involves social and cultural elements in addition to political and economic ones. In face of current international, political and economic environment in Brazil, the social actors' behaviours and strategies to the regulation of media occur whilst advocating for their own interests and are similar, independent of national structures.

1 Introduction

One of the most difficult aspects of working on a research subject in the social sciences in the area of structure is the fact that conjuncture is constantly conspiring to attract the researcher with its proximity. It seems to be a battle for power, the mermaid's song, made even more antagonistic when the researcher's formations and origins are firmly based in everyday things and fleeting moments. The endeavours involving the policies and strategies of communications that occurred during the present study could have generated an infinite number of articles, essays, commentaries and projects.

Over the last fifteen years in Brazil, the discussions by social actors regarding communications and media policies have been very intense (e.g., digital television and radio, public broadcasting, advisory guidance to safeguard children, alcoholic beverage and obesity product advertising, broadcast license renewal and internet law).

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Pressure groups act similarly when they are defending their interests. The institutions (or lack of them) of policy in communications and media are characterised by peculiarities that result from the existing relations between governments and other spheres of power such as entrepreneurs, congressmen, political parties, religious organisations, associations, intellectuals, unions and media groups.

This study shows that the huge conflicts of interest were associated with the establishment of policy in communications and media, including the interests of those involved in the Legislature, the Executive branch and the business sector, in addition to all the necessities and fears inherent in an organised civil society. Intellectuals/experts were also considered to be a powerful pressure group in this field.

The key idea put forward by this article is that, concerning the regulation of communications and media, the behaviour of the social actors involved—media owners, politicians, organised civil society and experts/intellectuals—is disparate, despite governmental claims of a media policy that is in tune with the public interest. This key idea is firmly based on previous observations that there is a dominant political and economic elite class in Brazil that appropriates state concessions for personal gain to sustain their hegemonic position.

It was therefore established that this analyse would concentrate on trying to understand the intricate process whereby the body that elaborates and regulates policies in communications and media is lobbied. To obtain a more complete view of the problem, it was used the diagram below (Fig. 1) showing the social actors involved and the vectors that link them to themselves and to the regulatory body.

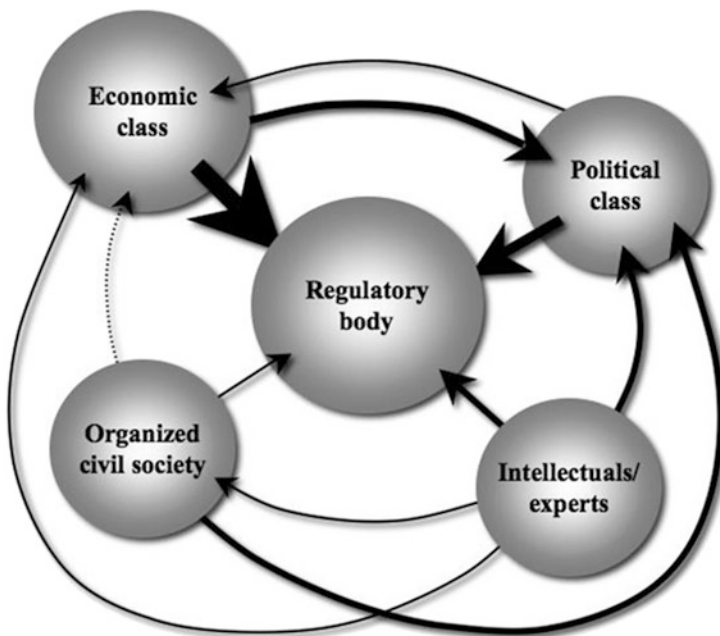


Fig. 1 Pressure vectors of social actors in communications and media policy

There is only one knot in the system: the *regulatory body*, which is the point where the interests and pressures of the social actors converge, albeit in the interior of each representation there is also a certain interconnection. We can directly place the broadcast and pay television firms into the Economic class category, and we can indirectly place producers, advertising firms and advertisers into the same class. We can place the powers linked to the State: the Presidency, the ministries, the Congress, the Judiciary, the political parties and the bureaucracy into the Political class category. The groups linked to media, including non-governmental organisations and social groups formed with specific objectives, can be placed into the Organised civil society category as citizens and/or consumers. The Intellectuals/experts group represents experts working in the market and scholars fulfilling their organic roles. Finally, the National Telecommunications Agency (Anatel) constitutes the Regulatory Body category (Rebouças 2003).

1.1 Regulatory Environment

The regulatory environment is understood to be the space where procedures, rules and institutional mechanisms establish a favourable relationship with the media, the political sphere, the market and the public (Hamelink 1999, p. 13). This provides an appropriate setting for the power struggles between the actors involved as each actor exerts pressure in an attempt to defend often-conflicting interests.

Jürgen Habermas (1996), in his book *Between Facts and Norms*, reminds that a political system is constantly faced with difficulties that may affect not only its efficiency but also the legitimacy of its decisions. Governments typically fail to establish policies because either they do not have influence over the problems or the proposals transcend legal possibilities. A political system must also pay attention to the legitimacy of its interference.

Many countries treat regulation as a constitutional issue. This occurs in communications and media because of their importance as well as their political, social, cultural and economic implications, and results in heated debate amongst the organism of power and those who feel directly affected by the regulations, i.e., firms. The main argument on the part of legislators is framed in terms of the public interest, while the entrepreneurs claim it is a question not only of free commercial activity but also of freedom of expression (or the neologism “freedom of commercial expression”).

2 The Regulation Framework in Brazil

The definition of a regulatory environment involves many political, economic, social and cultural elements and is also associated with specific moments in historical evolution. The national tradition in Brazil is firmly based in a patriarchal

regime with a State that is considered to be a central element during decision making. However, the interests of economic groups have come more and more into play without losing the principle role of sovereigns over the media sector. The crucial reason for this phenomenon is that in Brazil, measured authoritarian regimes turned electronic communications into an instrument of integration and national security.

The National Agency of Telecommunication (Anatel) originated on July 16th of 1997 as a consequence of the General Law of Telecommunications and was created by Fernando Henrique Cardoso's government (1995–2002) as the regulatory body to address changes in the Brazilian market after the privatisation of companies in the old state monopoly.

The Governing Board of Anatel consists of five members chosen by the President of the Republic after Senate approval. The mandated term of each member is 5 years long with no second term allowed. The members of the Governing Board can only be dismissed from office after a disciplinary administrative process. Six superintendents are responsible for handling communications and media policies.

The Brazilian regulatory measures have always been strongly influenced by the United States' model of telecommunications and broadcasting. Thus, the model of the Federal Communication Commission, with a delay of 63 years, largely influences the Brazilian regulatory agency. In the 1930s, North America suffered the effects of the Great Depression, and when Franklin Roosevelt's New Deal served to increase governmental intervention in the market in the United States, many "independent" agencies were created to act as arbitrators in market affairs. The situation in Brazil has been very different.

2.1 The Pressure and Interest Groups Within the Systems

One survey showing how pressure and interest groups work found that the biggest problem is the constant link made between these groups and one of the tools they use to achieve their goal. Lobbying activity in itself is morally neutral, although it has a pejorative connotation. Ideological questions do not arise from the means but the intentions of those that employ lobbying. It is impossible to understand how lobbying happens, without first having a clear view of who is involved and in what context the lobbying takes place.

Interest groups are frequently confused with pressure groups, and the line that separates them is not very clear. What defines the use of each term is the way a group operates. An interest group is more passive and does not necessarily use pressure. However, pressure groups are always motivated by self-interest, even if momentarily.

The Political Class and Communications The Brazilian jurist Raymundo Faoro (1991), in his book *Os donos do poder* (The Power Owners), made one of the best analyses of the evolution of the tradition of oligarchy in Brazil. His observation of

history leads the reader to an understanding of how the power of the national elite came about in the economic and political fields in Brazil.

The internal actors of the political class in Brazil are the members of the Presidency, some Ministries (Science, Technology and Communications; Justice; Health; Education; Culture), the National Congress and the Judiciary. The relationship between the Brazilian Executive and the media sector has always been a very close one, not only because the power to grant licenses for radio and TV broadcasting companies was exclusively in the hands of the President until the 1988 Constitution but also because firm owners nurtured a relation of friendship and complicity with the holder of the most important post of the country—most notably during dictatorial regimes. Also involved in applying and receiving lobbying pressure is the Department of State, the responsible for dealing with the lobbying of ministries and federal autarchies in conjunction with the National Congress and regulatory bodies.

The Government has used the Ministry of Communications (nowadays “Science, Technology, Innovation and Communications”) as a powerful instrument for control since its creation in 1967. Initially, it was used by the military dictatorship as an organism that would guarantee national sovereignty by connecting the whole country under the doctrine of “national security”. The broadcast firms—notably television stations—took advantage of communications progress and set up networks with this “national security” philosophy in mind. In the 1970s, the broadcasting companies were given subsidies and incentives and, in exchange, the Ministry acted as a go-between so that the dictatorial government always looked virtuous through the eyes of the media. In the 1980s, under the so-called return to democracy, the Ministry of Communications was used as a stage for patronage and the buying of votes in exchange for licenses to radio and TV broadcasting stations by ministry Antônio Carlos Magalhães and president Jose Sarney (1985–1989)—both the leading media owners in their Northeast Region states (Bahia and Maranhão) at that time. Over the past nearly three decades, the Ministry of Communications has been dismembered and reorganised by the governments of Fernando Collor de Mello (1990–1992)—another northeastern regional media owner (Alagoas)—and Itamar Franco (1992–1994). However, it was during the social democrat government of Fernando Henrique Cardoso (1995–2002) that a plan to drain the Ministry of Communications was put into action. The ministry Sergio Motta continued to make political use of the position regarding the distribution of licenses and in 1995, he began to implement the privatisation of the state monopolised Telebras System, which became a reality in 1997 with the publication of the General Law of Communications. The National Agency of Telecommunication (Anatel) was created and within 2 years, the National Agency of Communications would be established, transforming the Ministry into a purely political organ, but the Anacom was not created due to the death of Sergio Motta a few months beforehand. The matter was never addressed again in the administration because no other ministry could (or wanted to) confront the media interest groups.

During the governments of Luis Inacio Lula da Silva (2003–2010) and Dilma Rousseff (2011–2016), the Ministry of Communications remained in the same

structure, and never made the promised reforms proposed by the social programs of the Workers' Party (PT). More recently, in 2016, with the overthrow of power, the Michel Temer (2016–...) government merged the old ministries of Science and Technology with Communications, transforming them into a single Ministry of Science, Technology, Innovation and Communications, where the last one has of very small importance.

The Congress The highest incidence of interest group actions occurs in the corridors of the legislature. The greatest proportion of a representative's time is spent receiving people, hearing requests, discussing proposals, representing people's interests and weighing patronage while at the same time contriving political advantage.

Pressure and interest groups in the media sector leap into action whenever projects are discussed in the commissions set up by the House of Representatives or the Senate. Business groups forge bonds with representatives and present their proposals through them. Pressure and interest groups that exist within the Congress itself should also be given serious consideration. At present, fourteen blocs can be identified, independent of political affiliations. The so-called "Broadcasting Bloc" clearly serves the interests of the representatives and senators whose names are linked to the sector, most of whom own radio or/and TV station licenses and newspapers firms.

The distribution of licenses as a form of political currency reached its peak between 1985 and 1988, when Jose Sarney's government was responsible for conferring 1028 radio and television stations benefitting 91 representatives. Sarney's measure created an anomaly in the broadcasting market because most of the representatives and senators had no experience in the sector. They became politician-broadcasters overnight instead of broadcaster-politicians, which would have been the more natural progression resulting from radio broadcasters, TV journalists or media entrepreneurs taking the plunge into political careers.

The Strategies of Media Firms The management strategies at the end of the 1980s were all related to each other, and showed that what each firm really wanted was to follow its own path. Enormous conglomerates were formed as a result of the fusion of companies that became insecure about their future when faced with the prospect of massive technological changes. The situation in Brazil was no different. There was a lack of rigid control over media conglomerates. The radio and television companies knew how to take advantage of developmental and nationalistic policies to expand their businesses as much as possible. As a result of this, the current communications and media systems are highly developed, boasting high technical standards, activity on the international market, and generally high levels of content.

One outstanding characteristic of the media groups in Brazil is that the majority of them are family firms that developed from small companies into large conglomerates, for example, Globo Group, Abril Group, Band Group, SBT and Record Network, to mention just the national largest ones.

The pressure groups representing the entrepreneurs of media sector in Brazil are the Brazilian Association of Radio and Television Stations (Abert)—founded in 1962 to unite the interests of broadcasters all over the country during discussions on the Brazilian Code of Telecommunication—initially dominated by Diarios Associados Group, but currently linked directly to the Globo Group, the Brazilian Association of Broadcasting and Telecommunications (Abratel) and the Brazilian Association of Broadcasters (Abra)—two splinter groups of Abert, in conjunction with the TV networks SBT, Record and Band—and the Brazilian Pay TV Association (ABTA)—headed in rotation by Abril and Globo, which still encounter problems making parliamentarians understand the difference between broadcasting and pay television. As the companies in this sector are interested in both Broadcasting and pay television, they end up having four institutional representations for lobbying.

The Participation of Civil Society The crisis in the Welfare State has caused people to develop themselves first in the context of the family and then slowly integrate other social activities, enabling individuals to better suit their roles as a citizens.

In Brazil, the organisation of social movements happened as a result of greater autonomy at the beginning of the 1980s, when the military dictatorship was drawing to an end. People who had previously observed social problems from their doorstep began to become actively involved in education, health and popular communication. The unions, professional associations such as the Brazilian Bar Association (OAB) and the Federal Society of Engineers and Architects (Confea), the universities, as well as the Catholic Church, played important roles in encouraging and fomenting social movements.

Some entities have been outstanding in their function of uniting people for a common cause, the best Brazilian example on communications field being the National Forum for the Democratisation of Communication (FNDC). Founded in April of 1991, the FNDC is the main pressure group concerned with the policies of communications and media in Brazilian society. It was no longer enough to hurl out theses, wave flags and shout words of command, society needed to show that it could generate democratic political policies that were at the same time achievable. However, the FNDC suffers from a never ending crisis; is it an entity linked to the democratisation of communications and media in conjunction with fundamental movements or is it an entity concerned with the discussion of the great thesis of public policies?

Another significant movement was formed by the group Ethics on TV, with the national campaign “Whoever finances the trash television is against the civil rights”, founded in 2002 with the objective of influencing the quality of TV shows like telenovelas, news, games, musicals and advertising. Ethics on TV is made up of educators, lawyers, psychologists and social movements and encompasses feminists, homosexuals, Afro-descendants and other minorities together with the Commission of Human Rights of the House of Representatives.

Another one of the more active groups in Brazil is the Intervozes, an NGO formed by young volunteer journalists and advertisers with the objective of increasing

awareness to protect the democratisation of communications and media. They attempted to form a critical awareness within other organisations in society. In this way, they hoped to strengthen the relations between greater numbers of entities and increase their participation in debates on communications and media policies.

More recently, a group that occupies an important place in discussions on communications and media policies is the Alana Institute, an NGO focusing on advocacy against child consumerism, with a specific emphasis on banning all advertising directed at children. The Alana is formed by professionalised lawyers, educators, psychologists, communications experts and activists. They work with consumer groups and parent associations, and have partnerships with universities to publish research on child consumerism.

The Role of Intellectuals and Experts In his chapter *Os Intelectuais e a Organização da Cultura* (Intellectuals and the Organization of Culture), Gramsci (2000, p. 15) begins with this question: “are the intellectuals an autonomous and independent group, or does each group have its own specialised category of intellectuals?” This study classifies those who work with the policies of communications and media in an atmosphere of ideas and practical experience as intellectuals, while excluding the traditional and popular types of intellectuals listed by Gramsci distributed among artists, authors and journalists. The intellectual here is that “enduring persuader”, the ideological intellectual of Bobbio (1997). He was born at a specific moment in history, in Paris between the 13th and 14th of January 1898, with the publication of the article *J'accuse*, by Emile Zola, and the *Manifeste des Intellectuelles*, authored this time not only by Zola but also by Marcel Proust, Jean Jaures, Anatole France and others. All of them came out in defence of Captain Dreyfus, unjustly accused of treason in a case that became known as *affaire Dreyfus*.

From that moment on, intellectuals became a force as true social actors with individual functions. Some people even classify them as a social stratum, a category or social class, the so-called *intelligentsia*. When analysing the role played by intellectuals as a pressure group in terms of communications and media policies, it is of no interest to treat them merely as those who retain the analysis of immediate questions. What is needed is a deeper view that enables further reflections based on conceptualisations, redemptions, theoretical confrontations and comparative panoramas. Experimental, superficial or merely conjectural opinions are no longer enough; the intellectual now owes a debt to society.

The ideal intellectual who works in public policy is a type of mediator who promotes dialogue, opening an opportunity for debate between interlocutors who typically ignore one another. This type of intellectual has the difficult job of eliminating, or at least diminishing, the huge gap that exists between the analyst and the politician. Ideological intellectuals differ from experts in many ways. The most obvious difference is that the academic works with profound principles that will guide future analyses, whereas the expert develops means-knowledge studies. Thus, when they draw up a written report worth US\$10,000 in one weekend, they are preparing mediating data for the decisions of companies and politicians.

Technical knowledge has become increasingly important in recent years. Some companies are now only beginning to realise that there is a great source of information available at a low cost in universities.

In light of the historical contempt shown by the economic and political classes towards intellectuals, when an opportunity appears to show off their knowledge, irrespective of the use it is to be put to, researchers become excited. The risk, alerts Armand Mattelart (2002), is that a profound crisis exists among the academics.

In her article with the very provocative title: *Is Policy Research an Irrelevant Exercise?* Robin Mansell (1985) stresses that most research focuses on the consequences of communications and media policies with respect to the public interest. As a result, business interests end up being ignored by a large number of researchers, but are taken into consideration by decision makers. While the critical research generated in the academic field are tied down to an analysis of power relations and their effects, government and company resistance to academics increases day by day, and the academics' results rarely reach those who are actually responsible for making policy decisions. Mansell (1985, p. 162) goes even further, suggesting that the credibility of such research is already questioned within the academic community itself.

The academic intellectuals in Brazil have very wide social visibility, but almost no visibility in the business arena. Although media firms welcome experts, no one sees them. In Brazil, university scholars still have status, and many of them make use of this fact to boost their curriculum when offering a consultancy. Being a professor at Getulio Vargas Foundation (FGV), University of Sao Paulo (USP) or Superior School of Propaganda and Marketing (ESPM) still has symbolic value for specialists, even though in their own departments, they are often minor researchers with few publications, little academic involvement and a lack of commitment. However, scholars who works as consultants for various firms are viewed by their students as someone in contact with the market, "the real world", while professors spend their time writing "incomprehensible articles" about theory and "boring things".

The intellectuals involved in communications field have three well-founded research associations: the Brazilian Association for Interdisciplinary Studies in Communications (Intercom), the Association of Masters and PhDs Programs (Compos) and the Brazilian section of Latin Political Economy of Information, Communication and Culture Union (Ulepicc-Brazil). All for them have specific applications and research groups on communications and media policies.

3 Conclusion

In face of the present in political, economic, cultural and social framework, the behaviour of the social actors represented here is fascinating to observe as they defend their interests in communications and media policy. In Brazil, equal access is not granted in strategic and political decision making within the sector of media (Rebouças 2003).

For more than a century, the idea of capital has been feeding a series of intentions and interests with the notion of maximum profit with minimum cost. Included within this notion are all the trial and error strategies that have been tested since the crisis in the 1970s. A type of superiority of these capital actors has emerged in relation to the rest of the actors involved. The result is a constant defence of the doctrine of *laissez faire*.

What has become clear is that neither the entrepreneurs, politicians, organised civil society, intellectuals, policy makers nor even the regulatory bodies know what to do. The conjuncture continues to regulate the phenomena linked to the sector of media and no time is left for the strengthening of structures.

An analysis of the regulatory bodies involved shows that more time is needed for the regulatory bodies to reach maturity and effectively fulfil their roles as defenders of the public interest. An analysis of the role of the political class leads to the conclusion that it is mindful of the sector, involving the spheres of power in national projects, most explicitly in the 1950s, 1960s and 1970s, and in a less clear-cut way since the early 1990s, when management strategies became more important on the political scene (Rebouças 2010).

The role of the firms, it has been said that they were playing a game but coming out with nothing, and then became much more like a game where all of the players came to agreement, enabling everyone to win. In fact, by using this type of redefining moment strategy, it was the other players who lost. Thanks to their easy access to government decisions, media entrepreneurs also have an advantage with respect to redefining policies to benefit their interests.

Various facts point towards the function of intellectuals as an autonomous group. In Brazil, entrepreneurs in the media sector give almost no consideration to intellectuals' opinions. The experts, however, are always heard because they are paid to write reports. As holders of specific knowledge that is invaluable for business strategies, a number of academic researchers spend increasing amounts of their time as expert consultants.

Organised civil society has found a new impetus in recent years. One of the problems social movements constantly face is their own organic growth. Society's conquest of a political voice is directly linked to how the political voice represents itself. In relation to communications and media, people should understand that they must leave behind their roles as mere viewers and take the stage as actors. It must be emphasised that society should not expect a smaller state but a better state.

Recently, certain issues have gained prominence in discussions about communications and media policies; these issues were restricted to groups in the communications sector until the early 2000s. Even if one interprets historical banners as the democratisation of communication, the fact that the Workers' Party (PT) has been in power from 2003 to 2016 has at least tentatively caused issues such as digital television and radio, rating classifications, advertising for children, of products that cause obesity and of alcoholic beverages, political campaign funds, the regulation of journalism as a profession, the licensing of TV and radio stations and the quality of media content to enter into various sectors of society such as schools, churches, social movements and, even the mainstream media. This movement into the various sectors

forced the government to call the First National Conference of Communication (Confecom) in late 2009. This was the first opportunity to improve the involvement of civil society in discussions on which types of media it wants, and which policies are needed to meet their demands.

After 6 months of discussion in the 27 states and the Federal District, 1684 delegates representing the business sector, civil society and government met in Brasília for 4 days of dispute and debate on approximately 6084 proposals received nationwide. The objective of the first Confecom was to define the proposals to be presented as public policy to the Government and the National Congress. However, since Confecom, almost none of its 633 final recommendations have been taken into account by the Executive or Legislature.

There is a constant expectation that the Government will place the topic under discussion again. However, there is a fear that the administration will once again adopt the historical policy of “no policy” in the case of communications, due to the involvement of many interest groups and strong pressure from the media firms.

There is no doubt that lobbying is a necessary part of the political game in any democracy because it is through lobbying that social groups can manifest their interests. What is problematic is the lack of regulations preventing everyone from clearly expressing and defending their positions. The widely held pejorative image of lobbying is fed by the fact that lobbying takes place in the back rooms of power.

The great certainty that remains at the end of this analyse is that this is an unfinished, possibly imperfect work because the regulations and the social, economic, political and cultural phenomena related to communications are constantly evolving under pressure.

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Restrictions and Legal Challenges for Foreign Investment in the Media Market in Iran



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Abstract As economic sanctions against Iran started lifting up or easing, several major international investors moved to Iran, and others may follow. After lifting up the economic sanctions, Swedish and Russian businessmen team up to invest in Iranian digital markets. In recent years, some companies in Iran, like Café Bazaar, Iran's main Android marketplace, and Digikala, could increase their assets from \$150 million to \$4 billion in just about 4 years. How this would happen in Iran? What has been changed in recent years in Iran? What would the 'open for investment' policy means in the context of the Iran media market? The methodology of this paper is based on the relevant Global Competitiveness Index (GCI)'s pillars (The 12 pillars of competitiveness are institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. World Economic Forum, The Global Competitiveness Report, 2016–2017, Geneva, 2016, ISBN-13: 978-1-944835-04-0.) of competitiveness (2015–2016), taking into account recent economic developments in Iran (up until 2017) especially as a result of the lifting up of the sanctions against Iran, including legal reforms to facilitate foreign investment, creating businesses, a digital platform and an organization for import and export procedures, structural changes to improve and development of private sector, and great amendments to taxation legislation for foreign investment.

In this paper we will illuminate some basic facts and features of the Iran's economy and opportunities which have been ignored by some reports. We will discover that foreign investors in Iran enjoy the same supports and privileges that are offered to the Iranian investors. In this connection, the Direct Taxation Law rules that no discrimination must be applied in terms of taxation as regards foreign and domestic investors. In this regard, similar to Iranian investors foreign investors pay the equal amount of taxes. In the same way, tax exemptions and discounts have, further, been established equally for both foreign and domestic investors. Also we

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ascertain that there are four basic freedoms including assets and many other privileges and methods to invest in Iran especially in social media. By means of giving some examples of recent developments we show that the situation is very perfect, especially in terms of market size, to invest in social media in Iran. However, it should be kept in mind that, similar to many countries, a variety of legal arrangements govern different business activities in Iran, some of them are specifically related to media and some of the are general, and indirectly are concerned with this area of activity.

1 Introduction: Real Market Potential

The Islamic Republic of Iran, as a strategic country, is certainly a unique market in the Middle East. Iran's economy has undergone numerous upturns and downturns since the victory of the Islamic Revolution in 1979. In the face of important events such as the Iraqi-imposed war, international sanctions, freezing of its foreign assets, and similar reasons, Iran has, for a long time, been to formulate a planned and long-term economic and trade policy.¹ They have been developed gradually and steadily. After such a long time, Iran's economy could now be regarded as self-reliance and tenacious. Economically, although oil and gas remains the largest sector, Iran has diversified its economy through decades of self-reliance.

Shortly after sanctions were lifted, the Joint Comprehensive Plan of Action motivated foreign investors and absorbed their attention regarding the huge potentials that are available in Iran. "With a young and urbanized population of 80 million. . . , Iran is the second-largest economy in the Middle East, with a GDP of \$393.7 billion in 2015".²

The 10th pillar of the competitiveness is market size and one of the sub-indexes is real market potential. Size of domestic and foreign markets measured as an expenditure-weighted average of market access including own domestic demand. World Economic Forum's calculations are estimated based on the results of a gravity equation. The calculations are based on the United Nations Commodity Trade Statistics Database (UN COMTRADE) and CEEPI gravity dataset, 2015. In terms of market size, Iran's rank is 19. It is populous, rich in natural resources and apt to technological progress and international developments. The country's natural resources create a significant wealth.

In terms of recent economic trend, Financial Tribune describes the after lifting-up sanction situation, as "no "big bang" has happened here, but incremental developments are encouraging". These include the reestablishment of the commercial relationships between Iran and British, Italian, and French companies.³

¹See www.irantradelaw.com

²<https://financialtribune.com/articles/domestic-economy/57594/iranian-economy-a-year-after-sanctions>

³ibid.

In light of the anticipated lifting of most international sanctions in 2016, foreign investment, especially foreign direct investment (FDI), soars in Islamic Republic of Iran. According to fDi Markets, before the lifting of sanctions, Iran was ranked 12th out of the 14 Middle East nations for FDI, between 2003 and 2015, equating to a market share of 1.62%. In the Post Sanction Era, economic has rebound as country climbs regional FDI rankings. Since sanctions were lifted in 2016, Iran has mounted to number three in the rankings, with a market share of 11.11%.⁴ The major countries investing in different sectors in Iran during the period were South Korea and Germany, which together committed to capital expenditure of \$2.15 billion, and Russia in the Iranian Internet companies. The upward trend is set to continue.

2 Capacity to Commercialize New Ideas in Social Media

Social media can be a useful source of market information and customer's voice. The social media are inexpensive sources of market intelligence which can be used by marketers to track problems and market opportunities.⁵

The 2002 FIPPA has a vital role to play for providing the important facilities and protections available for media-related services and activities. FIPPA establishes substantive protections for foreign investors, including protection against expropriation in Iran. A number of facilities will be provided for licensed investors, which will be elaborated in details in the following sections.

Recently, under the existing national protections and facilities, Russian businessmen⁶ invested in DigiKala, the Iran's largest e-commerce company, as well as leading classifieds sites Divar and Sheypoor. They invested in Iran via Pomegranate Investment, a Swedish company founded in 2014. Owning 9.6% of Pomegranate, Sarava is the main holding of Pomegranate Investment. Sarava is one of the investment companies in the Internet sector with a 51% stake in Digikala as well as stakes in Divar and Sheypoor, and a shareholder of Café Bazaar, Iran's main Android marketplace. Pomegranate owns directly stakes in Carvanro, Iran's first online ride-sharing service, and in Griffon Capital, a newly formed Iran-focused investment and advisory boutique.⁷

This upward trend in foreign investment, on the one hand, will create bigger competition for Iranian startups, such as DigiKala or Café Bazaar, Iran's main Android marketplace, and on the other hand, gives foreign investors the

⁴ www.fdimarkets.com

⁵Constantinides E., Lorenzo C., Gómez M.A., 'Social Media: A New Frontier for Retailers?', *European Retail Research* 22, (2008), pp. 1–28.

⁶The former Qiwi shareholder and Parus Capital President Andrey Muravyev and Parus Capital Managing Partner Boris Sinegubko.

⁷East-West Digital News, March 21, 2016, available at <http://www.ewdn.com>

opportunities to invest and be aware of the challenges available in this emerging market. Iran, like every country, has its own challenges. However, in order to deal with such challenges, as said above, several investment laws and regulations have been established in recent years. Social media industry is covered by the 2002 FIPPA and more than sixty bilateral and multilateral investment treaties offering a high level of protection of foreign investments to be made in Iran.

3 Institutions and Government Regulations

One of the Global Competitiveness pillars is institutions and one of the indexes and sub-indexes is burden of Government regulation, which refers to question how burdensome it is for companies to comply with public administration's requirements (e.g., permits, regulations, reporting).

Over the last few years, especially after lifting up the economic sanctions against Iran, the policy and laws on foreign investment in Iran have moved towards an 'open for investment' approach. The current legal system provides great and continuous protection for foreign investors. This includes specific sectors of media market. Despite this, in terms of mass media, there still exist specific restrictions and legal challenges for foreign investment in Iran. It is worth mentioning that statistics show that, in general, a high degree of foreign investment restrictiveness exists in one of the primary economic sectors, that is, mass media, in many countries, including in Iran, some OECD and G-20 countries. It has also been shown that restrictions in some primary sectors, such as media, may be more extensive than others in some countries, due to their respective policies and legal challenges.

Admission of foreign investment in Iran is made with due observance of the prevailing investment laws and regulations adopted.⁸ With certain limited exceptions established by the 1979 Constitution of the Islamic Republic of Iran, foreign investors are allowed to invest, under the requirements of existing laws and regulations, in all primary sectors and subsectors, e.g., mining, agriculture and manufacturing, as well as in providing services, such as insurance and media services.

In addition to the Constitution, there are two types of laws and regulations regarding foreign investment and companies. The first group deals with such issues directly, e.g., Foreign Investment Promotion and Protection Act (FIPPA), and the second group contains specific provisions, which indirectly concern the topic, such as the Law on the Administration of Free-Trade Industrial Zones, Direct Taxes Act and Labor Law.

In Iran investment laws and regulations are a core policy tool to promote and regulate investment. Together with international investment agreements (IIAs), that

⁸Chapter Two, Article 2 of the 2002 Foreign Investment Promotion and Protection Act ("FIPPA").

is, bilateral and multilateral investment treaties and treaties with investment provisions, they constitute the basic legal framework for cross-border investment in Iran. Despite the fact that these laws and IIAs contain similar provisions, IIAs have some specific and different provisions, especially in terms of the challenge of the dispute settlements, which will be discussed further in this paper.

With an overarching goal of promoting economic development in line with the globalization's necessities and for the purposes of securing protection, as well as increasing, foreign investments in Iran, a number of investment laws and regulations have recently been adopted, the most important of which is "Foreign Investment Promotion and Protection Act" (FIPPA). It was adopted by the Parliament in 2002.⁹ It replaced the "Law for the Attraction and Protection of Foreign Investment" (LAPFI). By means of replacement of the law, Iran enhanced the legal framework and operational environment for foreign investors.¹⁰

Iran has also concluded more than 60 bilateral and multilateral¹¹ investment treaties,¹² of which more than 50 are currently in force.¹³ One of the features of the treaties and similar agreements is incorporating regulations to avoid double taxation.¹⁴ This would simplify cooperation between businessmen from contracting parties, and also increase economic exchanges with other countries. Additionally, bilateral investment treaties offer the highest level of protection of foreign investments to be made in Iran. Countries that have an in force bilateral investment treaty with Iran include Austria, Germany, China, France, Italy, Switzerland, South Korea, and Spain.

⁹The Act comprising of 25 Articles and 11 Notes is enacted by the Islamic Consultative Assembly in its session of Sunday, 10 March 2002. The initial part of Articles (1) and (2), Para (c) and (d) of Article (2), Para (b) of Article (3), and Note (2) of Article (17) have been approved by the Expediency Council in its meeting on Saturday, May 25, 2002.

¹⁰The Preambular part of Foreign Investment Promotion and Protection Act.

¹¹See for example, Agreement between the Federal Republic of Germany and the Islamic Republic of Iran on Reciprocal Promotion and Protection of Investments, date of signature 17/08/2002, and date of entry into force 23/06/2005; and Agreement between the Swiss Confederation and the Islamic Republic of Iran on the Promotion and Reciprocal Protection of Investments, date of signature 08/03/1998, and date of entry into force 01/11/2001.

¹²International investment agreements (IIAs) are divided into two types: (1) bilateral and multilateral investment treaties and (2) treaties with investment provisions.

¹³For a list of bilateral investment treaties between Iran and other countries, see UNCTAD website, available at <http://investmentpolicyhub.unctad.org/IIA/CountryBits/98> (Last visited on the 5th August 2016). Note that the 2016 treaties are not included in the list.

¹⁴See for example, Double Taxation Treaty between Iran and China; see also similar treaties between the Islamic Republic of Iran and other countries, available at rc.majlis.ir; For further studies, see "Addressing Tax Evasion and Tax Avoidance in Developing Countries", available at: http://www.taxcompact.net/documents/2011-09-09_GTZ_Addressing-tax-evasion-and-avoidance.pdf (retrieved at 9th Sep. 2017).

Finally, several steps have been taken to develop the existing legal system in Iran for private-owned sector including social media. Such legal measures include, in addition to 2002 FIPPA,¹⁵ the Fifth Five Year Economic, Social & Cultural Development Plan of the Islamic Republic of Iran,¹⁶ the Direct Taxes Act,¹⁷ and Labor Law deal with issues such as criteria for admission of foreign investments, guarantees and transfer of foreign capital, litigation, tax exemptions for foreign persons, and the employment of foreigners.

4 Burden of Government Regulation

One of the Global Competitiveness pillars is institutions and one of the indexes and sub-indexes is burden of Government regulation, which refers to question how burdensome it is for companies to comply with public administration's requirements (e.g., permits, regulations, reporting). In this respect we need to refer to the following major problems:

1. Lack of Transparency on the Legal Investment Framework: It would seem to be a lack of transparency in terms of legal investment framework due to the existence of several laws and regulations, directly and indirectly related to the foreign investment, such as the 2002 FIPPA, labor law, tax law, employment law and commercial law. This paper makes it clear what are the basic legal requirements, methods and restrictions to invest in the Iran media market, distinguishing between social media and mass media.
2. Time-consuming process of obtaining permits and lengthy bureaucracy. In order to find out what would be the easiest and quickest way to invest in media market in Iran, we explain the procedure and the organizations involved in this procedure.
3. FDI and Technology Transfer

One of the main concerns which has been reemphasized in the Report by World Economic Forum is to what extent foreign direct investment (FDI) bring new technology into your country. In this respect, many policies and laws have accentuated that this question, as well as the question of technological readiness and availability of latest technologies should not be ignored in any FDI. Currently Iran is ranked 104 with the score of 3.9. Which must be improved through following years.

¹⁵The 2002 Foreign Investment Promotion and Protection Act.

¹⁶January 15, 2011.

¹⁷The Law of Direct Taxations, adopted by Islamic Consultative Assembly on 1987.

5 ICT Use for Business to-Business and to-Consumer Transactions

In Iran, the clear answer to the question as to what extent businesses use ICTs for transactions with other businesses and to-consumer transactions for selling their goods and services to consumers depend on the lifting up sanctions completely. Many our problems stem from the imposed sanctions. One of the main goals of the Government is to develop and promote the quality of communication services. Of course, there are some difficulties as well, especially for commercial companies as regards making commercial relations with their customers abroad, which would be improved after lifting up the whole sanctions.

Limited Online Payment Options: Due to sanctions, especially in terms of banking systems, lack of a system providing credit cards, the online shopping and internet-based services have problems. There is a need to develop and promote the related services in Iran. As a result of such problems, in some cases, collect on delivery has become a popular transaction method between sellers and buyers inside Iran. However, after lifting up sanctions, especially in relation to SWIFT, there is a hope to improve the online banking system and to establish new ways of online payments supported and secured by the Government and international monetary systems.

6 One-Stop Shop: No Time-Consuming Process

As mentioned above, one of the main challenges for the investment in media market is the issue of time-consuming process of obtaining permits and lengthy bureaucracy. In order to solve such problems, the 2002 FIPPA has taken great steps. For the purpose of facilitating and accelerating the fulfillment of the Organization's legal duties in the areas of promotion, admission and protection of foreign investment in the country, a one-stop shop has been created by FIPPA and the Implementing Regulations of FIPPA. Applications of foreign investors as regards issues relating, for example, admission, importation and repatriation of capital must be submitted to the Organization for Investment, Economic and Technical Assistance of Iran (OIETAI).¹⁸ In this regard, at the premises of the OIETAI, the "Center for Foreign Investment Services" has been founded where the representatives of the relevant agencies are stationed. This Center is the focal point for all referrals by foreign investment applicants to the relevant organizations. It has been established for focused and efficient support for foreign investment undertakings in Iran.

¹⁸Organization for Investment, Economic and Technical Assistance of Iran (OIETAI), Tax Exemptions For Legal Persons In Iran, available at http://www.investiniran.ir/OIETA_content/media/image/2012/10/2441_orig.pdf

All investment licenses must be issued after confirmation and signature by the Minister of Economic Affairs and Finance. Before this confirmation, the investment license must be approved by a Board working on the applications for admissions.¹⁹ Investment licensing procedure takes at most 45 days and it is a great step towards resolving the challenge of time-consuming process of obtaining permits and lengthy bureaucracy. In point of fact, within a maximum period of 15 days, the investment applications must be submitted by the Organization, after a preliminary review, to the Board, and then, within a maximum period of 30 days, the Board reviews the applications from the date of submission, and at the end, notifies its final decision.²⁰

Under the provisions of FIPPA, the benefits of coverage of FIPPA are available for foreign investors who have already invested in Iran. FIPPA's coverage for the principal investment already made is subject to some conditions.²¹

7 Legal Methods to Invest in Social Media Market in Iran

The first question for many foreign private persons is whether they could invest in social media market or not. One of the features of FIPPA is giving a broader definition²² to foreign investment, according to which all types of investments are covered. This includes the investment in social media. With the intention of stimulating and benefiting both foreign and local investments, FIPPA introduced a number of enhancements for foreign investments in Iran. It is an important complement to a whole host of reforms taking place in Iran's general macroeconomic framework and structural mechanisms.²³

Under article 3 of the FIPPA, methods of foreign investment in social media in Iran can be divided into two categories as follows:

¹⁹Article 5 of FIPPA.

²⁰For the purpose of investigation and making decision on applications referred to in FIPPA and its Implementing Regulations, a board under the name of the "Foreign Investment Board" shall be established under the chairmanship of the Vice Minister of Economic Affairs and Finance who is ex-officio the President of the Organization, comprising of Vice Minister of Foreign Affairs, Vice President of the State Management and Planning Organization, Vice Governor of the Central Bank of the Islamic Republic of Iran and vice ministers of relevant ministries, as the case requires.

²¹Article 6 of FIPPA.

²²Article 2 and 6 of the Implementing Regulations of Foreign Investment Promotion and Protection Act.

²³Other developments include: broader fields for involvement by foreign investors including in major infrastructure; streamlined and fast-track investment licensing application and approval process; creation of a one-stop shop called the "Center for Foreign Investment Services" at the Organization for Investment, Economic and Technical Assistance of Iran (OIETAI) for focused and efficient support for foreign investment undertakings in Iran; more flexibility and facilitated regulatory practices for the access of foreign investors to foreign exchange for capital transfer purposes; introduction of new legal options governing the government investor(s) relations.

First: “Foreign Direct Investment” (FDI), in areas where the activity of the private sector is permitted. The investment can be made through the use of foreign investment in a new Iranian company or by the purchase of an already-established company’s shares by the foreign investor. FDI “occurs when an investor based in one country (the home country) acquires an asset in another country (the host country) with the intent to manage that asset. The management dimension is what distinguishes FDI from portfolio investment in foreign stocks, bonds and other financial instruments. In most instances, both the investor and the asset it manages abroad are business firms”.²⁴ Under FDI, the foreign investor controls the asset in the host country by presentation at location and admitting responsibilities. FDI aims the cooperation of one or several foreign companies in a country where they have legal rights for investing. FDI involves possibilities as possession or buying, making a company substitution, cooperative investment, cooperation at producing, cooperation at profit and partly cooperation.²⁵

In relation to FDI, there are two important points to make, as follow:

1. Investment may be made in all areas where the private sector activity is permitted. A major step that has been taken in recent years in Iran is to adopt several laws relating to the Principle 44 of the Constitution which facilitate and encourage the real competitiveness in Iran. This has happened as a result of fact that monetary stimulus is not enough to reignite growth if economies are not competitive.²⁶ It should be kept in mind that monetary policy is not enough. Insufficient competitiveness would be a constraint for reigniting growth worldwide. On the other hand, as a country becomes more competitive, productivity will increase and wages will rise with advancing development.²⁷
2. There is no restriction on the percentage of foreign shareholding.²⁸

²⁴The Preamble part of Foreign Investment Promotion and Protection Act.

²⁵Blackhurst, R., & Otten, A., World Trade Organization Report “Trade and foreign direct investment”, World Trade Organization, 1996, available at: https://www.wto.org/english/news_e/pres96_e/pr057_e.htm. Accessed 23 Jan. 2017; see also Moran, Theodore H., “Foreign Direct Investment”, *The Wiley-Blackwell Encyclopedia of Globalization* (2012); Moran, Theodore, *Foreign direct investment*, John Wiley & Sons, Ltd, 2001.

²⁶It should be mentioned that (1) monetary stimulus is not enough to reignite growth if economies are not competitive, (2) an increasingly important element of competitiveness is creating an enabling environment for innovation, and (3) innovation in turn goes hand in hand with openness and economic integration. For such purposes, World Bank/International Finance Corporation, *Doing Business 2016: Measuring Regulatory Quality and Efficiency*, <http://www.doingbusiness.org/>

²⁷World Trade Organization (WTO), *World Trade Organization Annual Report 1996*, World Trade Organization, Geneva, (1997). See also Moran, Theodore H., “Foreign Direct Investment”, *The Wiley-Blackwell Encyclopedia of Globalization* (2012); Moran, Theodore, *Foreign direct investment*, John Wiley & Sons, Ltd, 2001; Larraín, Felipe, Luis F. Lopez-Calva, and Andres Rodriguez-Clare. “Intel: a case study of foreign direct investment in Central America.” *Center for International Development Working Paper* 58 (2000); Hatzius, Jan. *Foreign direct investment*. Centre for Economic Performance, London School of Economics and Political Science, 1997.

²⁸Article 4(b)(1) of the Implementing Regulations of Foreign Investment Promotion and Protection Act.

Second: another way is contractual framework for investment,²⁹ i.e., contractual arrangements between the parties with or without formation of company, which are based on conditions. In accordance with the Foreign Investment Promotion and Protection Act, Ch. Two, Article 3(b), contractual framework for investment is permitted “where the return of capital and profits accrued is solely emanated from the economic performance of the project in which the investment is made”. This Article continues to regulate that the Government or government companies and/or banks must not guarantee the return of capital and profit.³⁰ The conditions articulated in this Article of FIPPA, indeed, are certain criteria in the economic system for foreign investment in the public and private sectors and must be observed by both groups.

Different types of project financing methods including “Civil Participation”, “Buy-Back” arrangements, “Counter trade”, and various “Build-Operate- Transfer” (BOT) schemes.³¹ The difference between FDI and foreign indirect investment is that the latter one occurs when the foreign investor has not got any share of fund and/or cooperative investment, then being situated on the level of foreign indirect investment subject. It does not have supervision or legal responsibility, and just receives profit depending on its share.

Subparagraph (2.1) of Article 4 of the Implementing Regulations of FIPPA in terms of investment within the framework of contractual arrangements, provides that compensation of a loss sustained by the foreign investor is guaranteed by the Government, where the losses are come from “prohibition and/or interruption in the execution of financial agreements caused by enactment of law and/or Cabinet decrees”.³² The Article in the subparagraph b(2) deals with the guarantees where a government agency is a party to the contract in “B.O.T.” and “Civil Participation” schemes.³³

²⁹Salacuse, Jeswald W. *The three laws of international investment: national, contractual, and international frameworks for foreign capital*. Oxford University Press, 2013; Esmaeil Karimian, *Investment in Iran*, Wiesbaden, Springer Fachmedien Wiesbaden, Germany, 2016.

³⁰Foreign Investment Promotion and Protection Act, Ch. Two, Article 3 (b) provides that contractual arrangements between the parties will only be permitted “where the return of capital and profits accrued is solely emanated from the economic performance of the project in which the investment is made, and such return of capital and profit does not dependent upon a guarantee by the Government or government companies and/or banks”.

³¹Chapter Two, Article 3 of Foreign Investment Promotion and Protection Act.

³²Subparagraph 4b2.1 regulates that “Compensation for losses sustained by the Foreign Investment resulting from prohibition and/or interruption in the execution of financial agreements caused by enactment of law and/or Cabinet decrees, up to a maximum of matured installments, shall be guaranteed by the Government”.

³³Article 4(b)(2.2) of the Implementing Regulations of Foreign Investment Promotion and Protection Act provides that “In “B.O.T.” and “Civil Participation” schemes where a government agency is the sole purchaser and/or supplier of goods and services at subsidized prices, the purchase of produced goods and services resulting from an investment project by the government agency as a party to the contract, shall be guaranteed in accordance with the relevant regulations”.

A variety of features and advantages of the above mentioned methods of investment are incorporated in the provisions of FIPPA and its Implementing Agreements, the most important and common of which are “the volume of foreign investment” in each case is not bound by any limitation; and also, foreign investors enjoy the identical treatment as bestowed to domestic investors.³⁴

8 Guarantees and Transfer of Foreign Capital

In the long run, the four freedoms have been guaranteed by Iran, i.e., the free movement of people, goods, services, and capital. One of the main questions for foreign investors is how a national law protects the investment against the host States actions. In this respect, it should be pointed out that under the national Iran laws and regulations, as well as bilateral or multilateral agreements, investments of investors will not be nationalized, confiscated, expropriated, “unless for public interests, by means of legal process, in a non-discriminatory manner, and against payment of appropriate compensation”.³⁵ It should be noted that application for compensation must be referred to the Foreign Investment Board³⁶ within 1 year from the date of expropriation or nationalization. Moreover, it should be mentioned that disputes arising from expropriation or nationalization must be settled in accordance with the provisions of FIPPA and the bilateral agreements with the respective government of the foreign investors.³⁷

Bilateral agreements concluded by Iran on the protection of foreign investment grant foreign investors common investment treaty protections, for instance, most-favored-nation treatment, national treatment, the right to fair and equitable treatment, protection against expropriation, and a guarantee of free transfer of capital. For example, it has been articulated in many bilateral agreements that investments

³⁴Article 4(a) of the Implementing Regulations of Foreign Investment Promotion and Protection Act.

³⁵According to the provisions of FIPPA (Article 9), foreign investments shall not be subjected to expropriation or nationalization, unless for public interests, by means of legal process, in a non-discriminatory manner, and against payment of appropriate compensation on the basis of the real value of the investment immediately before the expropriation.

³⁶In accordance with Article 6 of the 2002 FIPPA, for the purpose of investigation and making decision on applications referred to in Article (5), a board under the name of the “Foreign Investment Board” shall be established under the chairmanship of the Vice Minister of Economic Affairs and Finance who is ex-officio the President of the Organization, comprising of Vice Minister of Foreign Affairs, Vice President of the State Management and Planning Organization, Vice Governor of the Central Bank of the Islamic Republic of Iran and vice ministers of relevant ministries, as the case requires.

³⁷Chapter Four, Article 9 of Foreign Investment Promotion and Protection Act.

must “receive the host contracting party’s full legal protection and fair treatment not less favourable than that accorded to its own investors or of any third State whichever is more favourable to the investor concerned”.³⁸

As regards investment projects where a government agency is a contracting party, the government guarantee the purchase of the goods and services produced at the price and quantity determined in the relevant contract.^{39, 40}

9 Taxation Legislation: Incentives to Foreign Investment

The sixth pillar of the Global Competitiveness Index is goods market efficiency which includes competition divided into two groups, (a) domestic competition variable; and (b) foreign competition variable. Among different factors which have been considered in the Global Competitiveness Report 2016–2017, the following issues are very important to note: “effect of taxation on incentives to invest; total tax rate; number of procedures required to start a business; time required to start a business; prevalence of trade barriers; trade tariffs; and prevalence of foreign ownership”.⁴¹ Here, we are intended to describe the taxation legislation in Iran and the incentives of legislation to foreign invest. For this purpose, the focus of this paper is on the main features of taxation and some of the tax exemptions established by laws as follow:

The 1987 Direct Taxation Act, as amended in 2001, is in tandem with the ongoing economic conditions in Iran, as well as investment protection and promotion in line with the economic developments.⁴²

In recent years, several laws and regulations have been adopted to encourage foreign investment in Iran. The same protection and privileges have been provided for both foreign and national investors. One of the most important of this is

³⁸To avoid double taxation more than 30 agreements have been signed between Iran and other countries, such as Spain, China, Germany, South Africa, Switzerland, Ukraine, Poland, Indonesia, Austria, and Turkey. Apart from such treaties, there a number of agreements on reciprocal promotion and protection of investments that contain provisions on double taxation. See, for example, Agreement on reciprocal promotion and protection of investments between the Government of the Republic of Cyprus and the Government of the Islamic Republic of Iran. Tehran, 2 March 2009, Article 4. See also, investmentpolicyhub.unctad.org.

³⁹Article 11 of the Implementing Regulations of Foreign Investment Promotion and Protection Act.

⁴⁰List of Countries Signing the Agreement to Avoid Double Taxation with Iran (November 2011): Azerbaijan Republic; Algiers; Turkmenistan; France; South Africa; Indonesia; Turkey; Kyrgyzstan; Germany; Ukraine; Tunisia; Kazakhstan; Austria; Bahrain; China; Qatar; Jordan; Belorussia; Russia; Georgia; Armenia; Bulgaria; Sri Lanka; Lebanon; Uzbekistan; Venezuela; Switzerland; Poland; Spain; Pakistan; Syria; and Kuwait.

⁴¹World Economic Forum, *The Global Competitiveness Report, 2016–2017*, Geneva, 2016, ISBN-13: 978-1-944835-04-0.

⁴²Article 138 of the Act support investment promotion.

concerned with taxation included in the Direct Taxation Act; there is no discrimination in terms of the payment of taxes. The same amount of taxes must be paid by foreign investors. Stimulatingly, all licensed publishing, press, cultural and artistic activities are exempted from income tax.⁴³

Tax exemptions and discounts are equally applied for both groups of investors for both nationals and foreigners. All licensed travelling and tourism institutions enjoy fifty percent tax exemption every year. Tax exemption, to a great extent, has been applied as regards industrial and mining activities, which in terms of the free trade and industrial zones is one hundred percent exemption for a period of 20 years. For the same period of time, in the free zone, any type of economic activities is exempt from property tax and payment of income.

In any region, interestingly, the payment of income is free of taxes, under certain conditions, for “the branches and agencies of foreign banks and companies conducting marketing and market research”.⁴⁴ Transferring assets between merged companies is, conditionally, free of taxes.⁴⁵ With some exceptions, value-added tax is levied, under the Value-Added Tax Act, on the sale of all “services and their imports”.⁴⁶ The law was readopted in 2017 for 5 years more and also value-added tax is not applied in the free zones for economic activities.

Finally, to avoid double taxation more than 30 agreements have been signed between Iran and other countries, such as Spain, China, Germany, South Africa, Switzerland, Ukraine, Poland, Indonesia, Austria, and Turkey. Apart from such treaties, there a number of agreements on reciprocal promotion and protection of investments that contain provisions on double taxation.⁴⁷

10 Persons Protected by Laws and Agreements

For a foreign investor to be protected under an Iranian bilateral agreement, it must qualify as a protected investor and its admission must be made in accordance with the provisions of FIPPA and with due observance of other prevailing laws and regulations of the Country. Under the provisions of Article 6 of the FIPPA, the benefits of coverage of FIPPA are still available for foreign investors who have already invested in Iran. FIPPA’s coverage for the principal investment already

⁴³Article 139 of the Direct Taxes Act.

⁴⁴The Direct Taxes Act (Article 107).

⁴⁵The Direct Taxes Act (Article 111).

⁴⁶For further, see the Value-Added Tax Act (Articles 12 and 13).

⁴⁷See the Agreement to Avoid Double Taxation, as well as, for example, Agreement on reciprocal promotion and protection of investments between the Government of the Republic of Cyprus and the Government of the Islamic Republic of Iran. Tehran, 2 March 2009, Article 4. See also, investmentpolicyhub.unctad.org.

made, however, is conditional and subsequent to the issuance of the investment license under the provisions of the Act.⁴⁸

In addition to FIPPA which protect broadly a wide range of natural and legal persons qualified as protected investors, bilateral agreements on the protection of foreign investment concluded by Iran, also, offer a high level of protection of foreign investments in Iran. Some of countries that have a bilateral agreement with Iran in force include Austria, Belarus, Bosnia and Herzegovina, France, Germany, Italy, Switzerland, Finland, China, Austria, Turkey, Cyprus, South Korea, and Spain.⁴⁹

A large variety of assets invested in Iran, including movable and immovable property, shares or any kind of participation in Iranian companies such as securities, debentures, equity holdings and credits, are generally protected by bilateral agreements concluded by Iran.

Within the framework of these agreements, the notion of investor refers to the persons of either contracting party who invest in the territory of the other contracting party within the framework of the agreements. They include natural persons who, according to the laws of either contracting party, are considered to be its national and have not the nationality of the host contracting party.

In terms of legal persons, the situation and conditions are different in bilateral agreements. Some of bilateral agreements, including the bilateral agreements concluded with, for example, agreement between Iran and Switzerland, Turkey, Spain and Cyprus, only protect companies that are incorporated and have their seat, i.e., are managed from, and have “real economic activities” in the other contracting State.⁵⁰ Such requirements make it likely that persons providing special purpose media services would qualify as protected investors.

Several other bilateral agreements, including the bilateral agreements concluded with Sweden, Malaysia, Qatar, South Korea, and Italy, have qualified their protection exactly under the following conditions: “legal persons of either contracting party which are established under the laws of that Contracting Party and their ‘headquarters’ or their ‘real economic activities’ are located in the territory of that Contracting Party”.⁵¹ Under

⁴⁸Article 6 of FIPPA provides that “Foreign Investors who have already invested in Iran without the benefit of coverage of FIPPA may, upon completion of the admission procedure, benefit from FIPPA’s coverage for the principal investment already made. Subsequent to the issuance of the Investment License, the investor shall be entitled to benefit from all privileges of FIPPA including, inter alia, the right to transfer profit. This type of investments shall be generally considered as existing investments to which the general criteria for admission of Foreign Capital is applicable”.

⁴⁹A list of Bilateral Agreements on the protection of foreign investment concluded by Iran is available at: <http://investmentpolicyhub.unctad.org/IIA/CountryBits/98#iaInnerMenu>

⁵⁰Such Agreements regulates that “legal persons constituted or incorporated in compliance with the law of that Contracting Party and having their ‘seat’ together with ‘real economic activities’ in the territory of the same Contracting Party”. For further, see, e.g., Bilateral Agreements concluded between Iran and Cyprus (Article 1(2)(b)); Iran and Switzerland (Article 1(1)(b)); Iran and Turkey (Article 1(2)(b)); and Iran and Spain (Article 1(2)(b)).

⁵¹See, e.g., Bilateral Agreements concluded between Iran and Sweden, Article 1(2)(b); Iran and Malaysia, Article 1(2)(b); Iran and Qatar, Article 1(2)(b); Iran and South Korea, Article 1(2)(b); Iran and Italy, Article 1(2)(b); Iran and South Africa, Article 1(2)(b).

the provisions of such bilateral agreements, special purpose media services will be protected as long as they maintain their headquarters in their State of incorporation.

Few bilateral agreements, e.g., the bilateral agreement concluded with Austria do not include the requirement of their ‘seat’ and qualified their protections for legal persons which are founded in accordance with the laws and regulations of a State party and “*their ‘real economic activities’* are located in the territory of that Contracting Party”.⁵²

Lastly, some bilateral agreements, e.g., the bilateral agreements concluded with Finland, Armenia, France, Germany, and China protect entities constituted or incorporated under the laws of a State party having their ‘seat’ in the territory of that contracting party.⁵³ It could be said that the last type of bilateral agreements offer the most comprehensive coverage, notably for special purpose media services managed from their State of incorporation.

11 Investment in Media Market and Dispute Settlement

Almost all of bilateral agreements articulate two types of different dispute settlements, i.e., settlement of disputes between the contracting parties and settlement of disputes between a contracting party and an investor of the other contracting party.

In terms of settlement of disputes between the contracting parties, the disputes which are related to the application of the agreement and its interpretation should as far as possible be settled by the governments themselves. Otherwise, it could be referred to an ad hoc arbitration tribunal consisting of three members, two members from each State party, and one member from a third country.⁵⁴

As regards settlement of disputes between a State and an investor of the other State party, should be settled between them through negotiations and amicably. Otherwise, it must be referred to the competent court of the host State, if not, to international arbitration. As regards such disputes, also, the provisions of FIPPA regulates that if they are not settled through negotiations, they must be referred to national courts. It should be noted that in some cases, bilateral agreements incor-

⁵²See, e.g., Bilateral Agreements concluded between Iran and Sweden, Article 1(2)(b); Iran and Malaysia, Article 1(2)(b); Iran and Qatar, Article 1(2)(b); Iran and South Korea , Article 1(2)(b); Iran and Italy, Article 1(2)(b); Iran and South Africa, Article 1(2)(b).

⁵³See, e.g., Bilateral Agreements concluded between Iran and Finland, Article 1(2)(b); Iran and Armenia, Article 1(2)(b); Iran and France, Article 1(2)(ii); Iran and Germany, Article 1(2)(b); Iran and China, Article 1(2)(b).

⁵⁴See, e.g., Bilateral Agreements concluded between Iran and Germany, (Article 10); Iran and Switzerland (Article 9); Iran and Malaysia, (Article 13); Iran and Austria (Article 12); Iran and South Africa (Article 12).

porate some other methods for dispute settlements.⁵⁵ It should also be mentioned that the most bilateral agreements concluded between Iran and other countries provide for ad hoc arbitration under the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL) and some of them provide for international arbitration under the Rules of the International Chamber of Commerce (ICC).⁵⁶ Note that Iran is not a party to the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (ICSID Convention).

12 The Constitutional Framework of Mass Media

As regards mass media, under Principle 44 of the Constitution, radio and television, post, telegraph and telephone services are considered as examples of the state-owned sectors of the economy in Iran. The economy of the Islamic Republic of Iran consists of three sectors: state, cooperative and private. The state sector includes all large-scale and mother industries, radio and television, post, telegraph and telephone services, foreign trade, major minerals, banking, insurance, power generation, dams, and large-scale irrigation networks, aviation, shipping, roads, railroads and the like; all these will be publicly owned and administered by the State.⁵⁷ The three types of ownership are protected by laws in so far as they are in agreement with the other laws and regulations and cause no harm to the society.⁵⁸ In terms of media, the preamble of the Constitution provides that they will be utilized “as a forum for healthy encounter of different ideas”, however, they “must strictly refrain from diffusion and propagation of destructive and anti-Islamic practices. It is incumbent on all to adhere to the principles of this Constitution, for it regards as its highest aim the freedom and dignity of the human race and provides for the growth and development of the human being”.⁵⁹

However, in terms of activities which are categorized under the head of State-sector activities (under Principle 44 of the Constitution of Iran), the entrance of foreigners is very restricted. May be they could work as operators in this sector or they could sign a cooperation agreement with the relevant governmental agencies. But, they are not allowed to invest in mass media.

⁵⁵See, e.g., Bilateral Agreements concluded between Iran and Austria (Article 11); Iran and Germany, (Article 11); Iran and South Africa (Article 13); Iran and Switzerland (Article 10); Iran and Malaysia, (Article 12).

⁵⁶See, e.g., Bilateral Agreements concluded between Iran and Austria (Article 11(2)) referring to UNCITRAL and ICC; Iran and South Africa (Article 12(4)) referring to ICC; Iran and Switzerland (Article 9(2)) referring to UNCITRAL.

⁵⁷The 1979 Constitution of the Islamic Republic of Iran, Principle 44, paragraphs 1 and 2, adopted on: 24 Oct 1979, effective since: 3 Dec 1979, amended on: 28 July 1989.

⁵⁸*Ibid*, paras. 5 and 6.

⁵⁹*Ibid*, Preamble, Mass-Communication Media section.

13 FDI Regulatory Restrictiveness on Mass Media

It has been stated in Organisation for Economic Development (OECD) studies that foreign direct investment flows would help, under the right policy environment, contribute positively to incomes and job generation in the host country.⁶⁰ Moreover, FDI ‘encourages the transfer of technology and know-how between countries’,⁶¹ and ‘triggers technology spillovers, assists human capital formation, contributes to international trade integration, helps create a more competitive business environment and enhances enterprise development’.⁶² In this regard, compared with other developing countries or transition economies, China is a striking example of success. Among other aspects, China is mainly characterized by its ability to attract foreign technology and capital by means of incentive policies.⁶³ However, an important point to make is that according to the OECD FDI Restrictiveness Index, China scores higher than other countries in terms of FDI regulatory restrictiveness. The highest score for any regulatory measure in any sector is 1 consisting of the measure completely “restricts foreign investment in the sector” and the lowest is 0 covering situations where there are “no regulatory impediments to FDI in the sector”. It is worth mentioning that the FDI Restrictiveness Index includes four kinds of measures: (first) “foreign equity restrictions”, (second) “screening and prior approval requirements”, (third) “rules for key personnel”, and (four) “other restrictions on the operation of foreign enterprises”.⁶⁴

The FDI Index does not provide a full measure for the evaluation of a country’s investment climate, as no attempt is made to appraise the overall restrictiveness of the regulatory regime as it is actually implemented, and it does not take into consideration other aspects of the investment regulatory framework, for example, “the extent of State ownership, and other institutional and informal restrictions which may impinge on the FDI climate”.⁶⁵

⁶⁰Organisation for Economic Development (OECD), Foreign Direct investment for Development: Overview (2002), www.oecd.org/investment/investmentfordevelopment/1959815.pdf

⁶¹OECD Factbook, Economic, Environmental And Social Statistics (2014), p. 88. See also Luke Malpass and Bryce Wilkinson, Verboten! Kiwi hostility to foreign investment, Research Note No. 1, 29 August 2012.

⁶²OECD, Foreign Direct investment for Development: Overview (2002), *supra*, p. 5.

⁶³Jean-Claude Berthélemy and Sylvie Démurger, ‘Foreign Direct Investment and Economic Growth: Theory and Application to China’, *Review of Development Economics*, 4(2), 140–155, 2000, p. 1.

⁶⁴See further, Kalinova, B., A. Palerm and S. Thomsen (2010), “OECD’s FDI Restrictiveness Index: 2010 Update”, OECD Working Papers on International Investment, 2010/03, OECD Publishing. <https://doi.org/10.1787/5km91p02zj7g-en>

⁶⁵*ibid.*

14 Foreign Investment and Its Regulatory Restrictiveness in Iran

According to Foreign Investment Promotion and Protection Act (FIPPA), foreign investments will only be allowed in accordance with the procedures prescribed by the Act. Then the admitted investment in accordance with the provisions of the Act will enjoy the facilities and protections available under the FIPPA. FDI in areas where the activity of the private sector is permitted is allowed.⁶⁶ Under the provisions of FIPPA and its Implementing Regulations, electrical and electronic machinery and equipments, including radio and television and other communication devices and apparatus are considered as some examples of sectors and sub-sectors referred to in para. (d) of Article 2. This Article states that admission of foreign investment will be made under the provisions of FIPPA and with due observance of other prevailing Iran's laws and regulations, for the purposes of development and promotion, and producing activities, including industry and services based on certain criteria.⁶⁷

It should be noted that like the OECD FDI Regulatory Restrictiveness Index, especially in relation to China's Media restrictiveness as shown above, in Iran there exists statutory restrictions on foreign direct investment in this sector, due to the fact that the ownership, management and control of radio and television are considered as a State Sector under the Constitution.⁶⁸ In FDI, usually, the control

⁶⁶OECD (2016), FDI restrictiveness (indicator). doi: 10.1787/c176b7fa-en (Accessed on 04 August 2016).

⁶⁷One of the criteria is contained in Paragraph (d) of Article 2 (FIPPA), according to which the ratio of the value of the goods and services produced by the foreign investments, contemplated in FIPPA, to the value of the goods and services supplied to the local market, at the time of issuance of the Investment License, shall not exceed 25% in each economic sector and 35% in each sub-sector (field). The sub-sectors and scope of investment in each sub-sector shall be determined in the by-law to be approved by the Council of Ministers. Foreign Investment for the production of goods and services for export purposes, other than crude oil, shall be exempted from the aforementioned ratios.

⁶⁸See Foreign Investment Promotion and Protection Act, Chapter Two, Article 3 (a). Under Principle 44 of the Constitution of Iran, the economic system of the Country is established 'based on three sectors: State, cooperative, and private, based on systematic and sound planning'. The State sector includes all large-scale and mother industries, foreign trade, major mines, banking, insurance, power generation, dams, and large-scale irrigation networks, radio and television, post, telegraph and telephone, aviation, shipping, roads, railroads and the like; all these will be publicly owned and administered by the State. The cooperative sector includes cooperative companies and enterprises dealing with production and distribution, in urban and rural areas, established in accordance with Islamic criteria. And finally, the private sector consists of activities dealing with agriculture, animal husbandry, industry, trade, and services that are complementary to the economic activities of the State and cooperative sectors. The ownership in each of these three sectors is protected by the laws of the Islamic Republic, in so far as this ownership is in conformity with the other Principles of the Constitution, does not surpass the limits set by Islamic law, contributes to the economic growth and progress of the Country and does not harm to society. The details of the requirements, scope and conditions of each of these three sectors have been determined by specific laws.

and management of the company as a whole or in part often is in the hands of foreign investor. This seems to be in contrary with the above laws and regulations. However, if a foreign investor is intended to contribute to the development of know-how or new technologies or services related to media controlled and managed by private sector, it would not be in controversy with the aforementioned provisions.⁶⁹

15 Conclusion

In recent years, several laws and regulations have been adopted to encourage foreign investment in Iran. The same protection and privileges have been provided for both foreign and national investors. One of the most important of this protection environment is related to taxation included in the Direct Taxation Act; there is no discrimination in terms of the payment of taxes. The same amount of taxes must be paid by foreign investors. Equally, there are tax exemptions and discounts for both groups of investors.

The four freedoms have been guaranteed by Iran, i.e., the free movement of people, goods, services, and capital. One of the main questions for foreign investors is how a national law protects the investment against the host States actions. In this respect, it should be pointed out that under the laws and regulations, investments of investors will not be nationalized, confiscated, expropriated, “unless for public interests, by means of legal process, in a non-discriminatory manner, and against payment of appropriate compensation”.⁷⁰

In relation to one of the main challenges, that is, permissions, procedures and time-consuming process of obtaining permits and lengthy bureaucracy, according to the current regulations, FIPPA, investment licensing procedure takes almost 45 days and it is a great step towards resolving the challenge. An assortment of legal rules and arrangements may be applied to businesses and commercial activities, some of which are limited liability companies, partnerships, corporations, and co-ownerships.

As we discussed in this paper, as regards social media industry, it is covered by the 2002 FIPPA and its Implementing Regulations, which are considered as a core policy tool to promote and regulate investment, as well as by international investment agreements (IIAs), i.e., bilateral and multilateral investment treaties and treaties with investment provisions, which are altogether regarded as the basic legal framework for cross-border investment in Iran. Although in many countries, most investment laws have investment promotion as their main objective, the 2002 FIPPA deals also with investment facilitation. This means certain protection and facilities will be provided for licensed investors. The 2002 FIPPA and IIAs have

⁶⁹The 1979 Constitution of the Islamic Republic of Iran, Principle 44.

⁷⁰According to the provisions of FIPPA (Article 9).

vital roles to play for providing the significant facilities and protections available for media-related services and activities.

As regards, legal methods to invest in social media market in Iran, two different methods have been described: “Foreign Direct Investment” (FDI) and contractual framework for investment, i.e., contractual arrangements between the parties with or without formation of company. Also different types of project financing methods including “Civil Participation”, “Buy-Back” arrangements, “Counter trade”, and various “Build-Operate- Transfer” (BOT) schemes, with the following features, under the provisions of the laws, have been defined: first, foreign investors have “the same treatment as accorded to domestic investors”⁷¹; second, “import of foreign capital” is only conditional on the “investment license and does not require any other license”⁷²; third, the “volume of foreign investment in each individual case” are not conditional on “any limitation”⁷³; fourth, compensation of a loss sustained by the foreign investor is guaranteed by the Government, where the losses are come from “prohibition and/or interruption in the execution of financial agreements caused by enactment of law and/or Cabinet decrees”⁷⁴; fifth, under subparagraph (2.2) of Article 4 of the Implementing Regulations of FIPPA, guarantees are provided where a government agency is a party to the contract in “B.O.T.” and “Civil Participation” schemes.⁷⁵

Another worry of foreign investors is concerned with guarantees and transfer of foreign capital and the qualified persons protected by laws and agreements. In this respect, within the framework of IIAs, the investor refers to the persons of either Contracting Party who invest in the territory of the other Contracting Party within the framework of these agreements. They include natural persons who, according to the laws of either Contracting Party, are considered to be its national and have not the nationality of the host Contracting Party. In terms of legal persons, the situation and conditions are different in the 2002 FIPPA and bilateral agreements.

Another important challenge for investment in the medial market is related with Dispute Settlement. FIPPA and almost all of bilateral agreements articulate two types of different dispute settlements, i.e., settlement of disputes between the contracting parties and settlement of disputes between a contracting party and an investor of the other contracting party. They refer to arbitration tribunal which will be constituted ad hoc.

In terms of mass media, which is considered as one of the examples of the primary sectors and subsectors, for which the requirements of existing laws and regulations provide that with certain limited exceptions established by the

⁷¹Article 4(a)(1) of the Implementing Regulations of Foreign Investment Promotion and Protection Act.

⁷²Subparagraph (a)(2) of Article 4.

⁷³Subparagraph (a)(3) of Article 4.

⁷⁴Article 4(b)(2.1) of the Implementing Regulations of Foreign Investment Promotion and Protection Act.

⁷⁵Subparagraph (b)(2.2) of Article 4.

Constitution of the Islamic Republic of Iran, foreign investors are allowed to invest. Activities that are categorized under the head of State-sector activities (under Principle 44 of the Constitution of Iran), the entrance of foreigners are difficult. As evidenced on the news, this country enjoys a high level of security in the region, though there would be restrictiveness similar to China under OECD FDI Regulatory Restrictiveness Index. It should be mentioned that although there are still some conditions, restrictions and limitations as regards the investment in the Iran mass-communication media, radio and television, it could be possible to make contracts as mentioned above as the available contractual methods.

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Evidenced-Based Internet Policy for Emerging Nations: Maximizing Network Investment and Local Content Development



Roslyn Layton

Abstract This article reviews the three components of evidence-based policy and the seven inputs to good regulation. It describes the challenges to conducting evidence-based policy, particularly with using data to make decisions as well as deploying measures to see how well a policy is working. Examples from net neutrality policy are provided to illustrate some of the challenges for telecom regulators. Some literature from the policy research field is presented to help explain why regulators have difficulty using evidence-based approaches. The paper concludes by reviewing the importance of evidence-based approach for regulators in emerging countries, particularly as net neutrality policy to date has limited documented success to stimulate local digital economies.

1 Introduction to Evidence-Based Policy

Evidence-based policy is comprised of three linear steps: (1) a rational process of evaluation of policy possibilities; (2) the collection of associated holistic information for each possibility, both quantitative and qualitative; and (3) finally the measurement of outcomes expected and observed with each possibility. Performance measures for outcomes could include effectiveness (how does the policy address the targeted problem), unintended effects, and equity (what are the effects on different groups). The implementation considers issues such as the cost, feasibility, and acceptability. The introduction of net neutrality or Open Internet rules in some 50 countries within a decade would seem to present an opportunity to practice evidence-based policy, particularly as supporters claim that rules are urgent and necessary. Such confidence by supporters suggests that there is empirical data to justify rulemaking and that benefits should be realized, observed, and verifiable.

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Nations with net neutrality rules have employed some elements of the evidence-based policy process at different points to different degrees. For example, when the Federal Communication Commission (FCC) in the USA launched a Notice of Proposed Rulemaking in 2014, it inquired as to which legal instrument should be used to make net neutrality rules, for example Section 706 of the 1996 Telecommunication Act or other sources of authority. The FCC ultimately chose Title II of the 1934 Communications Act, but it never offered a cost-benefit analysis as to which among various legal instruments and methods was preferable (ex ante rules under various types of legal authority, ex post adjudication, multi-stakeholder model, Federal Trade Commission enforcement of unfair and deceptive standards, etc.). Moreover policymakers had no benchmark against which to weigh the pros and cons of different approach. The FCC presented a binary decision, either Title II or no rules at all, and as the result the FCC was sued by nine separate parties alleging that they used the wrong instrument. As of this writing seven petitions against the FCC await review by the US Supreme Court.

The European Parliament, European Commission, and the Body of European Regulators of Electronic Communications (BEREC) are only slightly better when it comes to an evidence-based approach. The key “evidence” offered by the European authorities was a survey on broadband providers’ contract disclosures in 2011–2012, showing that 15–20% of surveyed providers had contract conditions stating that they *could* restrict broadband service for some reason for a period of time. However the European authorities never provided actual documentation of systematic abuse, but instead based their reasoning on the inference of abuse from the survey. The inference was never tested to see whether it was accurate. By the time the EU adopted rules, the survey was more than 3 years out of date.

It is also important to observe that traffic management practices have changed significantly over time. For example deep packet inspection, once reported as an occasional practice by at least 50% of operators, is now reported by less than 20% of operators.¹ This shows that operators’ behaviour has changed with public opinion, which itself may be even a better than regulation if actors behave in the right way voluntarily.

A pan European survey was performed to assess users’ views of the issue in 2015, concluding that desire for the policy fluctuated with the age of the user and price of the product. The legislature commissioned its own literature review showing that hard rules were necessary only in extreme cases, but the subsequent law took the view that all broadband provision was suspect. Notably the EU law does not contain the terms “net neutrality” or “zero rating”.

However neither the US nor the EU has produced a set of objective, independently verifiable metrics to tell whether the policy is working. For example should “innovation” be measured? Will the policy create more or different “edge” content providers? Should end users report a greater degree of freedom? Should broadband providers invest more or less? The rules do not say.

¹Asghari et al. (2013).

The European Union also has a major research function in the European Commission's Research and Innovation arm² which by law must conduct research policies and implement research programs. It has not conducted research on net neutrality that is findable in its database, but its report on innovation "Models of Innovation in Global ICT Firms: The Emerging Global Innovation Ecosystems" suggests that innovation occurs within an ecosystem as the result of the "symbiotic" interplay of actors, including situations in which telecom operators partner with different actors in the ecosystem.³

It appears that the "ecosystem" view of innovation in which actors work together symbiotically is the antithesis to the "net neutrality" view in which one player needs to be controlled. While thousands of articles have described and debated net neutrality, almost none have tested it empirically within the context of national policymaking.

While the EU law has been adopted, The European Commission competition authorities issued the definitive report on free data and zero rating, some 200 pages, showing that the practice is not harmful to competition, but debate remains on the issue.⁴

This explosion of net neutrality rules around the world has created a new responsibility for telecom regulators. While regulatory and competition professionals may be skilled to address the issues of foreclosure (the technical and economic term for the concerns raised by net neutrality), net neutrality policymaking presents a set of new challenges for which regulators are not necessarily skilled, resourced, or even motivated to address. For example, net neutrality rulemaking is associated vigorous advocacy in which activists may flood the regulator with millions of emails and comments. This creates a new political dilemma for regulators which hitherto prided themselves on being expert, independent, and free from political influence.

The diversity of approaches to net neutrality and their different implementations suggest that policymakers have different priorities, and there is limited agreement on the ideal set of rules or approach. Consider Denmark and Netherlands, two leading countries for broadband competition and deployment. While both are subject to the same EU net neutrality rules today, between 2010 and 2016 the two countries took radically different approaches to on net neutrality. Keeping in line with a long-term telecom policy which focused on moving the market to full competition, the Danish authorities discouraged ex ante telecom regulation in favour of policing the market with ex post competition law.⁵ In 2011 Denmark adopted an industry-led, self-regulatory multi-stakeholder model for net neutrality. On the other hand, Netherlands adopted a hard ex ante law in 2012.⁶

²No Author (2015a).

³Fransman (2014).

⁴No Author (2017).

⁵(2015), Roslyn Layton and Joseph Kane (2017).

⁶(2012).

Such conflicting solutions from two similar countries hardly seems to be a consensus. Nobel economist Jean Tirole described, “Successful regulation is built on an intellectual consensus about the existence of clearly identified and sizeable market failure.”⁷ At best, the peer-reviewed literature reviews suggest that the policy is ambiguous;⁸ in some situations it could be helpful, in others, harmful.

In most cases net neutrality laws and regulations are adopted without a regulatory impact assessment, skipping a helpful procedural step to quantify a market failure (if it exists), explore alternative approaches, identify costs and benefits, and protect regulators from legal challenges. It is not surprising that in the rush to make rules, important issues may be overlooked. The FCC was challenged by nine lawsuits after it adopted rules in 2015, charging among other things, that the FCC exceeded its statutory authority in making rules. Those cases continue on appeal as of this writing.⁹ Regulators in Chile, Netherlands, and Sweden have also faced litigation for their net neutrality rules.

In spite of their best intentions, regulators may find themselves in the crosshairs of litigation, which takes resources away from other important regulatory activities, not to mention the social and financial costs for taxpayers and citizens. Telecom authorities have to manage a range of regulatory priorities without getting caught up in politics. As such, having an evidence-based framework is helpful to keep focus on the salient issues and stakeholders, and ideally, identifying the informed and appropriate remedy for a known problem with an expectation of how the instrument will address and change the situation.

The definition of policy is often broad, including laws, regulations, and judicial decrees as well as agency guidelines and budget priorities. Research and scientific information is too often inaccessible to policymakers for a variety of reasons. As such, it’s not uncommon that anecdotes and personal experience provide the information and justification for policy.

Common barriers to including data and evidence include

- Insufficient evidence base: scientific evidence is lacking or changing over time; the cost of collect and analyze information is high
- Mismatched time horizons: Election cycles, policy processes, and research time run on different schedules and are not coordinated
- Power of special interests: Different groups have different agendas which may or may not cohere with an evidence-based process
- Researchers disconnected from the policy process: While there can be reasons to keep research and policy separate, the lack of communication means that research is developed and communicated in a way that makes it difficult for policymakers to action

⁷Tirole (2011).

⁸Schuett (2010), Kraemer et al. (2013).

⁹(2016a).

- Research silos: while some research may be conducted properly, it lacks multidisciplinary perspective to give it nuance and depth
- Policymaking is a non-linear, ad hoc process: Evidence-based policy occurs in complex systems and social psychology suggests that many decision-makers often rely on habit, stereotypes, and cultural norms for the vast majority of decisions.

Some may object to the idea of “measuring” the effectiveness of net neutrality, as if one wanted to measure the value of human rights or freedom. Indeed an insistence on evidence is itself a bias, but one that is enshrined in most legal systems as a means to ensure justice. Measurement can be a way to provide additional support and justification for desired policies. For example there are indices of freedom¹⁰ and human rights,¹¹ and these are valuable to make policy comparisons across countries and improve policy. With regard to net neutrality, it is surprising that empirical tests have not been performed as it would seem to give support for policies which have been deemed to be obvious given the speed of rulemaking.

Nations spend considerable sums on scientific research. It’s a wonder why it hasn’t played a greater role in net neutrality policymaking. In the US, the National Academies of Science, Engineering and Medicine organized a committee on Comparative National Innovation Strategies: Best Practice for the Twenty-First Century.¹² The committee met over 6 years and produced a number of reports including *Innovation Policies for the 21st Century*.¹³ It emphasizes the need to foster ecosystems, particularly local and regional ecosystems, as well as public-private partnerships. A search of the institute’s archives found very little information on the topic of the Internet and nothing on “net neutrality” or “open internet”.

An estimated 150 billion euros is spent annually by European governments in initiatives to support innovation and economic growth.¹⁴ The UK’s Innovation Growth Lab (IGL) observes that that there is limited study of the efficacy of governments’ innovation policies. Moreover, even if innovation evolves, whether radical or incremental, it is difficult to tell whether it was the result of a specific policy. IGL notes the report of the What Works Centre for Local Economic Growth which reviewed 15,000 policy evaluations and found that only 2.5% had a concrete conclusion about the effectiveness of the policy, and of those, 1 in 4 had a positive impact (about 0.06% of the total). The implication is clear; without evidence about what works, it’s difficult, if not impossible, to allocate resources to successful programs.

¹⁰(2016b).

¹¹No Author (2016).

¹²No Author (2005).

¹³(2007).

¹⁴Beevers and Firpo (2016).

1.1 *The Policy Research Perspective*

The Science Policy and Research Unit (SPRU) of University of Sussex is a leading university for ICT policy research. Reflecting on SPRU's 40th annual conference in 2006, Morlacchi and Martin¹⁵ observed that that policy research on science, technology and innovation continues to be a "somewhat heterogeneous set of activities undertaken by a community of diverse actors, each with rather different roles and aims."

To be sure, the central goal of activities is "helping to construct more effective policies for science, technology and innovation, which in turn will yield greater benefits for society." The authors suggest that innovation policy researchers should be concerned with the means and ends for society. They note a trend to instrumental and entrepreneurial activities at the individual and organizational level which need to be balanced with critical and independent scholarship as well as "reflexivity." Importantly they define innovation policy research as the application of social science to the study of innovation policy. It is not theory or paradigm driven, but rather problem-oriented by focusing on practical issues with specific policies and the taking account of the central role of firms in the evolution of technology and innovation.

They note that the policy research field has a multidisciplinary, empirical orientation and motivation, and when there is theory, it is generally inductive. This contrasts to the traditional social science approach in which theory comes first followed by the empirical work. Innovation policy research comes out primarily of the field of economics with a preference for the study at the firm industrial and national levels of analysis, viewing the Market and the State at its role to regulate or facilitate market interactions. Sociology, on the other hand, comes from the history and philosophy of science. The research function grew out of discussion of a variety of intellectual actors, with governments, international institutions, and research institutions starting to produce data about innovation (patent statistics, R&D expenditures etc.). They summarize Ball¹⁶ in describing the four roles of policy researchers.

The policy *engineer* who uses a set of procedures to determine best course of action to achieve a goal; the policy *scientist* who seeks the technically correct answer to the political problem with the available scientific knowledge; the policy *entrepreneur* who provides technical solutions or organizations and contexts and searches for opportunities to apply his or her favored solutions. The policy *scholar* seeks to shape the way we think about society's problems. The roles may have blended or take one part of the approach or another, and there is debate to what degree the roles are influenced by politics or vice versa. Critical policy research should reflect upon these various roles and seek to find the optimal balance of the various approaches.

¹⁵Morlacchi and Martin (2009).

¹⁶Ball (1995).

They use the 1970s *Limits to Growth*¹⁷ debate to describe how the application of the assumptions of each of the roles can help produce more effective policies. The *Limits to Growth* view was evidenced through a set of computer models for population growth, resource depletion, food supply, capital investment and pollution. In particular, they examined the effects of continued economic and demographic growth in a world of finite resources, and derived various policy implications, such as the need for birth control to limit population growth. SPRU's response, called "technological optimism" was not necessarily to reject the empirical findings of the model but to highlight that the model did not account for social change and technological advances which could change the expected outcomes.

For example population growth, is desired, not deterred and now expected to reach 10 billion by 2050.¹⁸ Crucial resources have not depleted; innovative technologies have found substitutes and new and better means of extraction; food is so plentiful that one-third of it goes to waste globally; capital investment has seen unprecedented heights; and pollution, while not totally eliminated, has much better management. Moreover mobility and internet has benefitted the people of the world tremendously. This is not to say that progress will always proceed in a linear fashion. Growth and sustainability are still key issues in the policy research field. Failing to incorporate the views of the different actors (engineer, scientist, entrepreneur, and scholar), predictions can fall short. Indeed relying on data alone can lead to false conclusions.

The *Limits to Growth* allegory is instructive for today's net neutrality debate in which on the side, proponents suggest that the internet will essentially come to an end without net neutrality and must therefore be "preserved" versus a more holistic view that does not reject concerns but sees change and advancement as a net positive development that can address concerns and solve problems, though maybe in different way that is not yet known.

Flanagan, Uyarra and Laranja¹⁹ attempt to foster the needed "critical reflexivity" by devising an approach that helps policy researchers conceptualize the innovation policy complexity and its various actors, levels and dynamics. Their problematization consists of policy agendas, rationales, actors, processes, instruments, and interactions.

The literature on agenda setting and advocacy critiques the view that policymaking proceeds in a linear fashion, as if there is a scientific identification of the problem followed by the proper intellectual exchange of ideas and rationales to remedy the problem, the evaluation of various options with appropriate cost benefit analysis, and selection of instrument followed by measurement and optimization. Instead agenda setting²⁰ is the process of creating awareness and concern on

¹⁷Meadows et al. (1974).

¹⁸No Author (2015b).

¹⁹Flanagan et al. (2011).

²⁰McCombs and Shaw (1972).

selected issues. This is achieved by leveraging the press and media (which does not reflect reality but rather shapes and filters the news) as well as the media concentration on a few issues which leads the public to believe that some issues are more important than others.

Kingdon²¹ described the “policy primeval soup” as the policy process as an evolutionary one that favors “policy entrepreneurs” which can exploit “windows of opportunity.” Majone²² describes how policymakers use theory selectively after the fact to justify favored policies; he rejects the difference between policy analysis and advocacy, simply calling the combined a “policy innovation”, as all policies are a mix of objective analysis, advocacy, and persuasion.

Borras and Edquist²³ explore the selection of innovation policy instruments across three dimensions including (1) selection of the suitable instruments; (2) design and customization of the instrument; and (3) the design or mix in which the instrument is to work. They observe that while countries may have the same innovation goals, the micro-level policies may differ significantly. They cite how ICT policy in Ireland, Israel, and Taiwan manifested itself in different ways in the 1990s. Ireland focused on foreign direct investment; Israel supported R&D through government grants; and Taiwan instructed the national institution to lead R&D efforts and diffuse them through the country. They define the key instruments as (1) regulatory; (2) economic and financial; (3) soft which are collectively the “sticks, carrots, and sermons” of public policy.

The authors stress that policy instruments are not “neutral” and hence it is important to select and customize the instrument which is appropriate to address the actual problem. They highlight this as a means to identify which activity of the innovation system that the instrument is supposed to address. The key activities include (1) provision of knowledge inputs to the innovation process; (2) demand-side activities; (3) provision of constituents; and (4) support services for innovating firms.

They note that it is common for actors to disagree on the type of policy instrument and how it should be designed. They note that when contestation is fierce and widespread, that public governments and agencies should reconsider the specific contents of the instrument or even the entire instrument. They describe that instruments are frequently used to address a problem of low performance in the innovation system. This conclusion could be important for the selection of hard instruments for net neutrality, which are highly contested and litigated.

²¹Kingdon (1993).

²²Majone (1989).

²³Borras and Edquist (2013).

1.1.1 Checklist for Good Regulation

As policy is created in a political context, it may be difficult to conduct evidence-based policy because policymakers may be under tight political timeframes and need to deliver “results”. As described, a policymaker may need to deliver the policy first and the job of the researcher is to find the evidence for the decision after the fact. Frequently the best the regulator can do is to “satisfice”,²⁴ that is to pursue the minimum satisfactory condition or outcome. When an evidence-based assessment is not possible for whatever reason, the regulator can use a checklist to ensure minimum standards are met. The checklist is as follows:

- Aligned with national laws and institutional goals
- Based on rational, comprehensive data and evidence—both quantitative and qualitative
- Clearly states the reasons why it’s needed and the proposed outcome
- Provides a framework for achieving the outcome
- Concise, clearly communicated and widely understood
- Creates value and benefits with measurable outcomes
- Monitored, evaluated, and reviewed regularly.

1.2 Aligned with National Laws and Institutional Goals

While the first requirement may seem obvious, it is surprising how frequently rules are adopted which do not conform to national laws, or at least that the regulated parties believe they do not conform to the law. This could also suggest that laws are ambiguous, leaving the interpretation to the courts or to legislators to improve when updating statutes. As such, regulators should be sure that rules do not duplicate or conflict with existing laws and statutes.

1.3 Based on Rational, Comprehensive Data and Evidence: Both Quantitative and Qualitative

While it may seem obvious that data and evidence should inform policy, it is helpful to review why. The basic reason to include data and evidence is to justify why a policy will work or has worked. For example the top ten achievements in health in the United State were each preceded by some kind of evidentiary investigation,

²⁴Simon (1956).

e.g. vaccines, prenatal screening, seat belt laws, limiting exposure to lead etc.²⁵ To be sure, telecommunications policy, like health, is based on a complex set of scientific, economic, legal, social and political factors. All the same, there is too frequently a gap between policy research and the policies that are enacted and enforced. More than \$30 billion annually is spent in the US on health policy research, but health policy may or may not bear resemblance to the empirical research. A review by Hartsfield et al. identified 107 model public health laws covering 16 topics, but only 7 laws were based on scientific information (e.g., research-based guidelines).²⁶

Policymakers should make a best efforts attempt to include data and evidence and state its limitations. Similarly if they cannot include data and evidence, then they should disclose the shortcoming.

1.4 Clearly States the Reasons Why It's Needed and the Proposed Outcome

Good regulation should clearly state the reasons why it is needed and the expected outcome. No country's net neutrality rules make a compelling articulation of either of these goals. Open Internet verbiage tends to be esoteric and theoretical. No regulator has offered an expectation of what the regulation should achieve in any measurable fashion, for example more local start-ups, lower prices for consumers, more investment etc. If anything, there is vigorous debate about how the policy should work, whether the policy stimulates the expected domains, and to what degree.

1.5 Provides a Framework for Achieving the Outcome

It is not hard to understand that regulation which fails to articulate its reason for being and its outcome offers little in the way of steps to achieve the desired goal. For example the FCC suggests that a "Virtuous Circle"²⁷ governs internet innovation and broadband investment, but there are no empirical tests for such a notion, and there is vigorous debate about whether innovation comes from a utopian state of net neutrality or whether broadband providers themselves support innovation when they invest in networks, some combination thereof, or something else.

²⁵Centers for Disease Control and Prevention (CDC) (1999).

²⁶Hartsfield et al. (2007).

²⁷(2009).

When it comes to the mobile app economy, about 95% of the value of the mobile app economy is concentrated in just ten markets.²⁸ In general no emerging country has experienced an increase in locally made mobile app innovation as a consequence of the introduction of net neutrality rules. In fact, many nations have declined, even in the small amount of apps they produce locally. It is not uncommon for emerging countries to find that the traffic on networks goes overwhelmingly to foreign made apps while only a fraction of traffic goes to locally-made apps.

1.6 Concise, Clearly Communicated and Widely Understood

There is not a universally agreed definition of net neutrality. A variety of explanations run the gamut between freedom and openness to price controls. Other concepts have been proposed such as open access, common carriage, Anonymity, Competition, Fairness, Innovation, User choice, Media pluralism, Freedom of expression, and Free/zero price. Moreover the provisions of rules also vary widely including no blocking/no throttling rules; restrictions on service level agreements (also called “paid prioritization”), Interconnection requirements, Parental controls, Security controls, Privacy controls, Data retention, User requested blocking, and general conduct standards.

With so many interpretations, it is not surprising that there is debate about the policy. Therefore policymakers should be explicit about which definition they use and which assumptions they hold.

1.7 Creates Value and Benefits with Measurable Outcomes

An evidence-based policy requires a clear goal and objective means of measurement. For example, it would be expected that net neutrality rules would reduce blocking, but in order to show that, a baseline would need to be established, and then instances of blocking would have to be disaggregated from legitimate network practices such as blocking spam, illegal material and so on. The results would have to be measurable and verifiable over time. Blocking could be beneficial or harmful, and it could take place by a government, a service provider, or user.

²⁸Pon (2016).

1.8 *Monitored, Evaluated, and Reviewed Regularly*

Regulators have struggled on this front, but have not produced the definitive way to measure the regulation. This is understandable given that other conditions are frequently lacking (a sound base of evidence, clear formulation of the goals to be achieved etc.).

The Competition Authority of Slovenia modeled how zero rating might impact the marketplace, suggested that at most it amounts to only a few cents on a 30 € monthly broadband bill.

Of all regulators, Ofcom has produced the most serious attempt, commissioning a study of the various software applications purporting to measure traffic management techniques. It concluded that none of them are reliable.

Two additional rules of thumbs for regulators that are helpful include

If it's not working, stop doing it. If it's not broken, don't fix it.

1.8.1 Complementary Assets

Nations face pressure to make net neutrality rules but they should not necessarily expect that such rules will lead to greater innovation, investment, or freedom. If anything, internet policies should allow the sharing of complementary assets.²⁹

Teece discusses a number of assets that must be in place before an innovation can take root. They include marketing, specialized manufacturing, and/or after-sales support. He divides the assets into generic, specialized, and co-specialized categories. In the context of the Internet, HTML may be a generic asset, a language that allows innovators to create websites. Just as a factory is needed to make shoes, a mobile application needs a network. Thus a specialized asset may be an operating system that runs on a mobile phone, such as Apple iOS or Android. A co-specialized asset may be a 4G mobile network for the Apple iPhone, its complementary asset. Many iPhone features can't be realized unless the phone is connected to the appropriate 4G mobile network.

Teece describes two requirements for profiting from technological innovation (1) "appropriability", how easy is it to leverage knowledge, ease of imitation, intellectual property etc.; and (2) complementary assets whether generic, co-specialized, specialized. Teece also distinguishes between invention and innovation (ability to do something better than the state of the art), the latter of which adds value to users and economy.

Teece describes two stages of scientific evolution, the pre-paradigm stage and the paradigm stage. In the pre-paradigm stage there are generally accepted designs. Ideas compete, and designs are fluid. In the paradigm stage, designs become accepted, codified, and standardized. Once a design emerges as best, e.g. Model T,

²⁹Teece (1986).

IBM 360, or Douglas DC-3, competition shifts away from design to price. Scale and capital then become important. Innovation can still occur, but may only succeed in niches. This model tends to characterize large consumer markets with homogenous tastes.

Mobile apps in developed countries have reached a state of maturity. There are key platforms, use cases, business models, and so on. While a number of these developed country apps are popular in emerging countries, their growth is limited as internet penetration is low. Moreover, not all developed country apps are appropriate in emerging country contexts. There are many needs, problems, and challenges in emerging countries for which local country app developers are innovating, and which local country designs, value propositions and business models need to be developed. For example, Kenya-based M-PESA emerged where there was a lack of a financial system. Today 9 million users transfer \$320 million per month.³⁰ See the author's discussion of Facebook's Free Basics for other examples of complementary assets creating local innovation.

Few industries have the benefit of strong appropriabilities. Most of the time the appropriability is weak, so the innovator needs a business model to make its innovation known. In the pre-paradigm stage, innovators need to allow their designs to "float" to get a market test to see whether it can work. Facebook, by offering a set of tools and expertise, can help startups save valuable development costs in adapting their application to first-time Internet users.

In the pre-paradigm stage, the focus is on the winning design. Production is low (few users), so it doesn't yet make sense to deploy specialized assets. There are no scale economies, and price is not necessarily an issue. Once the design becomes standardized, the importance of complementary assets takes over.

Marketing/distribution is a key complementary asset. Teece gives the example of the 1980s PC market. Many companies made computers but few succeeded because the scale required to sell to American companies required a large sales force, retail space etc., so many companies partnered with large providers such as IBM. IBM's success in the PC market was related to its joining the complementary assets with smaller firms. It made more sense for IBM to find asserts in the market rather than to develop them in house. IBM's asset relative to the generic inputs was its strong brand which engendered credibility with customers and its formidable marketing and distribution network. Small firms brought various assets innovative computing.

Marketing is a type of complementary asset. For many firms the cost of getting online is nominal: fees of hosting, storage, and servers. Where they face major barriers may be competition from other content, applications, and services, not to mention being findable on platforms such as search engines, social platforms, and app stores. The practices of search engine optimization (SEO) and app store

³⁰Mas and Radcliffe (2010).

optimization (ASO) are designed to help companies and innovative applications overcome these intermediaries. Without Free Basics for example, first time users would have to expend high search costs in data subscriptions and electricity to find relevant content.

The ability to make a marketing partnership is also explained by the concept of user acquisition cost. Called the “startup killer”,³¹ it is the leading reason of failure for startups. For most startups the cost to acquire users exceeds the long term value of monetization. Anything that can be done to reduce the user acquisition cost can greatly improve a startup’s viability.

2 Consumer Choice

Net neutrality policy asserts that homogenous transmission delivers homogenous fidelity of applications. In point of fact however the total quality of a user experience is related to a number of factors, including a few significant ones that are outside the network operator’s control—namely, the terminal device and the application’s configuration both by the user and the application’s publisher.³² The regulator may unwittingly degrade user experience by inserting himself between the end user and the broadband provider.

At a minimum, price, quality, service, safety, and durability are a few of the many possible elements that a consumer could optimize to improve experience, but a regulator wrongly regulates broadband by focusing on speed. Indeed, it is misleading to suggested that speed is the appropriate metric to measure broadband. In fact, speed may be the least important metric when it comes to a quality user experience.³³

Net neutrality rules could deter consumers from pursuing the arrangement that could help them improve their broadband experience. For example, broadband providers are willing to offer free or sponsored broadband access at reduced cost; but net neutrality rules challenge consumers’ freedom to try such options by scrutinizing the offers and threatening providers.³⁴ Quality guarantees could be enabled through prioritization and service-level agreements if such contracting were not banned by the Open Internet rules.³⁵ Safety is an increasingly important area that requires new internet architecture and more active blocking of malicious data; that too can violate Open Internet principles.

Imagine if consumers could define their preferences for broadband the way they can for Uber. They might request different levels of quality given the type of application they use (currently banned by rules that prohibit throttling and paid prioritization); they could request to share the connection’s cost with the content

³¹Skok (2009).

³²Stocker and Whalley (2017).

³³Hurwitz and Layton (2014).

³⁴Brandom (2017).

³⁵Layton (2016a).

provider [Open Internet rules protect the online advertising industry from competition from broadband providers³⁶]; or they would consume more broadband that was bundled and prepaid with devices (currently deployed in Tesla's cars, which are shipped with a sim card that zero-rates the music-streaming services Slacker and Spotify). This kind of bundling makes a lot of sense for the use of connected devices, but it does not register on the regulatory radar screen, which is calibrated to measure just one metric.

One distressing feature of many net neutrality regimes is that consumers are forced to value all content equally through regulatory preferences for speed tiers and flat-rate pricing. Aside from the inefficiency this creates for consumers, this is a particular affront to those with moral and religious objections to pornographic, violent, and other offensive material. For instance, adult material is estimated to comprise some 10–12% of the internet.³⁷

Another unintended consequence is that net neutrality could force users to subsidize sloppily designed advertising, which devours data.³⁸ Users have little knowledge of how much of their internet connection is devoted to advertising versus the actual content they want to consume. In the case of mobile, online advertising can consume up to 50% of a subscription,³⁹ and some reports put the number as high as 80%.⁴⁰ Users are effectively forced to subsidize the delivery of advertising to their mobile devices, which is indistinguishable from the actual content the user wants. It is not surprising that the popularity of ad blocking has grown.

The ad-blocking market is large and growing, as consumers use these tools as a form of digital self-defense.⁴¹ The sheer volume of ads and their poor design create disturbances in network traffic flows, congesting networks and forcing traffic management that would not be needed had ads been designed better.

While blocking unwanted content at the end user's device is one method, it is not ideal. The actual recommended practice of implementing fine-tuned firewalls and network access lists is to block at network boundaries,⁴² as close to the content source as possible.⁴³ Such configuration saves network capacity used by data that will ultimately be discarded at the user device, so data users are not forced to pay for data they do not use. In wireless networks, saving capacity also saves scarce spectrum for the customers' actual desired use. The resulting efficient utilization of network capacity makes for a better user experience.

³⁶Layton (2016b).

³⁷Hussey (2015).

³⁸Hurwitz and Layton (2014).

³⁹Parmar et al. (2015).

⁴⁰O'Reilly (2015, 2016). This article suggests between 18 and 79% of mobile broadband data go to advertising.

⁴¹Tranberg and Heuer.

⁴²Scarfone et al. (2009).

⁴³Odom (2013).

Traffic-flow disturbances can also be security events (such as denial-of-service attacks). Thus, network refusal of misbehaving traffic is most effective close to the source as well. Clearly the most effective data-refusal solutions are implemented at the network level. This is why users appreciate that ISPs block spam, malware, viruses, and other offending data at the network level, even though net neutrality demands that ISPs not block traffic.

Not only are some ads irrelevant and unwanted to users, but a number may be infiltrated with “malvertising,” the malicious practice of embedding malware within legitimate advertising (or even running parallel to legitimate advertising⁴⁴), which can infect users’ systems without users even clicking on the ads. Such fraudulent and flawed advertising is responsible for \$8.5 billion in lost advertising revenues annually.⁴⁵

3 Conclusion

Any policy, including net neutrality, needs to be embedded in the proper institutional, social, political, and cultural environment. The degree to which a policy succeeds is a function of the quality of key inputs: the relationships of learning institutions, R&D, transnational networks; human capital; investment; and infrastructure (defined broadly). It will also be dependent on the linkage between the policy, the industrial objectives, and the social objectives.

There has been an important evolution in the view of ICT in developing countries. The pre-2000 view was related to industrial production, ecommerce, business process outsourcing. Today the prevailing view is that ICT facilitates poverty reduction, e-education, e-government, telemedicine, e-agriculture etc. There is no doubt that ICT has helped countries on the industrial side; the opportunity now is on the social and human development side.

ICT infrastructures are quasi-public goods and creating them requires large investment. The extent to which a country can benefit from ICT depends on the quantity and quality of its human capital. Education therefore holds the key to a country’s ICT development and diffusion. Typically policies may be well-developed but fail in implementation. There is a need for bottom-up rather than top-down strategy in achieving wider ICT diffusion. It is imperative to address root causes for unsatisfactory results of ICT for development programs such as poor access to ICT, obstacles to computer literacy, and failure to “localize” ICT contents and applications.

⁴⁴Trend Micro, “Malvertising: When Online Ads Attack,” March 19, 2015, <http://www.trendmicro.com/vinfo/us/security/news/cybercrime-and-digital-threats/malvertising-when-online-ads-attack>

⁴⁵Interactive Advertising Bureau, “Digital Ad Industry Will Gain \$8.2 Billion by Eliminating Fraud and Flaws in Internet Supply Chain,” December 1, 2015, <https://www.iab.com/news/digital-ad-industry-will-gain-8-2-billion-by-eliminating-fraud-and-flaws-in-internet-supply-chain-iab-ey-study-shows>

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Part VI
Startups and Small Enterprises

Start-up Boom in an Emerging Market: A Niche Market Approach



Aidin Salamzadeh

Abstract Startups, as an integral part of any entrepreneurship ecosystem, play a critical role in the success of emerging markets. Without these entities, less niche market opportunities are prone to be explored and exploited. In recent years, startup boom is happening in most of the emerging economies, and the startup ecosystem is shaped to some extent in different countries at this level of development. Then, in this chapter the author tries to elaborate the startup ecosystem in general, and investigates the startup ecosystem in an emerging economy, i.e. Iran. Then, a classification of the existing niche market opportunities which are explored and exploited by Iranian startups is presented. Finally, the chapter concludes with some remarks and directions for future research.

1 Introduction

Start-ups are becoming an integral part of any emerging economy, especially in the last decade. However, the transition from a traditional market to an emerging one entails several changes in institutions, paradigms, perspectives, as well as behaviors of individual actors (Khajeheian 2017). This trend is an inevitable part of any emerging economy (Doshmanli et al. 2017; Salamzadeh and Kirby 2017). Emerging markets, which are explored and exploited by a variety of actors, i.e. entrepreneurs or enterprises, provide a fertile ground for those who search for unique opportunities (Prashantham and Yip 2017). In such markets, typically, an opportunity pool exists along with a series of entrepreneurs, in which the individual-opportunity nexus begins to take shape (Renko and Freeman 2017). Since entrepreneurial mindset navigates this movement, such markets become more volatile and first movers could take advantage of these circumstances (Sparks 2016). Moving forward, without considering these facts, would lead to the failure of those who interested to be a part of this movement.

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In most cases, there are several important affecting factors in shaping emerging markets, among which start-up teams are of paramount importance. Start-up teams are generally formed to address a unique need in a niche market (Salamzadeh and Kawamorita Kesim 2015). In fact, these entities are created by their (co)founders in order to exploit an opportunity that is identified or created in a niche market (Gupta and Shapiro 2014; Picken 2017). Indeed, start-ups are different by their nature or aim, but their creation is almost similar. Emerging markets around the globe had experienced/are experiencing the evolution of these entities (Quinones et al. 2015). The *dotcom boom* in early 2000s was a generally accepted experience which brought several changes into the state of the markets (Henderson 2017). This boom had a lag in less developed economies; however, afterwards it was realized in several emerging economies, such as Iran (Salamzadeh and Kawamorita Kesim 2017). Since start-ups are mostly shaped in the field of ICT, the emergence of dotcom boom is normally correlated with appearance of these entities.

Iran, as an emerging economy, has undergone several changes in the last decade. The start-up ecosystem is becoming more mature and key players are making more contribution in this ecosystem (Salamzadeh et al. 2017). A significant number of start-ups are supported by several support mechanisms, while others emerge independently. Therefore, the ecosystem is improving very fast and the niche market opportunities are explored and exploited by different players in the market (Rezaei et al. 2017). In this chapter, the author tries to explain the startup ecosystem in general, and provide an integrated view of such an ecosystem in an emerging economy with several emerging market opportunities. Then, in order to have a big picture of the current state and to visualize future scenarios, startups involved in designing and managing today's ecosystem is discussed.

2 The Start-up Ecosystem

A start-up ecosystem is shaped by individuals, startups in their various stages and various types of firms in a certain (physical or virtual) domain, which interact as a system in order to create and scale up the new start-up firms (Gobble 2014). Any typical startup ecosystem has several key players, including individuals, teams, support mechanisms, initiatives, officials, unions, etc. Without a doubt, evolution of such an ecosystem is highly dependent on the actions taken by its players, and how those entities interact to create value (Cukier et al. 2015). The start-up ecosystem is a vast area where entrepreneurs run wild but it is still very much controlled than it has to be in most of the countries. To some scholars, in several countries, the startup ecosystem is not yet entirely developed and some areas are not covered at all, while some of the other areas may be insufficiently covered (Barilli 2015; Wallin et al. 2016).

In fact, any start-up ecosystem could be classified under its entrepreneurship ecosystem which includes more parameters, including those related to the top-down strategies of the governments; while the startup ecosystem mostly deals with the bottom-up tactics used by start-up owners (Fernández Fernández et al. 2015). Then,

it seems that a start-up ecosystem is more agile and also fragile than its entrepreneurship ecosystem as it is based upon decisions of single players who do not stand still to interact, but instead in most of the cases act proactively (Motoyama and Knowlton 2017). Therefore, the startup ecosystem is a rapidly and continuously evolving and changing environment. The followings are the most important players in this ecosystem:

- *Startups*: Startups are at the center of this ecosystem, which are considered as the key players. In fact, these entities act and interact proactively in the ecosystem. On the other hand, start-ups are the main entities influenced by other players. In most of the cases, the failure or success of the startups is related to the way they interact with others (Hauert 2016).
- *Support mechanisms*: Most of the startup ideas/teams are financed and supported by the founders, or their families and friends, at the first place. However, it does not take long for them to reach a point that they need more support. Support mechanisms are so diverse, ranging from angel investors to joint venture agreements. Among these mechanisms, the followings are more frequently used: angel investors, venture capital funds, banks, small business development centers (SBDCs), incubators, accelerators, co-working spaces, and the like (Salamzadeh and Kawamorita Kesim 2017).
- *Research institutions*: Research institutions are very important as they provide startups with critical information to establish and run their business. Research institutions provide startup owners with required information to identify and test the niche markets, to determine the market segments, select the key partners, and more generally to understand which business models might be more interesting, efficient and effective in their context (Oh et al. 2016).
- *Universities*: As most of the startups are created by young entrepreneurs who are studying in a university or are recently graduated students, universities become so important (Davila et al. 2015). Moreover, universities are considered as potential talent pools in which potential co-founders are identified. Startup workshops, events and competitions are normally arranged in universities (Oppong-Tawiah and Chan 2016). Normally, startup teams include a talent pool of university graduates, then what these individuals learn in universities become more important.
- *Service providers*: Start-up teams use several services to ideate, generate new business models, and to run their business (Hernández and González 2017). Then, there must be several service providers to answer their needs. In this group, mentors, coaches, trainers and other actors are also included (Renzi et al. 2015).
- *Large companies*: Although start-up companies deal with certain ideas to enter into some niche markets, large companies might highly affect their performance. In fact, large companies might affect the process of opportunity exploitation of startups, by investing too much money in order to become a leader. Also, some startups join large companies to take advantage of their market position and potentials (Yang et al. 2014).

- *Infrastructure*: The context and the infrastructure are also important elements in any startup ecosystem. Albeit, the failure or success of a startup company is highly dependent on its founders' decisions, sometimes the contextual elements and infrastructures stop startup companies on their way to success (Audretsch et al. 2015; Khajeheian 2013).
- *Government*: Governments are so critical in shaping the ecosystem as they regulate the interactions by different rules and regulations. If they fail to support the startup ecosystem, their failure will be inevitable. On the other hand, their support will absolutely pave the way for those who intend to establish their own startups (Berger and Kuckertz 2016).

The following figure presents the big picture of a typical startup ecosystem. As it is shown in the figure, there are eight key elements in such an ecosystem, which are elaborated earlier. It should be noted that there are several interactions among these elements, and the closer these elements become, the more dynamic the whole ecosystem will be (Fig. 1).

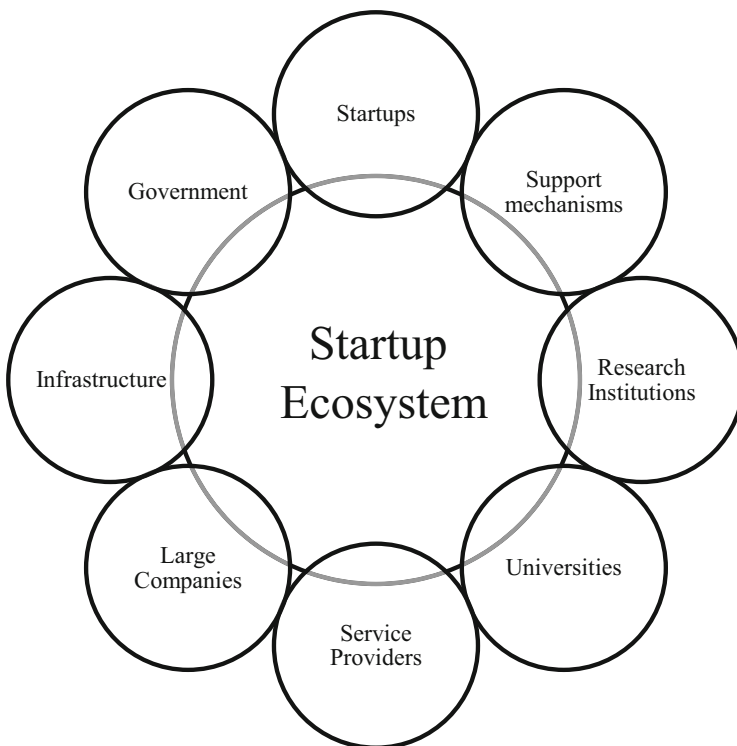


Fig. 1 The startup ecosystem (Source: Author's elaboration)

3 The Start-ups Ecosystem in an Emerging Market

According to the existing evidence, it seems that in terms of opportunity, as one of the largest emerging markets in the world, Iran's startup ecosystem is promising. However, transition from a traditional market approach to an emerging market approach was not an easy task, which happened in the Iranian entrepreneurship ecosystem (Salamzadeh et al. 2017). Similar to the rest of the world, the ecosystem started to grow in the last two decades. From 2005 onwards, by achieving several improvements in the field of ICT and preparing the infrastructure, ICT-based startups started to appear in the ecosystem. It should be noted that the last 5 years were so critical, as some of the main sanctions removed and the Iranian government opened new windows of opportunities for foreign investors. Therefore, foreign companies entered into the market and changed the roles of the game (Salamzadeh and Kawamorita Kesim 2017; Sarfaraz 2017).

The startup ecosystem was highly affected by the movements of foreign investors, slowing down the rate of brain drain, improvement of entrepreneurial spirit among Iranian students and university graduates, returning of the well-known Iranian startup owners from abroad, holding the startup weekend events, and the like (Semati et al. 2016). In sum, the ecosystem changed to a great extent, and thus the players started to act proactively. At the same time, the government and universities became obliged to follow the entrepreneurial insights included in the national goals and plans (Akbari and Alipour Pijani 2013). Moving toward entrepreneurial universities was another initiative that facilitated this transition (Guerrero et al. 2014, 2015).

The number of startups is growing everyday and the startup boom is happened evidently in the country. Meanwhile, several private and public entities are working closely with those startups to facilitate their performance. For instance, the ICT Startups Empowerment and Facilitation Center (ISEFC)¹ is established to help the players in the ecosystem, especially the startups (Salamzadeh et al. 2017). At the same time, several support mechanisms are present in the ecosystem. Currently, more than 55 startup accelerators, more than 10 unofficial and official venture capital funds, several incubators, science parks and technology transfer offices exist in the ecosystem² (Salamzadeh and Kawamorita Kesim 2017).

Research institutions and universities are also moving forward to achieve entrepreneurial goals and therefore are willing to help startups. Entrepreneurial mindset was mainly shaped in entrepreneurial events held by universities for young potential entrepreneurs (Cheraghi 2017). In addition to this, several service providers are offering a variety of services to startup companies. These services are ranging from consultancy services to fundraising. Large companies are also focusing on supporting startup opportunities, since they noticed that their survival is tied to exploiting such opportunities (Ebrahimi et al. 2015; Khajeheian and Tadayoni 2016). However, still a

¹<http://www.ictstartups.ir/en>

²As of July 15th 2017.

significant number of large companies fail to understand the importance of startups and try to insist on their own insights. Finally, the government and infrastructure are more ready to help startup companies than ever before. The following figure shows the Iranian Startup Ecosystem, as depicted by ISEFC (Fig. 2).³

4 Niche Market Opportunities: Exploration and Exploitation

Generally speaking, there are three types of market: (i) existing market, (ii) resegmented market, and (iii) new market (Blank 2012). The following table shows the details of these three market types. To these three markets, one might add the Clone market (Blank 2017). In this study the author considers four market types. As one could see, each of these markets might be interesting for each of the startups. However, the resegmented market is the one in which niche market opportunities would be present. Then, most of the niche market strategies would win, while a minority of them might fail in a resegmented market (Table 1).

According to a general review of the 1335 startups registered⁴ in the ICT Startups Empowerment and Facilitation Center (ISEFC), as one of the main databases, one could see that more than one third of the registered ideas did not turn into any startup companies. In addition, among those startups, more than one-fourth of them are dealing with clone markets. More than half of the startups are focused on the existing or new markets, while less than one-fourth of them considered resegmented markets. It is interesting to know that most of the accelerators also invest on the startups which focus on clone markets, and mostly angel investors are prone to invest on resegmented marketing plans for niche markets (Johnson 2004). It seems evident that most of the investors might be afraid of investing on niche market strategies, since they would be afraid of losing their money; while investing on clone markets seems to be more reliable (Cohan and Rangan 2006; Verhoeven and Johnson 2017). One should note that however this belief might look logical, it is not true in most cases.

Based on the statistics of this center, rate of exploring new business opportunities is four times higher than the exploitation rate, which shows the dynamics of the startup ecosystem (Mack and Mayer 2016). Niche market opportunity exploration rate is, however, lower than the total rate. As the ecosystem is young, it is inevitable that clone markets might be more interesting for those who would like to run a startup. But, it seems that the more mature the ecosystem becomes, the more its players work on the niche market strategies (Parrish et al. 2006). Existing market opportunities are also explored and exploited by some of the players of the market; mostly who are trying to make the transition from a traditional business to a modern startup.

³As of July 15th 2017.

⁴As of July 15th 2017.

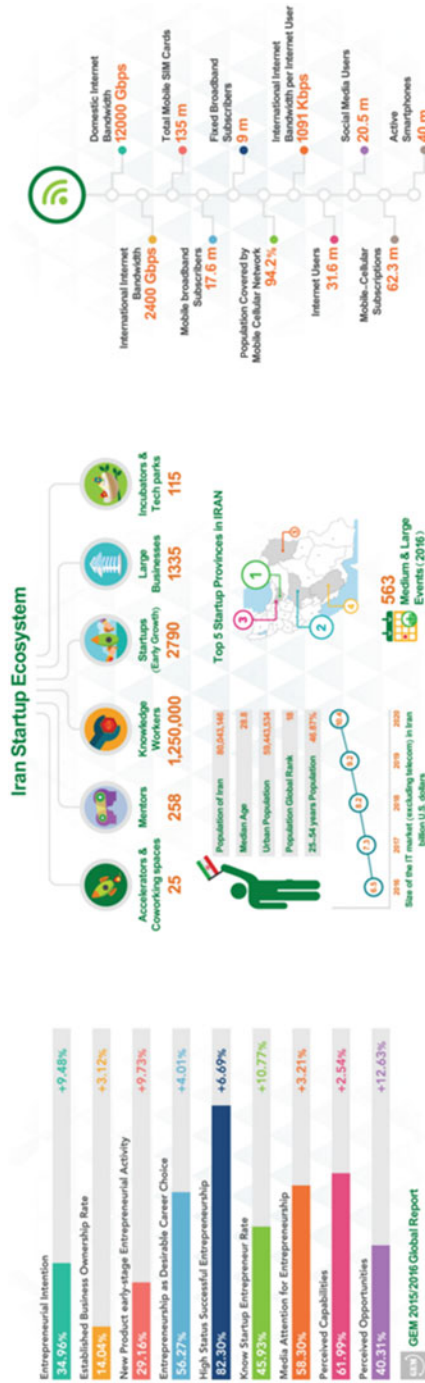


Fig. 2 Iranian startup ecosystem (Source: ISEFC)

Table 1 Types of markets (Blank 2012, 2017)

	Existing market	Resegmented market	New market	Clone market
Customers	Existing	Existing	New and new usage	New
Customer needs	Performance	Cost; Perceived need	Simplicity and convenience	New Idea already proved overseas
Performance	Better/faster	Good enough at the low end; Good enough for new niche	Low in traditional attributes, improved by new metrics	Good enough for local market
Competition	Existing incumbents	Existing incumbents	Non-consumption and other startups	None; Foreign originators
Risks	Existing incumbents	Existing incumbents; Niche strategy fails	Market adoption	Cultural adoption

5 Conclusion

Startup boom has happened in the mid 2000s in the Iranian entrepreneurship ecosystem. By the advent of startup ecosystem and its initiatives, the ecosystem has grown and today the level of maturity of the ecosystem is so much higher than it was before (Salamzadeh et al. 2017). In this chapter, the startup ecosystem and its key elements are discussed. Then, the ecosystem in an emerging economy, i.e. Iran, is elaborated. Finally, the four types of market (Blank 2017) are explained and the current status of the markets on which Iranian startups has focused is generally depicted.

Future researchers might break the elements down to scrutinize the startup ecosystem in Iran quantitatively and in more details. Moreover, it is recommended to analyze the data according to different databases, although the ISEFC's database seems to be the most extensive and reliable one among others. In addition, determining strategic approaches for startups working on each of the mentioned markets could result in interesting findings. If niche market strategy is followed by a typical startup, then it would be easier for its founders to understand the chance of success or failure according to the prescribed strategies. Moreover, it will be useful to investigate the configuration of startups based on their approach toward market.

It should be noted that the present chapter only dealt with ICT based startups. Therefore, other types of startups are not considered in this chapter. Maybe future researchers could extend the study to other domains such as cognitive science, nanotechnology, biotechnology or the like (e.g. see Wagner et al. 2006; Ghazinoory et al. 2012; Salamzadeh and Kawamorita Kesim 2017). But, one might put in mind that there are currently limited databases of such startups in Iran. However, the departure point could be the outputs of the existing accelerators of biotechnology based startups or the database of Nanotechnology Development Fund, for instance.

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The Challenges of Firms in Iraqi Kurdistan Economy in the Light of Strategic Acquisition Theory



Ahmed Omar Bali and Hadi Zarea

Abstract Businesses have faced a range of international developments and threats over the past years, and technological changes and intense competition in different societies have posed a threat to their survival. This has led to improvements in businesses during recent years with an emphasis on their competency. On this basis, the present study attempts to examine and analyse economic transaction cost, strategic acquisition, efficient media market theories and the role of intermediary companies in the businesses in the Kurdistan region. A qualitative method was adopted in this study using open, in-depth interviews with 17 business managers the in tourism industry of the Kurdistan region. The results indicated that with the development of global brands and the appearance of intermediary companies, outsourcing affairs were delegated to these companies and, as a result, the costs associated with the execution of these projects have decreased. The interviewees' emphasis on the development of governmental infrastructures and the growth of intermediary businesses helped to complete and expand on the examined theories.

1 Introduction

Following the fall of Saddam Hussein in 2003, which led to the lifting of economic sanctions, the economy of Kurdistan has been semi-independent for years now, with the Baghdad government deciding to devote 17% of the Iraqi budget to this region. Due to oil revenues, the budget of Iraq increased rapidly as a whole, and this influenced the Iraqi Kurdistan budget. However, in April 2015, the Kurdistan Regional Government (KRG) started to make its economy independent from Baghdad through direct exportation of their oil. More than 95% of the budget of Iraq, with Kurdistan included, comes from oil exports, indicating that the majority

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of necessary goods are imported, and people consume a diversity of services which are provided by global enterprises and foreign departments. Many foreign firms have, accordingly, opened their own branches in Kurdistan and other foreign companies have entered the Kurdish markets via local firms that provide intermediary services and create an engagement between local clients and global markets. Many local business ventures have emerged with a share in the new global market and this trend coincides with the government's policy, which is becoming more open towards global products and services.

A major problem facing business entrepreneurship, however, is a lack of knowledge about business management, particularly in the developing countries (Khajeheian 2013). Although many small ventures have emerged in Iraqi Kurdistan, there is currently no research addressing this phenomenon. This indicates a considerable gap between the development of business in practical terms, with practitioners driving new ventures, and scholars' contributions to the understanding and analysis of this phenomenon. The outcome of this study provides a guide to understanding the entrepreneurial firms and their successful operation.

To accomplish the entrepreneurial firms, the present study investigated the role of social media in the management of innovation costs was examined. Next, the role of big companies in supplying resources and carrying out transactions and the role of small companies in innovation was examined based on the strategic acquisition theory, in the context of businesses of the Kurdistan region. Subsequently, the role of intermediary companies in connecting small and big companies and their role in the decrease in Kurdistan's businesses were investigated, drawing on Khajeheian and Tadayoni's (2016) study. Finally, efficient media market theory was also examined in terms of whether efficient market with a sufficient number of intermediary companies can be effective in growing small companies' and large companies' access to innovation.

2 Theoretical Consideration

This research tries to investigate and analyse four models and theories that have been proposed to explain small and medium firms' opportunities to have a stake in the new global markets, with a particular focus on the economy of Iraqi Kurdistan. It will also examine the emergence of small and medium entrepreneurial enterprises that act as an intermediate actor between the large foreign firms and internal markets. We test the theories by conducting qualitative research on the Iraqi Kurdistan economy to clarify and explain them in this environment:

1. Transaction cost economics: In answer to the question of why a corporation, whose task is to allocate resources, is created despite the allocating structures like the market, and the question of why all the transactions are not organised within a unified corporation considering it can be responsible for allocation of resources, Coase (1937) stated that the market mechanism is costly. This means

that the costliness of a resource allocation mechanism prepares the ground for the appearance of other resource allocation mechanisms. Any method of resource allocation requires a contract, and in any contract there is a risk of violation and, eventually, the inevitable transaction cost. Finally, for allocation of resources and transaction obligations, a mechanism that incurs the least cost for transaction is used.

2. Theory of strategic acquisition: The large firms mainly have an established reputation, history and capital requirements. However, they often find it challenging to prompt and encourage the innovation which will save the business, particularly in the age of advanced communication technologies which are characterised by frequent and rapid changes on the market. To save the business and keep abreast of changes, innovation is more sought after than ever. This provides more opportunities for small firms to have a share in the market through their innovation, particularly as small firms are flexible and more likely to be innovative. Day et al.'s (1993) point is developed and represented in a theory of strategic acquisition which is attributed to Eliasson and Eliasson (2005). They pointed out that large wealthy firms are more complex in terms of organisational structures and have difficulty in fostering radical changes and thus have limited innovative capabilities, but they have strong operational abilities and provide good access to resources (Eliasson and Eliasson 2005). Conversely, small firms have limited operational efficiency and capital, and cannot hope to dominate the markets, but they are highly flexible and innovative.
3. Theory of efficient media markets: Khajeheian (2013) expanded on the theory of strategic acquisition. He noted that an efficient market can provide a possibility for matching large and small companies through intermediary actors. Though small enterprises have an advantage in innovation and large companies have competencies in operation and access to resources, facilitators combine these advantages and create new opportunities by bridging small and large companies. Based on this theory, innovations come from small enterprises (including individuals and users) which are developed by large companies. The large companies in a developed economy are powerful and more likely to dominate the global markets. However, empirical research has found that emerging economies can play an active role in new global market opportunities. Khajeheian (2014) suggested that every country, including developing countries, has its own opportunities and challenges in media entrepreneurship, which should be viewed as distinct from each other. In recent research about new startup ventures, nevertheless, Salamzadeh and Kirby (2017) found that this theory faced contradictions, particularly in relation to the new ventures. They maintained that the individual environments, trends and phenomena should be studied at macro, meso, and micro levels to provide more depth and strengthen the theory.
4. The role of intermediators in strategic acquisition theory: Khajeheian and Tadayoni (2016) developed the theory further by considering the capability of small and medium firms in acting as intermediators in contract. By doing so, they can secure their own stake and participate in the global market. They found that the facilitators manage small and medium entrepreneurs to present their

innovation and values for large firms. They also suggested that the facilitator relies on their history, record of success, trust and their capacity to access innovators, as these factors represent their best chance of gaining a better contract.

3 Method

Given the nature of the present study, a qualitative design was adopted. A case study is unique when the 'research object' cannot be different from the context, and even more so if the context boasts unique richness (Yin 2003), as is the case in this study. The overall goal is to examine the mentioned theories by focusing on the opportunity for small firms to have a stake in the new global markets. The main data-collection method for the present study was face-to-face interviews. A total of 17 interviews were carried out, as presented in Table 1: ten with top managers of flight and tourism industries, and seven with managers representing foreign corporations (all importing products from the global markets based on special requests). The interviewees were from two large, two medium and five small flight and tourism industry firms, and the rest of the interviewees were from two small and three medium online shops which imported products from the global markets. The strategy for the interviews followed that of McCracken's (1988) long interview, centring on creating a few constructive and qualitative interviews, rather than trying to complete as many interviews as possible. The interviews were conducted at the end of June and during July, 2017. Most of the interviews took place in a meeting room at the university campus so that, if required, the participants could have easy access to a PC, laptop, tablet or other devices they normally use for gleaning information or reviewing their company information. The interviews began with a brief explanation of the nature and overall purpose of the research and an assurance of confidentiality. Participants were asked to talk about the company in general, the market atmosphere, economy pressure and other factors influencing their business. Each interview lasted between 50 min and 2 h, and all were transcribed immediately after they took place. Data collection and analysis progressed in an iterative manner. A combination of values coding was used in the first stage to identify interviews related to SMEs which have a stake in the international market. Once all data had been mattered to open coding, second cycle axial coding was controlled to clear the initial codes, remove dismissals and look for connections in order to consolidate themes in the data. Coding was carried out by the researcher; an independent researcher checked the final coding scheme to ensure integrity.

4 Findings

We present the key findings from the interviews in the following sub-sections and provide a summary in Table 2.

When analysing the obtained codes, it is clear that lower costs were frequently mentioned in the interviews with regard to the role of intermediary companies. The

Table 1 Research participant

No. of Participant	Position in company	Age of company	Size of company	Type of company
Participant 01	Manager	4 years	Small	Flight and tourism
Participant 02	Manager	6 years	Small	Flight and tourism
Participant 03	Manager	5 years	Medium	Flight and tourism
Participant 04	Manager	5 years	Medium	
Participant 05	Manager	4 years	Small	Flight and tourism
Participant 06	Manager	4 years	Small	Flight and tourism
Participant 07	Manager	5 years	Large	Flight and tourism
Participant 08	Manager	7 years	Large	Flight and tourism
Participant 09	Manager	4 years	Small	Flight and tourism
Participant 10	Manager	4 years	Small	Flight and tourism
Participant 11	Manager	7 years	Small	Online shops
Participant 12	Manager	7 years	Small	Online shops
Participant 13	Manager	5 years	Medium	Online shops
Participant 14	Manager	5 years	Small	Online shops
Participant 15	Manager	5 years	Small	Online shops
Participant 16	General manager	8 years	Medium	Online shops
Participant 17	General manager	7 years	Medium	Online shops

fact that intermediary companies have been influential in their production process can be traced to their reduction of the costs of providing services or products in the Kurdistan region. For example,

Our intermediary firms cost less compared to new company branches (Participant 01, Participant 03).

As usual, the local people and employees are familiar with the local lifestyle and they are able to adapt to the environment and manage their expenses and business with lower costs the foreign employees. Also, the foreign employees' incomes play a key role in meeting their salary expectations in the host country. In hence, if the local employees have the same experience with the foreign employees in rich countries they are more likely to replace them because they are willing to work with lower payment comparing to the foreigners'. Further, the firm owners can find local employees with lower salaries because there is not a standard to determine the minimum hour wage in Kurdistan. Alongside this, the entrepreneurial firms can afford to start out with a small budget (Khajeheian 2013), making only small profits

in the beginning. Communication technology's changes, particularly the rise of social media, have facilitated MSEs' publicity, promotion, identifying target customers, and analysing competitor's behavioural. Thanks to the internet, all of this can be done easily and quickly with low costs and using flexible methods. It was mentioned that:

There is strong competition between companies and the marketing here is crucial and we have better experience and we are knowledgeable about our environment, markets and customer trends, compared to foreign employees (Participant 05, Participant 06).

The interviewees strongly emphasised the role of large companies in conducting transactions and providing access to resources. Furthermore, reflecting on the organisational structure of these companies, issues that were within the field of activity of these companies are delegated to external companies. It was asserted that:

Most business people who have a good capital prefer not to invest in tourism because they are looking to invest in a field that earns big money and quickly. For example, housing, which is not organised and where the business people have exploited customers (Participant 07, Participant 08).

The participants pointed out that the large corporations have many challenges in accessing and maintaining their business branches in the developing countries and poor economies, due to operational costs and risk. The income in poor economies and developing countries is lower than compared to the developed economies. The cost of marketing processes, including conducting research about consumer trends, costs more when done by local employees than if they are done by foreign employees. One of the interviews stated that:

Before the last decade most of the flight companies were reliant on their employees, but now, local people have started to get experience in flight and tourism service (Participant 03, Participant 04).

The local entrepreneurs take the responsibility for whether their new entrepreneurial ventures succeed or not, while the foreign corporations only deal with those which succeed, but don't offer any compensation to unsuccessful ones. This protects the large corporations from the risks involved when opening new branches. It was pointed out that:

Recently the foreign companies withdrew their employees and they started to close their branches because we can provide the service to those companies instead (Participant 03, Participant 04).

Social and personal relationships play a big role in Kurdish society's markets, Kurdish customers prefer to be served by their friends and relatives. This helps the local people to start up new enterprises because they believe that they will have a few customers at least and this reduces the risk possibilities (Participant 16, Participant 17).

The lack of security and political and economic stability in many developing countries causes serious obstacles. Large corporations try to avoid the risks expected in these markets. Conversely, local firms can adapt to their environment, such as by forming alliances with local authorities through legal procedures. Importantly, this

will not have any impact on the large corporations in terms of the expected losses, or their responsibility and reputation. This allows the local firms to fill the gap and play an intermediary role in establishing connections with the markets. Thus, the local firms have to compete for contracts with the large wealthy corporations; in other words, the entrepreneurs and innovators in the local markets have a challenge to start up successful ventures which are based on strategic acquisition. For example:

Most foreign companies are willing to deal with us because we are able to attract customers; if one company rejects us we can find another. They are willing to deal with us and provide us with products and services at a discount. Following this, we can keep our share and stake in the markets, because there is competition (Participant 13, Participant 17).

There are a large number of intermediary companies that transfer innovation from small companies to big companies in the Kurdistan region, but due to cultural issues these intermediary companies do not have enough efficiency. It was mentioned that:

We are more knowledgeable about the habits and patterns of our customers and the obstacles raised by political party leaders against new business (Participant 14, Participant 15).

The above quote refers to how the market in Iraqi Kurdistan generally is not welcoming towards new enterprises because the market has been monopolised, and local entrepreneurs may have more chance of adapting to the corruption and finding the opportunity to run and keep the business through utilizing lobbying. This situation indicates that the political environment does not encourage new enterprises to start up because the government does not facilitate for them, and curbs them through monopolising the market through the companies owned by the two political parties and the other companies who share with them. With all these restrictions, some young people seek to start up new businesses because they are suffering from unemployment. This can be seen in the following codes:

Recently young people have started to look for jobs in the private sector or are creating their own jobs because they believe that the government cannot offer them new jobs, due to the decrease of budget which mostly relies on oil income. As a result, they tend to create enterprises (Participant 04, Participant 08).

The two political parties in rule are controlling the small, medium and large business that make people do not think about creating own business (Participant 04, Participant 14).

We believe that if you want to create your own business you should find a political leader to have a share in your business and those leaders are not to contribute in the business whether by capital and experience (Participant 04, Participant 14).

According to Eliasson and Eliasson (2005), strategic acquisition happens in the framework of big successful innovative companies meaning that big companies purchase small companies to compensate for their demerits, e.g., innovation. The innovation of the small and medium local firms here is based on understanding their customers' needs and involving them through their products and services, and they are able to persuade their customers to buy alternative products and services. This was seen in the codes obtained from the following interviews:

We sell products upon customers' requests and it costs a lot less if the same products are available in the branches of international and global brands. And we offer them a variety of alternative products and services (Participant 16, Participant 17).

In Iraqi Kurdistan, some entrepreneurial enterprises have connected local customers to the world markets and goods through their activities, which are not simply local because they deliver goods from different countries to their customers through the networks of their agents. As long as these firms have kept a large number of customers, they can persuade global shops and firms to give them discounts. Subsequently, they can offer goods to their customers at a cheaper rate than the main company branches can. There are numerous brands competing in the markets. Hence, any company which produces goods is forced to deal with an intermediate firm, because the intermediate firm can persuade their customers to buy alternative goods. The power of the intermediate firms comes from their deep knowledge about the local environment and customers, and personal relationships which help persuade customers and gain their trust.

A network of distributed agents in different countries whether within one firm or different firms but they have share common interests and collaborations. The growth of these firms are not only because of cultural reasons of lacking technological knowledge or communicating in foreign languages but their growth are because of their economical products, in other words, the local customers get good deals by the firms than if they request the products directly by themselves. The intermediate firms have grown their own customers and in turn, they get discounts when importing goods from the original companies and distributing and shipping them cheaper than the formal branches do. However, the intermediate firms benefit from the personal and social relationships invested in by the intermediary firms, which play an important role in attracting customers. In the Kurdish culture context, this factor can play a considerable role. It is also assumed to play a similar role in other developing countries which are characterised by strong social relationships. It was asserted that:

We help our customers to get any products and brands. We provide them with more alternatives (Participant 14, Participant 16).

The majority of these ventures were created and introduced in Iraqi Kurdistan by people who emigrated to the West. '*Bombena*' firm, in English: 'bring to me', was established in 2010 and has now become the most popular delivery firm. It has opened branches in major cities and towns and even has some branches in the US. The general manager of the firm says that they grew rapidly and started to make contact with many global online shops. One of the key points observed among these firms is that they connected Kurdish people with the global markets and changed the habits of consumers. Hence, it is assumed that the intermediate firms replace the traditional market and link the local people with world markets.

The intermediate firms were concerned about quality control which can be weak, with some traditional and online shops selling fake goods at lower prices, which has a subsequent effect on the competition and marketing processes. People tend not to trust the majority of those traditional shops, where some shops use counterfeit

international brands because there are no strong quality and copyright controls. However, some people are unable to distinguish between original and fake goods. This represents one of the main challenges for intermediaries and online shops, aside from the lack of internal mail service and banking systems, where the majority of people do not have bank accounts and do not trust banks. It was pointed out that:

We have many Kurdish friends in the different Western countries and they help us to make contact with foreign companies and businesses (Participant 16, Participant 17).

According to Khajeheian and Tadayoni (2016), small and big companies need intermediary companies, which have an advantage in making a contract, in order to supply innovation. This was seen in the codes from the following interviews:

Although the local universities do not qualify new graduates to look for new ventures and entrepreneurial enterprises, many young people who have emigrated to the West have achieved experience and have started to create entrepreneurial enterprises (Participant 06, Participant 15).

Specifically, the reflection and implications of this research on a strategic acquisition theory emphasises the role of intermediaries in contract which was first pointed out by Khajeheian and Tadayoni (2016). This research finds that the role of some entrepreneurial firms is fundamentally the role of intermediary between the large markets and foreign customers. The large firms are forced to deal with intermediary firms because the intermediary firms can attract customers and control them through providing them with alternative goods and a variety of services which are different to those provided by the large firms. The ability of the intermediary firms in contract was determined by Khajeheian and Tadayoni (2016), who studied the history of the intermediary, their record of success, trust and access to innovators.

The nature of social and political environments plays a considerable role in the emergence of entrepreneurs because in some environments social and political figures are able to monopolise the markets. This can be viewed as an obstacle to the emergence of entrepreneurs. If the market is essentially monopolised in such a country by political parties' companies, it is assumed that many small and medium-sized enterprises can emerge by getting support by political parties' companies gather them common interest. The fact of the matter is that if entrepreneurial firms have been supported illegally or by unethical methods, they should not be viewed as entrepreneurial. Thus, the ethical method and conditions in the entrepreneurship should be taken into theoretical consideration because it not necessary that the whole potential entrepreneurs have the equal opportunity to startup new venture particularly in the countries do not have a higher score in transparency and integrity. For example:

Our business relies on providing global brands and products, and we can provide our customer with anything in the world. Many people believe that we provide them the original products (Participant 13, Participant 14).

The shortcomings of these firms have been investigated along with the obstacles to their growth such as lack of infrastructure, government's poor economic policy

and strategy, and corruption, e.g. local big firms being owned by political parties that support and allow them to monopolise the markets. By contrast, many entrepreneurial firms in Kurdistan such as those working in flight and tourism are becoming influential and they assume that they will soon take over the traditional markets that sell original products from western markets. Because they secure more customers for the global brand, the company frequently provides them with discounts and special offers. In turn, they keep their business and their share in the markets.

The opportunity to enter the market and win customers depends primarily on creativity. Global markets are willing to make alliances with entrepreneurs who already have their own customers. This brings new opportunities. The creativity and innovation in new ventures helps build new business by attracting and involving more customers. Sometimes, the creativity can be just a tradition, or can involve adding a small change to a simple idea which is long-established in one society but viewed as new in another. This new trend in the markets tends to encourage large companies to accommodate and to share with entrepreneurial enterprises even if they are from developing countries. It was pointed out that:

We help our people to get original products, and we help them avoid being exploited by the branches of global companies, and shops that sell fake products (Participant 13, Participant 14).

We can develop internal production because we export and provide the Kurdish people (providing products upon request) who are living abroad with local products (Participant 13, Participant 17).

We could persuade some foreign people abroad to consume some local products, and this is our challenge to get more and more foreign customers (Participant 14, Participant 15).

Local small firms want to target foreign customers but the government does not practice appropriate policy to support them because the government mainly relies on oil income rather than tax income from private companies and the private sectors. Another major point made by the interviews was that the government's overreliance on oil instead of revenues from tax has led to the neglect of the development of businesses, which has been pointed out in the following interviews:

The government doesn't believe has the interest of between the private sector and government because the government economy relies on oil income (renter-system) instead of taxes from the private companies. The government doesn't have a plan to develop the private sector (Participant 07, Participant 08).

Government employees get a higher salary and they work fewer hours. Government employees will get state pensions when they retire whereas employees in the private sector or those who are self-employed do not have a future because they will not get state pensions (Participant 07, Participant 08).

The inefficient administrative structure does not allow for the provision of appropriate services to the businesses. Therefore, businesses need to look beyond governmental programs and policies and look for the areas where values are connected and present these values to the market.

The government doesn't promote tourism and attract foreign people because the government does not rely on taxes from the private sector. Some young people are not motivated to work because their families are supported by the political parties in rule and they get privileges (Participant 05, Participant 06).

In spite of the failure of the government to support or facilitate the private sectors, new enterprises have emerged and identified opportunities to take advantage of the technological change, particularly by utilising social media, which facilitates the new ventures.

Social media helps us to target our customers in the world because it is flexible, cheap and powerful, and because it becomes a common platform. There is no internal post office here and this has an impact on our business because our business is online and online business relies on post offices (Participant 05, Participant 06).

These enterprises can be more successful and reach their goals if the government assists them to introduce an effective banking system that facilitates online shopping. This is to compensate for the absence of online transfers in banks and the fact that the majority of people do not have a bank account because bank security is weak and people do not trust banks. Another problem is that quality control as aforementioned is weak and this affects the companies which are importing global products because it is difficult to differentiate their genuine products from the fake products. These two key problems have been presented in the following comments:

Most people in Kurdistan do not have a bank account because people do not trust the bank system and this has an impact on our market. Kurdistan has a fantastic location to develop tourism but there is a lack of infrastructure. The internal transportation between cities relies on taxis instead of modern buses and the roads are not well-maintained. The Visa process takes longer and this does not encourage tourists to visit (Participant 07, Participant 16).

There are many natural areas which have not been invested in because this sector takes longer to return a profit. Digital communication such as Facebook, email, and other websites help us to observe global market strategies, techniques, marketing, and communication with companies. Many shops sell fake products because there is no strong quality assurance and copyrights (Participant 07, Participant 08).

The SMEs in the Kurdistan region have found a way to gain their stakes in the global market opportunities through gaining the opportunities created by the changes in communication technology, public income as a result of oil revenues, increasing demands for international goods and services. As the key ability of Kurdish firms is based on their knowledge about their local culture, and personal and social networking relationships that distributed in the world wide which enables to connect the small and medium firms to play as an intermediary between the large global companies and their customers. By this act, the SMEs have shared with large global companies through their roles to decrease transaction costs and the possible risks. More success for these the SMEs is linked to the role of the government to provide them the necessary services and to reduce the exploitation of the companies owned and shared by political parties in the markets. The key findings of this study as aforementioned have summarised in the following table:

Table 2 Results from group interviews

<p>Using intermediary companies, large and foreign companies seek to decrease the costs associated with providing services to the customers with an emphasis on decreasing the risks and getting access to the markets in the Kurdistan region. These companies decrease transaction costs and the risks incurred by the market because they are familiar with the business environment and conditions.</p>	<p>In the Kurdistan region, there are many opportunities for the development of business. As was mentioned in the efficient media market theory, large, foreign companies use the potentials of small and medium innovative companies by utilising the oil resources. Intermediary companies are normally formed based on capabilities or local and regional relationships and help to connect these companies.</p>	<p>A large number of small and medium innovative companies have been created in the Kurdistan region, which have developed by relying on their core competencies. Sometimes, the competencies of these companies are not used because they do not have governmental economic rents, this has been improved, however, with the presence of intermediary companies.</p>	<p>Intermediary companies based on economic rent that can relate small companies with the large companies thanks to their governmental or tribal relationships.</p> <p>Self-made intermediary companies that can relate small companies with large companies due to their core competencies.</p>	
<p>Transaction cost economics</p>	<p>Theory of efficient media markets</p>	<p>Theory of strategic acquisition</p>	<p>The majority of big companies, some of which are international, have had access to governmental economic rent, but some face different risks in the local markets. This highlights the role of intermediary companies.</p>	
	<p>Theory of strategic acquisition</p>	<p>The role of intermediators in strategic acquisition theory</p>	<p>Theory of strategic acquisition</p>	

5 Discussion and Implications

Over 5 years ago, the Kurdistan Regional Government (KRG) started to reduce job openings. This was because the two political parties in power (Kurdistan Democratic Party, and Patriotic Union of Kurdistan) appointed people to purchase their votes in elections, during 2003–2010 (Bali 2016a) and most of those who were appointed were not properly qualified. Meanwhile, the KRG budget has decreased due to the decline in oil prices and this reduced the government's capacity to create new jobs. The lack of jobs in government departments encouraged people to create their own entrepreneurial enterprises. In fact, the government is responsible for creating and providing jobs, whether in the public or the private sector. In Western economies, the government budget revenue relies mainly on taxes from private companies (Gevorkyan 2013; Knoop 2013). As a result, the governments seek to support private companies so that they can create and provide job opportunities. In Iraqi Kurdistan, however, there is no obvious and successful economic policy, and now the government is unable to offer jobs and does not have a plan to support private sectors that can offer more job opportunities. For example, there is no state pension in the private sector for those who retire. This affected people's desire to work in the private sector. It is also assumed to have had a negative influence on the spirit of entrepreneurs looking to create their own business. Another problem is that the government stopped granting loans to investment projects because of the decreased budget. There is no transparency for applicants for receiving loans, and there are few equal opportunities. This has a negative impact on people's motivation to start up new ventures. This indicates that entrepreneurs in this economic and political environment are exposed to risks incurred by poor government policies which are characterised by corruption and lack of economic strategy.

Another problem is that both political parties in power have monopolised the markets through their own companies, particularly in big businesses. This can negatively impact entrepreneurs' ambitions to grow their businesses and expand them. It has also generated a negative perspective of thinking that there is no choice when building a large business without giving a share or to merge with the companies that are owned by the two leading political parties. This can affect the way people think about new ventures within the space dominated by businesses linked to political parties. Thus, the entrepreneurs' option is to represent as a client of companies owned by political parties rather than acting as an independent business people. These problems are curbing the spirit of new startup ventures.

5.1 *Inflation and Weakness of the Private Sector*

The entrepreneurial enterprises in Iraqi Kurdistan markets look stagnant for the near future, and infrastructures are no more encouraging. It is arguable that the decline of oil prices related to many startup ventures, particularly from a few years

ago. In 2014, KRG started to reduce salaries from 15 to 75% because of budget deficit. Entrepreneurship, nevertheless, is more likely to appear in privatised economy and markets, but the private sector is underdeveloped in developing countries (Stevenson 2010). Bali (2016b) argues that the economic system in Kurdistan follows an economic rent system, as the private sector is very weak. The Kurdistan Regional Government (KRG) has increased the salary in the majority of government departments by more than 500% from 2008 to 2013 by allocating more than 75% of the budget to salaries. The rest of the budget was spent on infrastructure and supporting the private sector. This has had negative consequences because lack of government funds for the private sector encourages more and more people to look for jobs in the public sector because the salary is higher than in the private sector, which in turn causes inflation. This problem has led to a lack of entrepreneurship and creation of new businesses with many small local industries closing down and many professionals losing their jobs. The entrepreneurs were concerned about the government policies, especially regarding the current economic circumstances which they claimed could have been averted through the creation of job opportunities in the private sector. The interviewees working in the tourism and flight services pointed out that the tourism trade is mostly oriented to foreign countries. The internal tourism sector does not receive enough attention from the government and there are no new investments in this field; however, there are basic opportunities such as natural and historical areas and opening culture to foreigners. Investment in this sector will open many opportunities for the emergence of new ventures.

Apart from the weak infrastructure in tourism, the entrepreneurs point to the lack of promotional efforts by the government to create a brand for Kurdistan. In response to this shortcoming, some tourist agencies are starting to attract tourists through their own promotional campaigns and programs, such as utilising social media as an engagement platform with foreign tourists and cooperating with foreign firms to organise tourist groups to Kurdistan. The local tourism enterprises in the Kurdistan region have taken advantage of outsources, as many researchers have explained the role of outsources to develop new venture such as capital, expenses and operational efficiency (Eliasson and Eliasson 2005; Khajeheian and Tadayoni 2016); and they argue that this is a key feature of strategic acquisition. The local entrepreneurs benefit from technological changes by making use of advanced communication and social media to engage customers and develop their businesses.

5.2 Technological Change as a Facilitating Tool in Entrepreneurship

The development of communication technology has removed traditional borders between countries, creating an international space. This has also provided a platform to facilitate collaboration between entrepreneurs; individuals who have

innovative ideas; small, medium and large firms; and customers, creating a growing global culture with collaboration across the world. This has led to increased interest from foreign corporations in sharing business; each startup can gain its own stake. The internet in general and social media in particular have enabled local entrepreneurs to communicate and exchange ideas with foreign firms very different from them in size and power for the interests of both sides.

It is also quite easy to use social media to publicise business and products (Moore 2016; Funk 2012; Hyder 2016). Advertising across social media is both low-cost and a very good way to reach target customers (Moe and Schweidel 2014; Takran and Ylmaz 2015; Ozuem 2016). The interviewees in this study also highlighted how their business's webpages and social media accounts facilitate successful marketing for several reasons. First, it is very economical compared to other available marketing methods such as advertising on TV, radio, print media and billboards. Second, social media can selectively target audiences according to their residential and demographic backgrounds. For example, one of the entrepreneurs stated that some of the clients were from particular countries and often specific cities, and social media allowed the business to reach them easily, economically and quickly. Third, it is easy and flexible to design advertising content using a computer, and to make any changes required, whether designing a pamphlet, a slide, or audio-visual content. Fourth, social media is based on two-way communication which allows interaction and engagement with the customers. It also allows agents to communicate with clients 24/7, because the majority of people tend to use social media on their mobile phones, creating flexibility. Finally, social media enables agents to understand, analyse and anticipate trends, and to observe clients' feedback. Social media also allows agents to observe and check competitors' analysis and their marketing techniques.

5.3 Personal and Social Relationships and Entrepreneurial Ventures

Personal and social relationships, and social networks, play a considerable role in attracting customers and growing businesses (Pan 2000; Meier-Comte 2012). Some customers are influenced by relationships which may be based on religion, ethnicity, nationality, friendship (Gummesson 2011). The personal and social relationship of agents and the reputation of entrepreneurs and their business history may have an impact on the customers (Özbilgin and Malach-Pines 2009). This has a significant role in the Kurdish business markets at several levels. First, some companies offer opportunities and share to small enterprise as a branch based on the relationships. There are two reasons for this. First, they have a personal relationship and can target more customers, which will benefit the enterprise as a whole, as they have a stake in the same services and products, helping to expand and develop the main enterprise. This leads to the emergence of more small firms in order to control market. They

expand horizontally and involve more entrepreneurs. Second, it allows entrepreneurs from towns and even villages to get involved in the business through utilising their personal relationships or their innovative ideas. In this study, it has been shown that many Kurdish entrepreneurs build connections with foreign business people and utilise outsources through personal relationships because of several factors.

One of the factors is that many Kurdish people have emigrated to the West and to developed countries, and now act as mediators between local and global companies. Those who are living abroad, or who have previously lived abroad, have collected many new business ideas for Kurdistan that can be viewed as entrepreneurial enterprises and innovations. Experiencing a different culture can help the adoption of unfamiliar ideas and innovations for enterprise. In turn, this leads Kurdish people to connect and interact with developed countries and the West. This shift has changed the habits and patterns of the consumption of global brands by the Kurdish people. New online ventures have emerged to distribute original products to local customers with lower prices compared to those offered by the formal branches of the global companies. These firms are growing and tend to be widely accepted internally and many global brands and shops are willing to provide them with support such as administrative experience, database systems and capital requirements.

5.4 Online Shops and Their Implications

Online shops in Iraqi Kurdistan are still relatively unpopular because the internal post office has been weakened. It can be stated that the post office fell apart when the economic sanctions began in 1990. Thus, several generations have grown up unfamiliar with postal services. People post their goods via coaches and taxi drivers, which is very costly. For example, delivering a letter or a box weighing one pound is equivalent to the cost of one passenger, much more expensive than postage costs in wealthy countries. Conversely, global overseas mail companies like *DHL* and *TNT* are better in terms of cost because the worldwide Kurdish community migrating to developed countries has become familiar with these services. Following this, some of the enterprises which have emerged and are owned by Kurdish entrepreneurs who have citizenship in Western countries, bring goods in the outside countries' based on customers' requests. This service is a post mail service but also provides extra services. For example, if their customer does not have a bank account, they receive a cash deposit and buy the goods for them. These enterprises have shifted the patterns, habits and trends of people towards global distribution and products. The entrepreneurs offer more options and choices of various products for customers. Some customers want goods which are not available locally such as spare parts and cars parts. These kinds of intermediary firms have reduced customers concerns of not accessing to rare products of cars.

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Competitiveness of Small Media Firms



Somayeh Labafi and Idongesit Williams

Abstract Considering the importance of small firms in media industry, deeper knowledge of their strategic decisions and actions in turbulent markets is necessary towards understanding entrepreneurial management and competitiveness in these technological markets. This study explores the performance of a selected group of small Iranian media firms to understand their competitive strategies in a fluctuant and changeable media market. Nineteen managers from small firms in the publishing, software, video games, telecommunication and advertisement sectors of the media industry were interviewed. Collected data was analyzed using content analysis based on three types coding, namely open, selective and axial coding. The findings revealed four groups of salient concerns within the selected group of interviewees. These concerns involved (1) Production: extracted based on themes focusing on niche markets, the reproduction of the successful products, the entertainment function, the personalization and new product risk taking avoidance (2) The market structure: extracted from theme relating to the concentration on competitive markets, the avoidance of monopoly markets, technology utilization to make the market further competitive and customer loyalty (3) Financial resources: Extracted from themes relating to the risk-taking investors, the concentration on advertisement revenues and costs leadership (4) Regulations: Extracted from themes relating to avoiding risky markets with high capital, watching big markets and its interaction with regulations and joining the small markets with established regulations.

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1 Introduction

Advances in communication technologies have resulted in new and emerging players in the media landscape. Disruptive technologies have enable market features such as cost reduction, lower market entry barriers, and direct access to consumers into the media industry (Khajeheian 2017a), and in the same vain, radical changes are also evident on product and service attributes, business models, market dynamics, and consumer behavior (Gleason and Murschetz 2017). As a consequence, there is an increase in competition in these intrinsically competitive markets (Hasenpusch and Baumann 2017).

New startups established to exploit the opportunities that are raised from communication technologies (Salamzadeh and Kirby 2017; Hang 2016). Under the reduction of costs, these small firms find niche markets accessible and easier to reach (Khajeheian 2017b). On the other hand, the trend in consumer change rapidly and these trends are based on the experience of new products and services, consistently demanded from innovative services (Khajeheian and Friedrichsen 2017; van Kranenburg and Ziggers 2013). Changes in markets will also change the demand placed by customers on the market and as a result, small firms should be ready to respond to customers' needs, and innovation is a unique way of dealing with these uncertainty (Nel et al. 2017).

Given the pivotal role played by the small firms in the development of the media industry (Achtenhagen 2017a, b; Khajeheian and Tadayoni 2016), this chapter reports a series of interviews conducted with managers of small media firms in Iran, to understand how they react to changes and meet customers' demands in media markets. Media markets in this chapter refers to "the markets where media products, including news, entertainment, communication, advertising, creative talents, dream and user information are exchanged" (Khajeheian 2017a).

2 Methodology

This research is designed as a qualitative case study of some small media firms in Iran, as a developing economy. This study has been conducted using the explanatory approach (Felix et al. 2016). This approach illuminates the different aspects of competitiveness in small media firms, through the recognition of meanings, based on elite declarations about media business, including managers and scholars. The used approach considers if the research's findings can be transfer notably to other themes or not, rather than focusing on statistical extension (Marshall and Rossman 2006).

2.1 Sample and Data Collection

This study adopts the qualitative research method. Concentrated interviews (Fontana and Frey 1998) was conducted with 19 managers from small media businesses who are experienced in producing, joining markets and have achieved success in businesses (Table 1). These managers were selected using the targeted sampling approach (Lincoln and Guba 1985). The targets were selected based on terms of expertise, job position and experience in managing product entry. The data gathered was analyzed using content analysis. The data were analyzed till the data saturated was reached. The sample size was related to the pattern of qualitative research in which relatively small samples were selected for generating rich data (Patton 1990).

2.2 Data Analysis Approach

An interview guideline was produced using semi-structured and structured interviews. The interview questions were based on concepts gained from reviewing literature on the subject area to derive questions for the interviews. The key questions were prepared and interviewees were permitted to state their views and narrations freely to elicit data from the semi structured interview in addition to the structured interview. The researchers collected and then encoded the data.

A three-step encoding process was employed to shape the findings (Pratt et al. 2006). In the first step, the primary codes emerged via the open coding process (Miles and Huberman 2000). In the second step further encoding was performed to identify the second-level categories in a higher level of abstraction. This step tries to match the concepts from first step which were gained by open encoding, through a comparison process. Finally, the third step seeks out the categories of data, until the demanded categories are reached.

So, at this stage, 670 primary codes were converted to 98 concepts. And the convergent concepts were transformed into 15 categories; at last, these categories provided four main categories of research. The three steps (Strauss and Corbin 2008) were used to encode the information derived from the interviews. There were founded primary codes through the first encoding (open encoding). The concepts then were sorted intellectually and conceptually. Based on the contents used in extracting the concepts and categories. The tables in the subsequent sections of this paper illustrate the aforementioned process.

Table 1 Sample's interaction with small media firms

No.	Age	Sex	Degree	Business	Product	No. of Staff	Position	History
1.	41	Male	MA	Book publication	Book	25	Publication's manager	20
2.	45	Male	MS	Book publication	Book	20	Manager of publication's marketing	22
3.	56	Male	MS	Book and magazine publication	Book and magazine	23	Publication's manager	28
4.	50	Male	MA	Newspaper publication	Newspaper	40	Company's manager	19
5.	51	Female	MA	Newspaper and magazine publication	Newspaper and magazine	18	Company's manager	21
6.	38	Male	MA	Producing learning software	Software	17	Manager of publication's Marketing	10
7.	35	Male	MA	Producing learning software	Software	41	Company's manager	9
8.	46	Male	BS	Producing office software	Software	32	Company's manager	18
9.	51	Male	MA	Producing office software	Software	17	Company's manager	15
10.	39	Male	MA	Producing video games	Video games	21	Company's technical manager	11
11.	36	Male	MA	Producing video games	Video games	16	Company's manager	8
12.	35	Male	MA	Producing video games	Video games	24	Company's technical manager	6
13.	43	Male	BS	Marketing	Urban advertising	15	Company's manager	7
14.	42	Male	MA	Marketing	Urban advertising	19	Company's manager	8
15.	51	Male	BS	Marketing	TV advertising	24	Company's manager	10
16.	48	Male	MA	Marketing	TV advertising	18	Company's technical manager	11
17.	45	Male	PHD	Producing TV documentary	Film	12	Company's manager	7
18.	38	Male	MA	Online shopping	Selling service	25	Company's marketing manager	4
19.	39	Male	MA	Telecommunication	Selling Internet bandwidth	32	Company's manager	3

3 Analysis

The interviews indicate that the core concern of the small media firms in a competitive environment revolves around four salient categories: production, market structure, financial resources and regulations. These categories were extracted during coding process. These salient categories were shared by all these firms with an approximate close frequency.

3.1 Productions: This Implies the Movement from Production of the New Product to the Reproduction of that Product

This part of competitiveness in the small media firms deals with the production and preparation process of the products and services. Questions as to ‘what are the due entries for meeting the market needs?’, ‘Which product is competitive?’, ‘which product has more attractive power for the audience: the production strategies or reproduction ones?’, ‘What makes the audience attracted to the product: price, brand, . . .?’, the answers to these questions will shape the structure of competitiveness of small media firms in the market.

The managers of the small media firms tend to concentrate on the ‘entertainment function’ in the production. They believe that the revenues are highest in this sector to an extent that they try to reinforce the entertainment function even in their educational programs. Publisher and managers provide a corroborating insight to this perception of the inclination of the market as follows:

Since we are not a leading publisher in the market, we have adopted the approach of publishing books with entertainment themes (e.g. novels) and by publishing the widely-demanded books, we gain a higher level of sales (3,8 E4).

Since customers seek the power to choose, attempts to personalize the goods and reducing the final price is another strategy adopted by these firms in order to gain higher profits. As one of the managers said:

Since our company lacks the power to produce at a large scale, we produce the personalized products targeting the special customers (11E4).

This company tried to concentrate less on the products produced by their big counterparts (focusing on niche market). A manager added that:

We have concentrated on the overlooked issues. For instance, we have invested in the children health hints and defined kindergartens as the target market (8E6).

The production aspect deals with the goods and services directly produced by the company. In the interviews it was revealed that the big companies try to produce and supply the market with their own previously published books. This is why majority of small businesses reproduce their goods in new forms instead of producing new goods. For example, some game producers turn the best seller stories

into games instead of writing new stories. In this way they pay nothing for the content development. Moreover, nowadays they rely on the social networks in order to find stories in an easier way. That is, the social networks members do this for them.

Indeed, the small firms improve the quality of their products with user content generated. This enables them to compete in a market dominated by the bigger companies. An interviewee pointed out that they select and reproduce their new products from the “tried-and-true goods” whose ability to attract the audience is proven. He added that:

Our coworkers in the small media business avoid risky situations since the small companies as ours are unable to tolerate the risks or the lack of acceptance on the part of the customers. Given this, we invest on the products successfully merchandised by the big companies and reenter it into the market with a certain amount of added value (12 E7).

Meanwhile, the big companies undertake the risk of not being welcomed by the customers. One of the managers mentioned that:

Our company has its special customers (10 E6).

A parallel trend revealed during the interviews was that with the relative decrease of income from advertisement, in the small media firms, companies employ new media frameworks for offering their products. In this way they can take over markets controlled by the big companies. However, this heavily depends on the type of the product, whether it is considered an entertainment product or it is recognized as an educational product. A software company manager asserted that:

The products cannot survive in the face of big companies in the market unless they are produced based on the real market need. In our company top-quality production and supply technology is prioritized. So, the cutting-edge technology is applied above and beyond the big companies. We have charged a group of employees to search about production and supply technology (7, 3, 14 E9).

Currently a prominent amount of content within the new platform are produced by users. So there is no need for the content development staff. Many small firms employ such techniques. This was also evident in the interviews:

We use the ideas produced first by the users. This is easily acceptable on the Telegram channels. This method is highly economical to our company. Also the content is sometimes raw, it easily applicable by means of added value (11, 5 E10).

Given the reduction in the content produced by media companies over the last few years, the supply issue is of importance to the companies. Companies producing TV programs are among the examples of companies that have moved from being producers to becoming distributors. Such a trend is evident in other types of traditional media including newspapers companies, which have replaced the journalist with the online news agencies; thereby adopting the low-cost content development and supply approach by means of the citizen-journalist model. While the big companies rarely adopt such strategies, the small companies, especially those employing the social media framework have successful experiences in this area of user-produced contents. In this regard an interviewee added that (Table 2):

Table 2 Primary codes, concepts, categories and derived aspects

Frequency	Number of repetition in code	Concept	Category	Research's aspects
10	4,2 E2, 3 E5, . . ., 11 E3	Producing the products that large firms aren't interested on investing in	Focusing on niche markets	Productions: Movement from production of the new products to the reproduction of products
6	5,7 E4, 8 E7, . . ., 9 E6,13	Participating in markets with low rate of interest		
9	9 E10,, 15 E3,16	Focusing on markets which has been ignored by large companies		
7	14, 17 E7,, 4,7 E18	Using innovation advantage to establish new markets		
6	11,13 E5, . . . , 19 E17	Winning customer confidence in emerging markets		
8	2,15 E19, . . . , 1, 5 E11	Maximizing investment on early return products		
5	20, 22 E 1, . . . , 2,21 E9	Keep producing based on continuous monitoring of customer's taste		
9	5,11 E10,, 14 E9, 1	Imitating f large companies in the production of products		
8	13 E8,, 13,17 E15	Reproduction of previous products in a new form		
7	22, 26 E10, . . . , 1,3,7 E1	Innovation in delivering products rather than innovating in content		
6	5,6 E4, . . . , 3,6 E9	Template design according to customer's requirement		
4	9,15 E2, . . . , 12 E18	Investing in more efficient manufacturing technology		
5	8,9 E13, . . . , 6,21 E6	Adding value to previous products		
6	12,8 E9, . . . , 3 E4	Recognizing successful products in the market		
8	3,8 E4, . . . , 4,8,12 E7	Choosing entertaining functions as the main function of the product	Entertainment function	
10	13 E3, . . . , 1,2 E4	Delivering educational products in an entertaining form		

(continued)

Table 2 (continued)

Frequency	Number of repetition in code	Concept	Category	Research's aspects		
9	11,9 E8, . . . , 24 E19	Monitoring customers' behavior and taste				
9	7,8 E16, . . . , 2 E14	Investing in entertainment products				
11	21 E12, , 13 E1	Focusing on entertaining functions as a company's resource of innovation				
5	11,4 E4, . . . , 5,8 E3	Create the right mechanism for product ordering	Personalization			
6	9,2 E6, , 2 E15,18	Necessity of entering small and customer's favorite markets				
8	5,8 E9, . . . , 6,11 E5	Production at low circulation				
9	17 E8, , 2,3,5 E17	Economizing the production by focusing on customer's demands				
6	25 E16, , 15 E6	Attract and maintain customer by product customization				
5	28 E1, . . . , 13 E10	Changing the approach from mass production to ordering				
4	3,10 E8, . . . , 5 E9	Commitment to the audiences' taste				
10	16,19 E3, . . . , 6 E7	Establishing market supervising mechanisms to monitor customers				
5	2,5 E7, . . . , 5 E11	Not focusing on high-risk products			New product risk taking avoidance	
6	9,14 E4, . . . , 3 E7	Following large firms' production process				
5	24 E10, . . . , 19 E17	Modeling successful products				
10	11,4 E8, , 6 E15	Not entering to costly markets				
8	12 E19, . . . , 3 E13	Taking less risk in production				
7	8 E3, , 6 E5	Focusing on small and low risk markets				

Our company has ceased the production. Instead we have adopted the reproduction strategy. This has enabled us to base our investment on attaining new technologies. Through this we can supply the products at a lower final cost in comparison with the big companies. This is the key to our survival in the market (15, 10 E12).

3.2 Market Structure: Movement from the Monopoly Towards Competitiveness Structure

The market aspect of competitiveness explains the market in which the media companies interact with other players. This includes the competitors and customers. Moreover, this aspect explores the size and nature of customer's demand and payment tendency by answering the questions: who wants to pay how much? In what market structure is the company active? Answers to these questions can determine the level of the competitiveness of such businesses.

The small firms studied in this research, classified their potential customers on the basis of properties. Since the media products provide for the information and entertainment market, the sales management of the media products is somehow different from sales management of other products. The media sales management have to make decisions on the demand, sales and accessibility of the products. Such companies classify the customers based on their payment tendency from the highest tendency to the lowest tendency. These companies, therefore, has to treat various customers according to the needs and should provide them with goods and services. For instance a manager in a telecommunication company said:

We supply Internet packages based on the payment tendency of the customers no matter how much profit derived from selling the small packages, since our real profit lies in the quantity of customers that show interest in our products (13 E14).

An urban advertisement producer stated that:

We design our products according to customer's payment tendency. Since the structure of company is a small one, we can survive even with the meager benefit margins. This is a merit enabling us to survive in the face of the big advertisement companies (7, 15 E14).

The business model in such companies explains the competitive environment of the organizations. Thus, it is necessary to analyze the sales market besides analyzing the market mix of the existing and potential competitors. The sales in such companies cover various sectors. Contrary to other products, media products should be simultaneously present in the triple markets of either audience, advertisement companies or big data. Therefore, the media companies earn revenues from all three markets. However, the small companies try to earn revenues differently from the big counterparts. For example, in the advertisement market, the manager of an advertisement company under study were of the view that:

Since the big companies have dominated the advertisement market of the best-sellers, our concentration is on advertisement with lower costs for the advertisers (3 E5).

As another instance, the manager of an advertisement commercials company said that:

Our company has special offers for those advertisers who show a low tendency to advertise their products. Our marketer personally reach out for them and convince them to place orders (10 E16).

The structure of the market in which the companies are active plays a vital role in the molding the business model of the companies. Indeed, it is the market structure that determines the mode a company enters the market. A market enjoying the 'perfect competition' structure, will accommodate numerous customers and sellers. When no company is dominating the market, market entry barriers are few and there will be price competition. In such circumstances, the market enjoys perfect competition structure. The advertising and documentary companies, interviewed, generally maintained that they were competing in a competitive market. The manager of one the advertisement companies stated that:

Since the customers have grown intelligent and seek the highest qualities at the lowest prices, the market has grown highly competitive. Therefore, the big brand holding companies fail to maintain the customers at any prices. This means that they are forced to give in to market prices, which is not economical due to the big structure of such companies. As a result, customers tend to choose the smaller companies such as ours which can provide the highest quality at the lowest prices (13, 10 E17).

In monopolistic market, only one or a few producers dominate the whole market. In such markets, the products have no substitutes and customers purchase the products from a single company or avoid shopping. Such companies set the prices themselves and the market entry barrier is high. Most book and software producers expressed that they were competing in a monopolistic market dominated with a limited number of such companies. Therefore, they are forced to follow the pricing set by such dominant companies.

In the monopolistic market, small firms adopt alternative strategies to bail out from such dominant structure. A prominent feature of the media products, both traditional and modern, is the existence of the network effects whose effects goes beyond the limits of personal use. The network effect occurs when the increase in the number of the users leads into an increase in the value of the goods or products. A single telephone set has almost no value before being connected to another telephone set. As the number of the connected phones increases its value goes up since more families can be connected to each other (Shapiro and Varian 1999). In a market with network effect, a company with insufficient financial resources can expand its own market share and strengthen its position. On the other hand, in the same market, a company with few weaknesses (e.g. high prices, low quality, poor communication with the customer, etc.) will lose its share and will be forced to leave the market. This was corroborated by one of our respondents, a financial manager of a newspaper. He asserted that:

Our newspaper which issues controversial reports has gotten closer to the public concerns. In this way it has grown more influential and has managed to attract more audiences. Although it is not a leading or a best-seller, our readers advertise us to each other and exchange views on us in the virtual networks (7 E18).

On the other hand, a customer shows interest in a product because of the valuable services associated with the product that is not associated with similar products available in the market. An important valuable offer is the distribution method. Distribution deals with the mode of customers' access to the goods and services. Given this an interviewee maintained that (Table 3):

Online sales mechanism has facilitated the communications between the company and the customers. Moreover, the customer's loyalty to the product really matters. To this end, our company has grown so powerful that the customer has no other way than purchasing the goods and services from us. Technology which has provided a suitable context for an information technology entailing the customers to suppliers gives us the hope to make customer loyal for longer stretches of time (11, 16 E19).

3.3 Financial Resources: Revenue Achieved by Selling and Foreign Investment

This aspect of the competitiveness of small firms, operating in large and established market, presents an opportunity for enhancing the financial resources of these businesses. It also presents possible opportunities for running new businesses. Financial models do provide explanations on resources which provides for the company's assets. These models also deal with the recognition of the way and the source that business revenue is attained. Furthermore, it deals with problems such as the optimum volume of production, the appropriate marginal profitability and price flexibility. To avoid any misconception, it should be mentioned that revenue related issues results in revenue generation. A business model refers first to value creation, while the revenue generation model focuses on value allocation (Zott and Amit 2010).

There was not much difference between the companies, in terms of financial resources. Companies seeking traditional markets were funded by personal and government stakeholders. Printing companies (books, magazines, newspapers) usually have the same characteristics, which is that they have created a fairly reliable and well-funded financial resources for their business. One of the managers claimed (Table 4):

Our company is financed by two sales and investment sectors from the governmental and semi-governmental sectors, the first of which has been the secondary, and the second is the main route for us over the years, and we usually have the support of these institutions for the publication of the book (2 E7).

There are also some small firms that are looking for new media markets and have been funded by venturesome capitalists who often seek to run a media startup. These startups are initially established by venture capitals and then acquired by larger media companies. The popularity of media companies among investors is a sign of the growth potential in foreign investment in this industry. The sentences below is quoted from an interviewee. The interviewee narrates the experience of his

Table 3 Primary codes, concepts, categories and derived aspects

Frequency	Number of repetition in code	Concept	Category	Research's aspects	
8	7 E18, 3 E6, . . . , 12 E5	Working in markets which includes many manufacturers	Concentration on competitive markets	Market structure: movement from the monopoly towards competitiveness structure	
9	5 E5, 8 E9, . . . , 9 E12	Entering markets with low entry barriers			
4	9 E11, . . . , 15 E4,17	Entering markets with low exiting barriers			
5	3 E5, . . . , 4,9 E19	Creating markets in which customers determines the price			
9	11,15 E6, . . . , 19 E5	Wining customer's trust in competitive markets			
10	2,11E18, . . . , 11, 5 E19	Investing in markets without a strong competitor			
12	21E1, . . . , 2,21 E10	Focusing on competition with other small and novice businesses			
6	16 E5, . . . , 14 E8, 12	Avoid entering established markets			Avoidance from monopoly markets
7	11 E11, . . . , 13,18 E16	Avoid entering high capital markets			
9	22, 27 E15, . . . , 2,4,8 E1	Creating new markets for product sales			
8	5,16 E5, . . . , 3,6 E10	Taking advantages when competing with large companies			
8	8,15 E9, . . . , 12 E2	Advertising to attract customers from old markets to emerging ones			
10	8,19 E19, . . . , 9,21 E15	Producing products which are different from established markets			

(continued)

Table 3 (continued)

Frequency	Number of repetition in code	Concept	Category	Research's aspects
5	11,8 E7,..., 3 E1	Competition in pricing		
6	11 E2, ... , 4,11,12 E8	Investing in new technology	Technology employment to render market further competitive	
10	13 E7.. ... , 1,2 E5	Using technology to cut the production's cost		
4	11,14, E13,... , 25 E13	Delivering products in new formats according to the customer's taste		
5	7,15 E17, ... , 2 E10	Monitoring and using technologies		
5	21 E19, ... , 15 E1	Facilitating customer relationship using technology		
6	11,16 E19,... , 5,1 E7	Create the right mechanisms to bring loyalty into market	Customer loyalty	
11	5,2 E11,... , 8 E5,18	Producing chain and interconnected products		
9	5,11 E13.. ... , 6,2 E4	Producing supplement products		
8	18 E5,... , 2,3,11 E19	Change approach from production to service delivery		
8	15,7 E14,... , 15 E15	Attract and maintain customer by customization		
6	13 E14, ... , 10 E16	Inexpensive and high quality production		
7	30,12 E6,... , 5 E10	Audience's taste-locking		
8	10,11 E3,... , 6 E9	Market surveillance in order to monitor customer		

Table 4 Primary codes, concepts, categories and derived aspects

Frequency	Number of repetition in code	Concept	Category	Research's aspects
7	12 E4, 11 E6, 4, . . . , 10 E16	Media start-ups with primary capital	Risk-taking investors	Financial resources: from sales revenue to attracting foreign investment
7	15 E6, 8 E10, . . . , 7 E4	Accepting primary risk of investment		
8	2,5 E6, . . . , 17 E4	Using entrepreneurs' financial resources		
9	18 E9, . . . , 4,8 E18	Conquer more market share in order to attract capital		
6	10,12,17 E7, . . . , 2 E7	Not relying on government subsidies		
5	1,12E19, . . . , 2, 5 E15	Using the stock mechanism		
5	23E 5, . . . , 22 E16	convincing investors about the new markets desired by the company		
6	17 E15, . . . , 16 E9, 14	Focusing on advertisements' revenue	Concentration on advertisement revenues	
10	11 E13, . . . , 13,18 E15	Providing low-cost advertisements to companies		
9	22 E16, . . . , 2,4,9 E2	Marketing for ordering advertisement		
8	5,10 E1, . . . , 3,9 E12	Providing advertising services depending on the company's willingness to pay		
11	8,15 E1, . . . , 18 E2	Designing new advertisement's templates		
5	19 E18, . . . , 1,21 E19	Designing advertisements containing entertaining themes		
7	15,8 E17, . . . , 3 E11	Competition in pricing of advertisement		
8	11 E1, . . . , 11,12 E18	Producing inexpensive and high quality products	Cost leadership	
6	13 E8, . . . , 1,2 E7	Focusing on sales rather than focusing on profit		
8	11,19, E14, . . . , 9 E1	The cheapest prices by using the agile organizational structure		
10	7,15 E3, . . . , 2 E6	Using technology for low cost production		
5	22 E6, . . . , 18 E1	Markets' permanent change in order to gain more benefits in cost leadership		

company. The company initially was a media startup that used to advertise its animations for free on the Internet.

After attracting audiences by our company's animations, many investors declared their intention to invest in our company, and today our company is rapidly attracting capital and growing (12 E4).

Revenue sources can be divided into direct and indirect categories. It can also be recognized by identifying the markets in which media companies can produce and make revenues. Direct earnings are usually earned from media users, while indirect revenues are achieved from other companies (advertising) or government subsidies. One of the interviewees divided the markets generating revenue for their company into three categories: content market, user market and advertising market. He believed that:

In the contents market, we sell the content produced by the company; in the users market, we sell the users to advertisers and in the advertisement market, we get the advertising projects and outsource them to other companies, and these are the way that we make money. We have made much more money by selling contents and that is because we are less trustworthy than large companies, so we have managed to seize parts of the advertising market by producing inexpensive advertisements for companies (15, 17 E8).

In media firms such as books, cinema and other traditional media outlets, firms used to benefit from the direct revenue method, in which they earn money by selling products to the audience.

However, a fairly limited number of companies can benefit from direct social media revenue. But some companies chose this as a secondary route towards making money. One of the managers of these companies claimed:

The performance of the mentioned model depends on the number of users, although there are a lot of users whose willingness to pay is low, but if they are ignored, the value of our company's network will be reduced because they are valuable to advertisers. The amount of damage that users bring to the stakeholders and shareholders by not paying their fees, will be compensated by the amount of money received from advertiser, and so we can make money in this way (11, 14, 15 E15).

However, most firms that use social media for delivering their products are faced with big and powerful competitors that offer similar services, more or less. But the problem is that there is less willingness to pay for services acquired online. So advertising revenue remains the single and most important source of revenue for these organizations. In general, it can be concluded that companies whose main locus of activity is within the social media, rely more on advertising revenues than other companies. One of the interviewees said:

It is hard to price the products in media companies. There is a low willingness to pay before buying, because the quality and performance of a product cannot be evaluated. On the other hand, the willingness to pay remains low even after evaluating the product, and that is because the customer has experienced the product and is reluctant to use it again. So the pricing is related to the company's reputation. As a result, we have run customer feedback system in order to reach reputation in market (16, 18 E7).

Most of the media firms are affiliated with advertising revenue, which makes them to operate on a Dual markets. That means that, besides meeting customers' needs, they have to advertise the advertisers' products to the audiences. Ideally, these companies try to make customer-specific offers based on the market's needs in order to meet the needs of the audience aside increasing their willingness to pay. In this market, most of the revenue is generated by those small companies which are supplied by advertisers. By keeping in touch with customers, they make themselves attractive to advertisers. Hence, the business flourishes even though the financial resources are hard to imitate. The supply model of the companies studied is based on their sale and production competencies and they are among the successful companies in their business. One of the managers claimed:

There was no investor willing to invest in the production of new products until we increased our market's share up to two times more than the amount at the beginning of the company (5,2 R6).

3.4 Regulation: From Grounded Rules to Chaos and Lawless Situations

Two situations have been emerged from this theme. The first situation can be found in the print media sector of the media industry. This sector includes book, magazine, newspaper, etc. Here tough rules about content are established. Interviewees were unsatisfied with the plurality of rules and instructions of this sector. These rules have limited the companies' freedom towards producing new products.

Nevertheless, this part of the industry will be damaged by the lack of established rules if new markets emerge from technological changes (for example, the production of electronic books, etc.). The interviewees referred to the copyright law, which doesn't have the essential power to protect new products. One of the managers of these companies narrated their company's experience:

Last year, our product, which we dedicated three months in the design and production, was easily on the internet for free, so the company could not sell it then the market, this shows that law is incapable of protecting these media products (1, 3 E4).

The second position is part of the industry, which is essentially provisioned by emerging new markets associated with the changes in the taste of the audiences. In this sector of the industry (computer games, software, advertising, etc.) the rules are either insufficient or at a trial and error stage, which means they have not yet been established. One of the managers of video games companies claimed:

Video games' companies like us, are practically not supported by the law, because we have to spend about 10 to 20 thousand dollars for a video game while we have to sell it for 3 to 5 dollars in order to prevent the customers from buying the foreign version. If the rules were protecting us and it was not easy to get foreign high quality version of the video games for free, the company would not be harmed, and this sector of the industry would be flourished (4, 11, 13 E16).

This conflict was also clear in other companies. One of the interviewees complained about the strict laws for obtaining book's printing permission while saying:

After publishing the book, they are easily offset and sold in bookstores and law doesn't prevent this. It is necessary to review and establish the regulations and laws which protect small media businesses and stabilize the industry (12, 18 E12).

When it comes to rules, small companies were more on the advantage than large corporations, and they admitted that they were less likely to suffer from this chaos. For large companies because of the lack of laws to restrain their products from being copied during production, their products could be copied in the market and that will result in the huge costs they paid for production being a waste. While small companies rebuild products that, obviously, were less likely to suffer in this regard. On the other hand, small companies, according to the customer's request, usually invest in low-cost and low circulation products and had found their profits in this part of the market. So they were less likely to be damaged by lack of established rules. One of the interviewees told about this (Table 5):

We don't believe in expensive advertisement, because no one welcomes it and it is possible that the expensive parts can be imitated by other companies, so we try to respond to the customers' low cost requests and find our benefits in creating inexpensive advertisements for start-up businesses (7,9 E8).

4 Conclusion

The media market is witnessing the emergence of small media firms. These firms have managed to grasp a sizable share of the global market. In competing with big companies, not only have the small firms managed to survive, but they have also have outperformed their big counterparts. Therefore, their concentration has raised their position in the industry. This chapter is an attempt to understand a how small media firms fare when faced with disruptive changes. The analysis of the interviews conducted for this research revealed a series of practical approaches adopted by these small media firms. These practical approaches were grouped into four categories.

Their first category discovered in the course of interview was the production. With regards towards production, managers of this small firms concentrate on niche markets overlooked by the big companies in the entertainment market. Furthermore, these companies model themselves after the big companies and reproduce products of big companies that proved to be successful and widely received in the market. This strategy enables the small firms to operate within the market. They gun for lower profit margins, lower risks and high certainty.

The second category is the market structure. In this regard, the small firms keep their distance from markets that are monopolistic, dominated by their big counterparts. Instead, they search for alternative markets with a competitive structure.

Table 5 Primary codes, concepts, categories and derived aspects

Frequency	Number of repetition in code	Concept	Category	Research's aspects
10	9 E13, 1 E2, . . . , 1 E10	Avoids producing products that can be easily imitated	Avoiding from risky markets with high capital	Regulation: From grounded rules to chaos and lawless situations
9	1,3 E4, . . . , 6 E9	Producing products which are supported by copy-right		
6	4,11,13 E16, . . . , 5 E4	Entering legitimate markets		
8	11 E19, . . . , 14 E18	Producing inimitable products		
5	12,17 E5, . . . , 12 E6	Using technology to protect imitable products		
6	1, 2E9, . . . , 2, 6 E19	Follow ethical warnings on products		
9	20E 15, . . . , 21 E11	Low investment while entering the market		
11	15 E1, . . . , 16 E2, 15	imitate large firms by entering illegitimate markets	Following the big markets in interaction with the regulations	
12	11 E19, . . . , 13,18 E2	Reproducing the products of other companies		
5	2E16, . . . , 2,7,9 E4	Punctual entering and exit from the market		
5	5,10 E5, . . . , 3,20 E12	Interaction with legislative institutes		
6	8,19E7, . . . , 18 E2	Alliance with other companies to protect products		
5	1 E18, . . . , 1,11 E16	Designing strategies to cope with copied versions of products		
7	15,9 E11, . . . , 3 E2	Producing innovative products with low rate of circulation		
7	9 E1, . . . , 12 E18	Producing new and cheap products	Entering the small markets with established regulations	
5	7,9 E8, . . . , 1,10 E7	Entering markets with low interest margins		
4	11,13, E12, . . . , 5 E3	Choosing markets in which rules are not yet clear even for large companies		
5	7,14 E9, . . . , 2 E5	Using legal guilty in producing best-selling products		
5	1,4 E7, . . . , 15 E11	Investing in emerging parts of the industry with low rate of competition		

The third category is the financial resources of the company. The small media companies address this concern in three different ways. They may use their entrepreneurship investments or return to the inexpensive advertisement market. Meanwhile they adopt the cost leadership strategy as their focal strategy in the supplying the company's financial resources.

The last, but not the least, concern of the media small firms is how to interact with laws and regulations. Small companies suffer from the lack of clear established rules in the same way as the big ones. Meanwhile, the competitive merit of small media firms, in the face of their bigger counterparts, is that due to their activity in the markets with small capital, small companies suffer less prospective losses. This is a strong reason why these firms are reluctant to enter the markets with huge capital and in many cases avoid them. Instead, they prefer the production of low-risk products with low-profit incentive but in durable markets.

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Part VII
Strategic Issues in Organizations

Rapid Internationalization Emerging Markets Multinationals from Latin America: The Case of the AJE Group



Veronica Duque-Ruiz, Juan Felipe Zuluaga,
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Abstract This study provides an understanding of the internationalization processes of emerging markets multinationals (EMMNEs), and how they are becoming more important and relevant, as their role on the global market is taking higher importance. A very interesting phenomenon worth studying, is the rapid internationalization of some of those companies. Company's history, selection of the internationalization process method, the country and company's contexts, the political environment, the market conditions, and the industry characteristics are some of the points of discussion to identify how an accelerated internalization process affects the growth of multinationals in Latin America (Multilatinas). As a case study for EMMNEs from developing countries in emerging markets, this chapter aims to describe and analyze the Peruvian AJE Group's accelerated internationalization process.

1 Introduction

Since the end of the 1990s, Emerging Market Multinational Enterprises (EMMNEs) are evolving their roles on the global market. Internationalization processes are becoming more important and relevant for Multilatinas 'multinationals of Latin American countries' (Aguilera et al. 2017; Cuervo-Carruza 2010). These firms face liabilities as many of them fail on the long term, and others achieve low levels of success. Usually it is small firms, and not big ones, that face resource constraints in terms of finance, information, management capacity, etc. (Buckley 1989). There are also external barriers such as market imperfections and regulations (Acs et al. 1997). Accordingly, internationalization for EMMNEs must be a process of extreme care and strategic planning.

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As a case study for EMMNEs from developing countries in emerging markets, this chapter aims to describe and analyze many aspects of the accelerated internationalization processes for one of the most representative beverage Latin American companies; the Peruvian AJE Group.

AJE Group is one of the largest multinational beverage companies in Latin America. Since its foundation in 1988, AJE has managed to take operations to 23 countries in Latin America, Asia and Africa. In 2016, the company was ranked 9th among Multilatinas Companies, according to the results of *América Economía* (2017). And in 2015, it was ranked 5th. Currently the company is facing difficult financial situations and managerial adjustments due to the change of leadership in their CEO position. Due to its importance in the beverage industry in the region and its accelerated but catastrophic internationalization process, AJE Group is a good example and interesting case study of internationalization of Multilatinas SMEs.

The usual strategy for businesses to enter foreign markets would only take place when they have proven successful domestically and have generated enough cash flow to expand. And this should happen by entering one market at a time, into countries that are geographically close to home. This incremental process is suggested by Johanson and Vahlne (1977), advising companies to accumulate sufficient knowledge and resources to minimize the risk of venturing into foreign markets. AJE Group however, has challenged the findings of the traditional internationalization literature (Oviatt and McDougall 1994). This new typology of firms has been labeled many names, such as ‘International New Ventures’ (Oviatt and McDougall 1994), ‘Global Startups’ (Autio et al. 2000) and ‘Born Global’.

The context within which AJE Group has developed its business model internationalization strategy, is highly relevant to understand how the company is now facing negative consequences based on those strategies. Accordingly, this chapter will describe the effects of a rapid internationalization process within different environments, by presenting a review on the country and company contexts, by defining the industry profile of some of the markets where AJE Group entered, and by providing a brief history of the company.

With the analysis of the above, as well as the evaluation of the currency situation across AJE’s internationalization timeline and the performance of their issued bonds, we have identified factors that facilitate a rapid internationalization process.

This study aims to answer the research question: how can an accelerated internationalization process affect the growth of AJE Group in the beverage industry? The chapter offers a detailed description of the company’s internationalization process, along with an analysis of why such strategies might lead to the outcomes the company is facing today. Finally, in the concluding recommendations, the previously discussed theories are going to be applied to AJE Group’s accelerated internationalization process. And there will also be an evaluation on the currency situation over AJE’s internationalization timeline, the performance of their issued bonds, and the effects on their financial statements.

In this chapter, we recognize the importance of promoting responsible economic growth benefits by leading companies, to encourage the adoption of a wider business community. Also, we highlight the difficulties that may be considered

by Multilatinas when facing economic downturns during their internationalization process. And finally, we will identify additional challenges related to the low-cost strategies and lack of cash flow.

2 Context of the Study

In this study, we will analyze the factors that lead EMMNEs like AJE Group to internationalize rapidly and successfully into foreign markets. Specifically, we want to identify the factors that facilitated its accomplishments: Did AJE Group internationalize at a perfect timing? What was the relationship between their internationalization process and the exchange rate dynamics?

2.1 The Beverage Industry

The worldwide beverage sector has specific characteristics. The report “Global Soft Drinks” by MarketLine (2016) states the dominant factors that affect the beverage industry. According to the researcher; the market size, growth rate, volume, segmentation and overall profitability can all be used to evaluate the soft drinks industry. This document shows the relevant changes and current situations in the global industry. It will give us a standing ground for the analysis of the relevance of the market changes in AJE Group’s internationalization process. With this and the Industry Profiles provided by Euromonitor (2016a, b) about some of the countries where AJE Group has operations, we will be able to describe the market context and characteristics that led the company to enter those countries and what could be done to overcome its downfall.

2.2 AJE Group: The Company

The AJE Group was founded in June 23, 1988 by the Añaños family in Ayacucho, Peru. Operations began with a carbonated beverage called Kola Real, after one of the family sons, who had beverage distribution experience in the region, identified that there was no offer of soft drinks since all the suppliers in the area had left because of the ongoing armed conflict. Their focus was to offer those beverages to people with low purchasing power. Their expansion began at a national level, taking operations to Huancayo, in 1991, Bagua, in 1993, Sullana, in 1994 and Lima, in 1997.

After 11 years, they decided to venture into the international market. The owners chose Venezuela as their first country to market their products, due to its similarity in consumer preferences and the relatively short distance between the two

countries. But it wasn't until they reached the Mexican market in 2002, when the road to their internationalization strategy was shaped to a global industry structure. Accordingly, this will be the starting point to our analysis.

The Ayacucho region in Peru was deeply distressed by the Shining Path guerrilla conflict,¹ inducing major suppliers to retreat from business. The Añaños family rapidly identified a gap and began to produce carbonated beverages using the brand "Kola Real" brand. The company focused their business model on targeting the bottom of the pyramided and distance regions which had no attention by the leading brands, who have targeted consumers with comfortable purchasing power. As it was stated in their website AJE's group to "provide high quality products to people with limited resources was key to their success" (AJE Group 2018).

Based on this low-cost premise, AJE's products were exported to their first international market which they had set their eyes on. It was in 1999, when they decided to venture into the Venezuelan market. But unlike a well-structured internalization strategy, the company based its decision on the market size, which was twice as big as the Peruvian market. This strategy led the company to capture 12% of the Venezuelan market, which was the equivalent to 30% of the Peruvian market. In 2002, AJE Group decided to enter Mexico, the biggest market in Latin America and fourth worldwide. "AJE's investment in Mexico was about USD7 million, used to construct the plant in Puebla, which later supplied to Veracruz and Acapulco". Then in 2006, AJE began its internationalization into Asia with the establishment of a production center in Thailand, followed by many other strategies in the continent.

2.3 Bonds Issuance and Currency Fluctuation

In this section, we will analyze the financial information of the firm based on Bloomberg reports and other financial experts. It will be stated to which extent its internationalization process was affected by currency fluctuation and negative situations. According to the International Capital Market Association (2013), since 2007, there is proof of an increase in corporate bonds issuance from emerging market firms and their subsidiaries, due to the lack of trust from financial institutions. Market crisis has led to the downgrading of bond ratings. The general

¹Founded in 1970 by Abimael Guzman, inspired by Peruvian Marxist Jose Carlos Mariategui. It had presence throughout the country with operations primarily in rural areas of Ayacucho, Huancavelica and Apurimac, regions with population living in extreme poverty, where the national government had no military existence. In 1992 they detonated a car bomb in Lima, where it killed 25 people, becoming the deadliest attack of this organization. The same year, Abimael Guzman was captured and 1999 Oscar Ramirez, Guzman's successor was captured as well. Followed by these events, the organization broke up into small factions, diminishing the threat against population. The small bands that remains are nowadays committed to drug trafficking.

implications of this, will be explored according to the Bank for International Settlements (2005).

3 Research Methodology

3.1 *Research Design*

We analyzed the internationalization process of the Peruvian Multilatina beverage company AJE Group, from being a small-town company into becoming a world-wide recognized multinational enterprise. Since 1988 AJE has managed to take operations to 23 countries in Latin America, Asia and Africa. We aimed to answer the question: how can an accelerated internalization process affect the growth of AJE Group in the beverage industry?

This study is built as a single explanatory case study, based on the methodological approach described by Yin (2009) and reinforced by Ghauri and Firth (2004). The first, becomes a guide to do a rigorous case study research, and to explain in details the case study's method and analysis. The former describes the case study's method in an international business context.

There are two main reasons why we decided to propose our research as a case study. First, we intend to gather evidence from many different sources and contexts as the internationalization process of AJE happened not only in Latin America, but also in other continents. Case studies are particularly functional when the phenomenon to be researched is intricate and puzzling to study outside its natural setting. The case study method is particularly well suited to international business research, where data is collected from cross-border and cross-cultural settings (Ghauri and Firth 2004). Second, to allow the investigation of a phenomenon to be investigated from a variety of viewpoints, covering a period of time, and crossing the boundaries between different factors (Ghauri 1983) to grasp various important details. Variables and concepts under research, are frequently challenging to be measure, as there are too many variables to be considered, which make experimental, survey or strictly quantitative methods inapposite to utilize (Ghauri and Firth 2004). Additionally, case study research is a very useful method to develop understanding of a business phenomenon, as it allows expanding and generalizing theories, by combining the existing theoretical knowledge with new empirical insights (Yin 1994). This is one of the objectives of this study, according to internationalization theories previously explained in the Literature Review.

A single case study will be appropriate, because we are studying the critical case of a particular behavior of a singular firm, where we want to question an established theory. It is a critical case, because it meets all the conditions necessary to confirm, challenge, or extend the theory (Ghauri and Firth 2004).

3.2 *Evidence Collection*

We adopted a single case study, as we intend to analyze the development of idiographic explanation and deep contextualization of AJE Group, instead of contrasting observations for the advancement of propositions and replication of findings in various settings (Marschan-Piekkari and Welch 2011).

To collect crucial evidence, a case study provides researchers with a configurational context and path (Given 2008). Qualitative case study also provides researchers with a deep understanding of one or few instances of the studied phenomenon (Given 2008). We compiled data from specialized business and general media articles, publicly available interviews with the founder, websites, official firm's reports, and then collected secondary data, carefully examining business records and databases such as EBSCO (a leading provider of research database, e-journals, magazine subscriptions, and eBooks), Web of Sciences (a premier research platform for information in the sciences and social sciences), Emerald (a publisher of journals in management and information services, engineering, applied science and technology), Economatica (a tool for stock market analysis), and finally Bloomberg, which delivers business and market news, data and analysis. All those databases, provided us with a solid background and context to understand of the company's events. Table 1 shows our secondary data sources for this analysis.

Using numerous sources is crucial to interpret the company's decision and its expansion process; particularly because we are not able to access financial data, such as balance sheets, profit-and-loss statements, or cash statements, as the company has a reputation of not making its annual reports public.

To see evidence from different perspectives, we cross-checked findings (Bell 2014). To ensure validation and to produce a more complete, holistic, and contextual portrait of the AJE Group Phenomenon, we validated the information we received from various sources and examined them through different angles. We checked AJE Group's performance through newspaper articles and web sites, and compared them with business records and databases. We used this triangulation, in order to reduce the likelihood of misinterpretation (Ghauri and Firth 2004).

Using a single method approach, was the key to provide us with a common structure to analyze the meaning and to make sense of all the information gathered. To minimize research constraints, we critically examined the reliability of the information and defined a research procedure, which produces similar results under constant conditions on all occasions (Bell 2014).

3.3 *Evidence Analysis*

We used the case study methodology, to understand the company's internationalization actions and managerial decisions. One of the methodology's strengths, is the likelihood of gathering as much information as possible to explain accurately what

Table 1 Data collection

Source	Year	Name of report	Description of the success	Focus for information
El Comercio, Perú (newschapter)	2017	Los Añaños regresan al frente de la multinacional AJE	Angel Añaños comes back as the CEO, after a year outside the position	Managerial
La Republica, Perú (newschapter)	2016	Grupo AJE cambia su estrategia de venta en México	A bad sales strategy in Mexico, reduces its market share (17%) in the country	Financial
Semana Económica, Perú (business magazine)	2016	Subsidiaria del Grupo AJE en riesgo de default, según Fitch	Grupo AJE's subsidiary Atic, has a default risk, due to its low liquidity and poor performance in Latin American and Asian markets	Financial
Gestión, Perú (business magazine)	2016	Javier García, de AJE: "Estamos enfocando la operación hacia una mayor rentabilidad"	Interview with AJE's financial VP	Managerial
El Comercio, Perú (newschapter)	2016	AJE: "Antes construíamos fábricas, hoy trabajamos con socios"	Interview with AJE's brand director	Managerial
Expansión, México	2016	Big Cola, el error de pensar en grande	AJE Group is changing its market strategy	Marketing
Semana Económica, Perú	2015	Grupo AJE: nuevos problemas, nuevas estrategias	Due to its financial problems, the board has announced that Juan Lizariturry will be the new CEO	Administrative
La Republica, Perú	2015	Terremoto en AJE	AJE's financial problems, due to a drop in consumption of carbonated beverages in Latin America	Financial
El Comercio, Perú	2015	El grupo AJE se expandió al mercado africano	The company opened two factories in Africa	Expansion
Gestion, Perú	2015	AJE prepara cambios al interior de la compañía	Administrative reorganization in the company	Administrative
Gestion, Perú	2015	AJE Group reportó un mejor desempeño en bebidas deportivas en el 2014	Even though company sales went up, the EBITDA had a reduction of 9%	Financial
El Comercio, Perú	2015	AJE: "Iniciamos operaciones en Egipto con una planta propia"	AJE's new factory in Egypt	Expansion
El Comercio, Perú	2014	"Big Cola ocupa tercer puesto de consumo local en Colombia"	AJE's Big Cola is ranked third in consumption in the Colombian market	Expansion

(continued)

Table 1 (continued)

Source	Year	Name of report	Description of the success	Focus for information
Bloomberg	2012	Peru's AJEcorp Plans \$300 million of Senior Unsecured Bonds	AJE plans to sell 300 million USD of bonds	Financial
Bloomberg	2011	Rabobank to Lend \$100 million to Peruvian Bottler AJE Group	Rabobank lends 100 million USD to AJE	Financial

Available Secondary data (Source: Authors' elaboration)

happened to the business from different points of view. Additionally, it brings the possibility to collect additional data at any time.

We analyzed data using the following five stages. First, we constructed a case description and explanation. Within it we identified "how" things were developing and "why" they occurred the way they did in their chronological order. Consequently, we located the different elements and variables of the company's internationalization strategy, to facilitate later, their connection to theory testing.

In the second stage of the analysis, we rearranged the data that has been collected, into more conceptual categories, rather than chronological categories. Thirdly, we proceeded by identifying the stages of the internationalization process of AJE Group, which were relevant and provided further practical information for this case study.

Table 2 and Fig. 1 compile the crucial events in AJE Group's internationalization timeline. Our purpose was to discern the actions and situations that led the company to implement a rapid internationalization strategy. With the key events of AJE Group and information on the world's economy during those events, we could identify the reasons that might lead the company to rapid internationalization.

With the analysis of this data, we started to gain understanding of AJE's organizational structure and managerial style. We then on our fourth stage, compared the company's internationalization decisions with internationalization literature and theoretical debates, while also enriching the theory with new findings. We aimed to make the linkage between the economic atmosphere in the different national contexts with theoretical frameworks that could answer why the emerging multinationals start their internationalization process and the reasons behind this managerial decision. The theoretical frameworks that we used as a base for the analysis, are the LLL paradigm and the Uppsala model. This was done following Campbell (1975) and Yin (2003) discussion about "pattern matching", where several pieces of information from one or several cases are related to prior assumptions, based on propositions resulting from the first data analysis.

On the fifth and final stage, we tried to construct and to refine a framework to understand the negative growth impacts of a rapid internationalization process in the case of AJE Group according to our initial proposals.

Table 2 Main chronological events

Year	Event	
1988	Launching of Kola Real	The Añaños family began to produce a carbonated beverage called Kola Real in Ayacucho (Peru)
1991	Expansion to other cities in Peru	They expanded to Huancayo, Bagua and Sullana
1997	Kola Real in Peru's capital, Lima	Añaños family was then able to distribute their beverage all over Peru
1999	Internationalization journey	They entered first in the Venezuelan market in 1999 and in 2000 they entered Ecuadorian market
2001	New products on their portfolio	Launched their bottled water and brand CIELO
2002	Entry to Mexico	The company used the same business model used in Peru to enter Mexico
2004	Escalate internationalization strategy	They expanded to Costa Rica in 2004, Guatemala, Nicaragua and Honduras in 2005
2005	New brand launch	Launched a new brand called PULP
2006	New brand launch/Internationalization strategy completed	Launched a new brand called SPORADE/New corporate office in Spain, began operations in Colombian in 2007, Panama in 2009, India, Vietnam and Indonesia in 2010, and Brazil in 2011
2007	New brand launch	Launched a new brand called CFRUT
2008	New brand launch	Launched a new brand called COOL TEA
2012	Issue of bonds/New brand launch	The company issued USD300 million in bonds and launched a new brand called VOLT
2013	25th anniversary	The company began operations in Bolivia and Reunion Island
2015	New CEO	Angel Añaños steps down after being 28 years in office/Juan Lizariturri is now the new CEO The company began operations in Egypt and Nigeria
2017	Angel Añaños returns as CEO	Angel Añaños is appointed again as CEO

AJE Group (Source: Authors' elaboration)

4 Findings

AJE Group operation's strategy is based on low-costs, distribution ownership and brands creation. This strategy was set by their CEO, Ángel Añaños. AJE focused to offer their beverages for people with low income and low purchasing power, providing them with quality products at a "fair" price. The Añaños family, also wanted to be involved in the distribution channel and to provide employment for as many people as possible. Therefore they didn't outsource this process. On the contrary, they designed their very own distribution process, and hired small businesses to be part of their distribution channel. Building brands was the way they expanded their business, with brands such as Cielo, Sporade and Pulp.

Although the company's strategy is not fully explained under a specific theory, we identified that the company followed specific paths. They took the soda market and its competitors by surprise, first in Peru and then in other countries. They revolutionized the industry with their low cost strategy, giving people a different

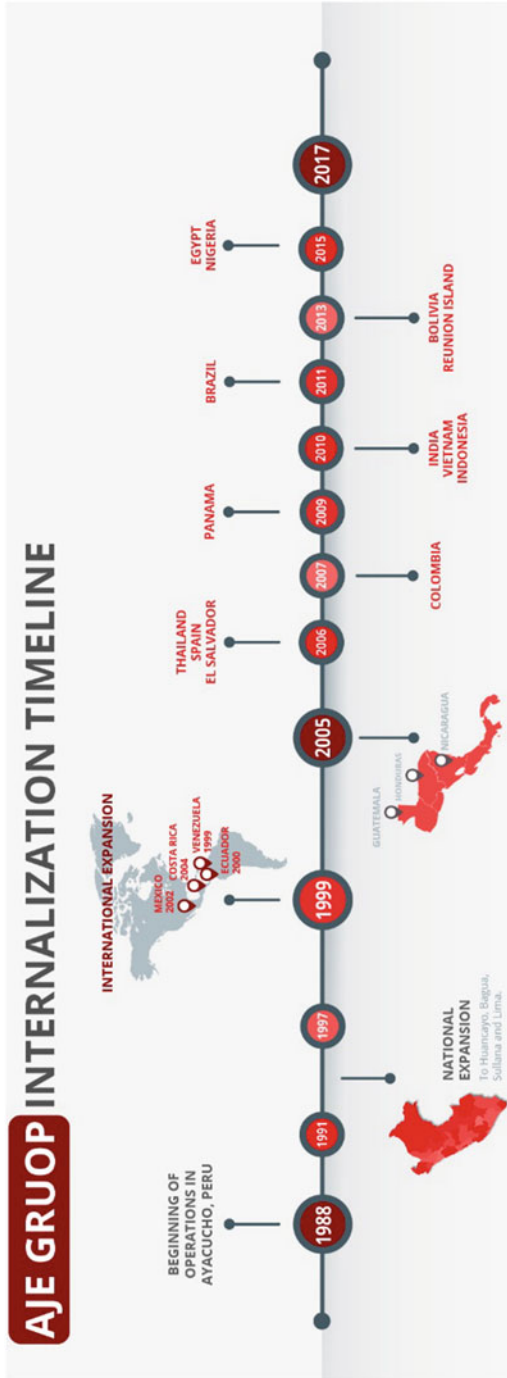


Fig. 1 AJE's Internationalization Timeline. Note: AJE Group (2006). Media: Press information. AJE Group website, Retrieved from <https://www.AJEgroup.com/media/press-information/>

Table 3 Market conditions

	India	Thailand	Mexico	Venezuela
Market growth	<p>India's soft drinks market has experienced very strong growth since 2011, with a compound annual growth rate (CAGR) of 28.5% for the period 2011–2015. The Indian government plans to roll out its new indirect tax regime under the banner of goods and services tax (GST) starting, 1 April 2017. This new tax is assessed under a four-tier rate structure, which is as follows. Carbonates, both cola carbonates and non-cola carbonates are likely to see sustained slowdowns in volume growth rates over the forecasted period. This is likely to be related to the increasing consumer preference for health and wellness products, which is set to be among the major reasons for consumer demand drifting away from carbonates</p>	<p>The government of Thailand promotes initiatives and policies to foster healthier eating, drinking and life styles tendencies. Soft drinks in Thailand are expected to record a slowdown in performance over the forecasted period, primarily due to the maturity of several categories, namely carbonates, RTD tea and energy drinks. Growth over the forecasted period will be largely supported by healthier options, such as bottled water, juice and sports drinks</p>	<p>The market has been growing moderately for the past few years. The Mexican soft drinks market grew by 4.9% in 2015 and it was expected to continue growing towards 2018. Mexico, in 2013 dominated 11.9% of the drinks and beverage industry in the entire American continent. The third largest beverage industry in the continent, after the United States (59.9%) and Brazil (16.1%) In 2013, the industry reached 67.8 billion USD in revenues</p>	<p>In 2016, the Venezuelan economy continued to suffer as the real GDP declined by 10%. This reflected the impact of heavy government intervention in the economy and lower global oil prices. In 2016, soft drinks declined by 19% in volume terms, as providers were unable to quickly replenish their stock and to maintain steady production levels</p>
Market share	<p>Coca-Cola is the leading player in the Indian soft drinks market, generating a 24.9% share of the</p>	<p>Coca-Cola has 17.6% of the market share, Boon Rawd Brewery Co owns 10% and AJE</p>	<p>Soft drinks is highly concentrated with few companies dominating big shares in each</p>	<p>Coca-Cola and PepsiCo are the leading players with 22% and 20% respectively. AJEVEN</p>

(continued)

Table 3 (continued)

	India	Thailand	Mexico	Venezuela
	market's value PepsiCo accounts for another 15.2% of the market. The other 59.9% is distributed among small players	Thai dominates 2.6% of the share	category. This has been a constant, as the major companies continue developing their distribution networks and are launching new products. Coca-Cola is the leading player with 53.8% of the market share. AJEmex CA had 1.6% of the market in 2016	CA had 2.6% of the market in 2016
Market distribution	Off-Trade form the leading distribution channel in the Indian soft drinks market, accounting for a 63% share of the total market value Convenience stores and gas stations account for 29.6% of the market	Off-Trade distribution channel accounts for 72.7% share of the total market	Off-Trade form the leading distribution channel in the Mexican soft drinks market, accounting for a 45% share of the total market value. Supermarkets and hypermarkets dominate 32.1% of this channel, when the traditional grocers control 63.3% and other stores 4.6%	Off-Trade distribution channel accounts for a 90% share of the total market
Suppliers power	Supplier power is moderate in this market. The supplier market size is extensive. There is no oligopoly		Some producers are producing their own raw materials, disposing their need for suppliers. Alternatively, suppliers can also sell their products to the market. Furthermore, suppliers can produce their own beverages through established companies, which will significantly reduce the chance of success	The domestic production of soft drinks continues to be threatened by shortages of major raw materials and inputs, which has led to the diminished availability of products and brands. Faced with declines in international oil prices. The government has limited the allocation of

(continued)

Table 3 (continued)

	India	Thailand	Mexico	Venezuela
				foreign exchange for imports. With few possibilities for improvement, this situation remained in effect throughout 2016, with the majority of soft drinks categories showing negative sales trends
New entrance and rivalry	Although it would be difficult for a new entrant to compete with existing players, it may be possible to achieve small-scale success, by focusing on a unique production method or nutritional benefits. Market niches can be exploited by new entrants. The players in this market are fairly similar. Switching costs are low: buyers can switch from one player to another without incurring costs	Existing players rely on new product innovations to stay relevant and to maintain consumer interest for their brands, and eventually boosting sales in a challenging environment in terms of volume performance. The competitive landscape of soft drinks in Thailand remains fragmented with the presence of many domestic players. Domestic soft drinks' players thrived, thanks to their competitive pricing, attractive marketing campaigns, and wide distribution networks. The economic slowdown hurt the purchasing powers of low-income consumers, several companies began to shift their focus to target the more-affluent urban consumers	There is an increasing opportunity to enter the market on a small scale. Demand for organic products, as well as artisanal craft beers, has been increasing. Rivalry has increased. Switching costs are mostly low and can boost buyer power. However, overall consumer demand forces them to stick to popular products, which reduces buyer power. The large number of market players aims to increase competition. Products are easily identified as brand loyalty is a big factor	Empresas Polar CA has continued to invest in expanding its product portfolio. Empresas Polar is by far the most prominent company supplying soft drinks to the consumer foodservice and retailing channels. The holding company reaches all cities, even the smallest towns, through the largest distribution network operating in Venezuela

(continued)

Table 3 (continued)

	India	Thailand	Mexico	Venezuela
Purchasing power parity conversion factor	Buyer power is moderate. India's 2010 PPP was 14.203. It has increased to 17.087 in 2015 (Fig. 2)	Buyer power is moderate. Thailand's 2006 PPP was 11.564. It has increased to 12.187 in 2015 (Fig. 2)	Buyer power is moderate. Mexico's 2002 PPP was 6.554. It has increased to 8.401 in 2015 (Fig. 2)	Buyer power is moderate. Venezuela's 1999 PPP was 0.225. It has increased to 5.591 in 2014 (Fig. 2)

Source: Authors' elaboration

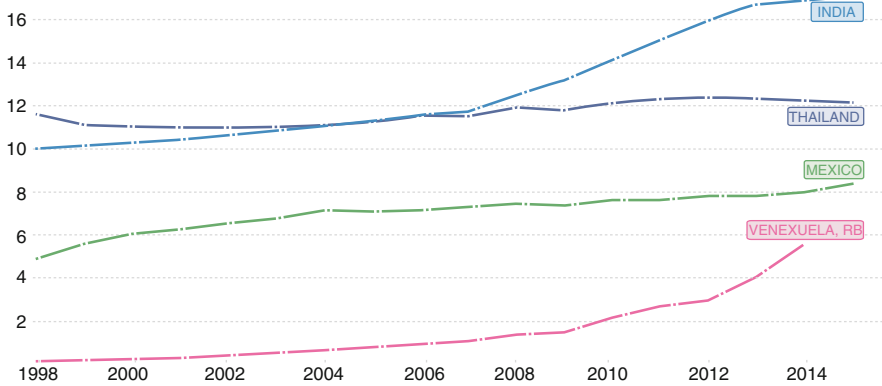


Fig. 2 Purchasing power parity conversion factor 1998–2015 (Source: Authors' elaboration)

option when purchasing soft beverages. They had the government support from home companies to go abroad, they developed confidence by dealing with the guerrilla conflict, and they had a strong vision to become one of the largest multinationals in the world by 2020.

4.1 Market Conditions

The beverage industry consists of different types of drinks available to the market, such as soft drinks, beer, ciders, other alcoholic beverages and more. The soft drinks segment refers to the sales of carbonated drinks, bottled water, functional drinks, juices and new age beverages. Carbonated soft drinks include many kinds of drinks, among them is cola, which is the most relevant product for AJE Group.

We have chosen to analyze four of the economies where AJE is nowadays operating. Those four markets are very similar in a way that all of them have a major population with low income, which is the target market of AJE.

Table 3 presents information about the market growth, market share, market distribution, supplier power, new entrance, rivalry, and purchasing power parity for four of the countries where AJE Group internationalized its operations. According to the following information, we are going to establish the common conditions of these markets. The following data in this industry profile, is based on the most recent information available for each country.

4.2 Market Growth

The soft drinks industry has experienced an increase in sales over the last years. For the analyzed countries, we can say that consumption habits and external factors are triggering the growth of this market.

If we look for instance at the political situation in Venezuela, the economy has suffered greatly due to governmental decisions. GDP in the country has declined by 10% and the situation is highly uncertain. In 2016, the soft drinks market declined by 19% in volume, as providers were unable to quickly replenish their stock and to maintain steady production levels.

In the case of Mexico, the market is still recovering from the imposed tax in 2014 on sugar drinks, which included carbonated soft drinks and juices. The market is growing at a small rate and is expected to remain in that process until 2018.

With the incursion of a new indirect tax regime under the banner of goods and services tax (GST) taking effect on the 1st of April 2017, the market is expected to stop growing. Carbonates drinks are expected slowdown in volume growth rates over that period as it reflects the increasing consumer preference for healthier products.

Thailand and India face similar situations. The government is in a strong position to continue promoting initiatives to encourage healthier eating and drinking habits. The government is planning to impose an excise tax on drinks with high sugar content. Soft drinks in Thailand are expected to record a slowdown in performance over the forecasted period, primarily due to the maturity of several categories, namely carbonates, RTD tea, and energy drinks.

The above expresses one of the biggest concerns in a company's internationalization process, as prominent political decisions and situations such as these, are going to affect the development of the company. In those four markets, it is clear that the market conditions have affected their sales and positions during their time of operation. The industry is not stable and there are many challenges ahead.

4.3 Market Share

Market share is the percentage of market distribution among companies. For all four economies, Coca-Cola is the biggest competitor, owning at least 20% of the market share in each country, although in Mexico it owns 58.3% of the market share. In all other countries, there is a big number of competitors making it hard for AJE Group to compete. In Thailand and Venezuela, AJE controls 2.6% of the market, when in Mexico this number is 1.6%. In India, there are so many competitors that AJE is still not an accountable player, as their share only accounts for less than the 1%.

4.4 Market Distribution

Market distribution refers to the channels where the products are displayed. The Off-Trade channel is when products are displayed at grocery stores, supermarkets, hypermarkets, convenience stores, gas stations, and others. The On-Trade channel is when the products are being offered in restaurants, bars, hotels, etc.

According to AJE's distribution strategy, their products are being displayed at small groceries and convenience stores. Therefore a high percentage of off-trade can be translated into more distribution channels. But when the biggest percentage of sales is happening in supermarkets and hypermarkets, the competition possibilities decreases and so the sales of AJE's products.

In India, 60% of the off-trade distribution happens in big department stores. In Mexico, supermarkets and hypermarkets control 32.1% of this channel, traditional grocers 63.3% and other stores only 4.6%. This information is not available for all countries and varies among them, so there is no common condition around the market distribution aspect.

4.5 Supplier Power

Supplier Power refers to the combination of information such as, differentiated input, switching costs, supplier size, player independence, player dispensability, oligopoly threat, quality/cost, forward integration, and substitute inputs.

In the analyzed markets, supplier's power is moderate. In India, the supplier market size is extensive, there is no oligopoly.

Some of Mexico's producers are producing their own raw materials, disposing their need for suppliers. Alternatively, suppliers can also sell their products to the market. Furthermore, suppliers can produce their own beverages, which will significantly reduce the success rate of established companies.

The domestic production of soft drinks in Venezuela continues to be threatened by shortages of major raw materials and inputs, which led to the diminished availability of products and brands. Faced with declines in international oil prices, the government has limited the allocation of foreign exchange for imports.

As the power of suppliers is moderate, there is a latent threat for AJE's products, mostly in Venezuela, where the political situation is unstable and the supplies of inputs and raw materials are being affected by it.

4.6 New Entrance and Rivalry

New entrance and rivalry include many factors such as competitor's size, storage costs, number of players, similarity of players, low fixed costs, low cost switching, lack of diversity, hardship of existence, distribution accessibility, brand weaknesses, undifferentiated products, supplier's accessibility, market growth and degree of regulation, and others.

In the Indian market, it would be difficult for a new entrant to compete with existing players in terms of reach and brand strength. It may be possible to achieve small-scale success by focusing on a unique production method or nutritional benefits. Market niches can be exploited by new entrants making more room for more competitors in the foreseeable future.

In Thailand, there is a tendency for product innovations rather than the entry of new competitors. The competitive landscape of soft drinks in Thailand is fragmented with the presence of many domestic players, which harnesses the sales of small companies like AJE Group. In recent years, Thailand's low-income consumers have faced an economic slowdown, leaving the primary buyer of AJE with less purchasing power. Accordingly, several companies have seen the need to begin shifting their focus to target the more-affluent urban consumers.

There is an increasing opportunity to enter the Mexican market on a small scale. Demand for organic products, as well as artisanal craft beers, had been increasing. Rivalry has increased as a great number of market players is aiming to increase competition, making it more difficult to survive in the market.

In Venezuela, Empresas Polar is by far the most prominent company supplying soft drinks to the consumer foodservice and retailing channels. Indeed, the holding company reaches all cities and even the smallest towns through the largest distribution network operating in Venezuela. They have continued investing in expanding its product portfolio. Rivalry is not as prominent, but Polar CA represents an almost undefeatable competitor.

There is a common factor among all four markets: the players in the market are similar, making switching costs low. This means that buyers can switch from one player to another without incurring costs. This boosts rivalry to a higher extent. The increased number of competitors in most of the markets, and the low cost of switching products, left AJE in an unstable position in those markets, as they do not own more than the 2.6%, and they are not a traditional brand.

4.7 *Purchasing Power Parity Conversion Factor*

From data collected by the World Bank we can say that the Buyer Power in India increased 20.3% in 5 years of operations. In Thailand the purchasing power parities (PPPs) increased by 5.3% from 2006 to 2015. An increase of 28.18% was seen in Mexico's 'PPP' in 13 years of operations. And for Venezuela the 'PPP' in 2014 was almost 24 times higher than in 1999.

We can observe in (Fig. 2) the behavior of the 'PPP' in the four economies analyzed. It has been constantly increasing, and it is now higher than the 'PPP' when AJE Group entered the market. This relates to the increasing power of buyers to acquire market goods, soft drinks, as well as other types of drinks. When there is an increase in people's capacity to buy, people's behaviors will change as they will begin to acquire goods that they weren't able to acquire before. AJE's market strategy is to target low income sectors of the population. Which means that AJE's products will no longer be the primary choice for buyers, because these buyers are going to prefer more expensive ones. The increasing in the 'PPP' of the countries can negatively impact the group's sales.

5 AJE's Internationalization Process According to Different Theoretical Frameworks

5.1 *Uppsala Model of Non-sequential Internationalization*

According to the Non-Sequential Theory of Internationalization Process, firms do not follow the traditional stages pattern in their internationalization process. This is a sharp contrast to the sequential model of internationalization. Such firms have been termed 'born global' by Mort and Weerawardena (2006), Knight and Cavusgil (1996) and Madsen and Servais (1997). The term 'born global' refers to companies that aim to a rapid international growth from the inception on in their lives. Companies that implement a global strategy from their beginning (Oviatt and McDougall 1994). One of the major characteristics of this so called 'born global', is that in their choice of international market entry, the majority of the firms ignored psychic close markets, and they may also avoid using gradual internationalization.

AJE's market selection for its international expansion was based on selecting countries that are close in psychic distance, like for example Venezuela, Ecuador, Mexico and Costa Rica, in order to improve managerial learning and decision making to minimize risk when entering into more distant psychic markets. They usually moved one stage to another, from the simplest form, export, to manufacturing abroad. This process combines getting experience and knowledge and increasing resource commitment to a foreign market.

It is a fact that AJE avoided using a gradual internationalization process when going abroad. They didn't choose the entry mode with less marginal risks. They

chose to begin operations directly with production plants. It is also true that AJE's internationalization process was being accelerated, since the beginning of their operations in Venezuela in 1999. Now they are located in 23 countries in Latin America, Asia and Africa, owning 21 plants in 11 of those countries.

Historically, 'born global' firms often achieve success through fast access to the market as their products undergo continuous innovation and improvement. They are dependent on speed offered by technological developments. In the case of AJE, their product is not susceptible to improvement or innovation, it is mostly to reduce costs of production and consequently lower costs for consumers.

According to Mathews (2006), the considerations that apply to international expansion in the pursuit of resources and new customers, are quite different from those that apply to the expansion designed to exploit existing resources. MNCs such as AJE Group, are driven by international expansion to pursue resources such as new customers.

AJE has been focusing its strategy in key markets around the world. For the company, those markets are fundamental to continue its internationalization strategy. However, if those markets don't respond, AJE's cash flow will be directly affected.

6 Rapid Internationalization Process

6.1 Venezuela

Successful experiences in Peru derived the ability of AJE Group to participate in the Business Network of the soft drinks industry. This network knowledge led to the commitment of internationalization to similar countries such as Ecuador and Venezuela in 1999, countries where the local soft drinks industry was not strong enough to build entrance barriers.

Through steady commitment to maintain operations in those countries, AJE Group has been able to stay in Venezuela, dealing with the country's risk, and adapting operations to new opportunities. Despite the nationalization of various industries, AJE Group has managed to remain, through the FDI in Venezuela and through relationship building with the government.

- Knowledge of the country: In some ways, Venezuela is a country like Peru. Risk awareness in Peru was dominated by the Añãños family since early 1980s. Violence issues at that time, such as the Sendero Luminoso Guerrilla,² was a

²The Peruvian guerrilla *Sendero Luminoso*, or Shining Path was created in 1980 as a armed insurgency Maoist group against the Peruvian state. The armed conflict with Shining Path had deep effects in the economy, politics and society in Peru. Shining Path's tactics and strategies included criticalgeographical elements in the movement's efforts to overthrow the successive democratic government. Beginning in the mid-1960s the Shining Path established a vast network of supporters

leverage for the family to gain market share. This enabled AJE Group to operate in countries with similar risk.

- Knowledge of the operation: In its home country, Peru, AJE Group acquired experience and knowledge regarding the soft drinks industry. This knowledge is transversal and applicable to the international consumer. AJE Group focuses on delivering similar products to the Venezuelan market.
- Knowledge of competitors: constant rivalry with multinationals such as Coca-Cola and Pepsi-co yielded special competition knowledge that allowed AJE Group to take advantage of markets already developed by competitors and the needs created by them.
- Latin American customer Knowledge: Being a Peruvian company, AJE Group knows the tastes and needs of the base of the pyramid consumers in their country, which in a globalized world could be similar to the likes of the rest of the countries in Latin-America.
- Marketing and distribution strategy knowledge: the knowledge of the Latin American market facilitated AJE Group to acquire relevant knowledge in order to successfully market their portfolio.

Regarding AJEVEN operations, latest news show evidence of difficulties operating in the bottling plant in Venezuela, mainly due to shortages in raw materials, which reflected in production shutdown of 9 of the 11 productions lines. This is basically due to the difficulties in logistics on imports and currency instability. However, it is very likely that the knowledge acquired by the company in these years of the revolution, about the economic and institutional management of Venezuela will make AJE Group maintain its market position and lead the soft drinks industry once the Venezuela economy becomes stable again.

Political instability has hit AJE's sales harder in the country, its volume sales has been down 38% from 2010 to 2016. The economic turmoil has not only affected AJE, but also all major beverage companies situated in the country. Restrictions in foreign exchange and lack of inputs had a direct impact in AJE's market volume, decreasing from 5 to 3%.

6.2 *Mexico*

Mexico is AJE's biggest market. After the tax on sugar-sweetened beverages, which came into force in 2014, company's sales took a hit, the industry was not able to recover until 2016, where marketing and pricing strategies were key to the recovery of the sector.

AJE implemented a new distribution strategy, focusing primarily on retail stores, rather than small stores. This decision made them lose up to 20% of the market share.

and sympathizers in the rural areas of the southern Andean departments of Ayacucho and Apurímac.

The decrease in sales and the legal battle against Coca-Cola for monopolistic practices, led the company to lay off employees and to close many distribution centers.

To recover, the company is relaunching many of its products with new packaging and reformulating Big Cola. It is also increasing its focus on middle income consumers. With the stagnation of the Sodas and juices in Mexico, AJE's water brand Cielo, will be key to the company's growth strategy in the country.

6.3 Thailand

AJE has experienced the biggest market failure in Thailand, even though it has been growing all over Asia. Market share fell by 32% since 2010, due to intensified competition of Coca-Cola and local producer 'Thai beverage PCL'. Thailand's market fragmentation has been a big obstacle to AJE's distribution model, on the contrary to Mexico, where it is more successful due to market concentration. Nowadays, the company is shifting its strategy to introduce the rest of its portfolio into the Thai market, so it can recover the market share it has lost in recent years.

6.3.1 Linkage, Leverage, and Learning (LLL)

The linkage, leverage, and learning (LLL) framework is a variation applied to EMMNEs of the resource-based view (RBV) (Hamel and Prahalad 1993). Mathews (2006) proposes that firms from the developing world are becoming players in the global economy and have lessons to teach in the strategies they have adopted. In this framework, the focus is EMMNEs' strategic choices (linkage, leverage, and learning) which is more suitable than a timeless framework such as Ownership, Location, and Internalization. This hypothesis is developed in his article Dragon multinationals: New players in twenty-first century globalization. In this framework EMMNEs are latecomers to the global business system, and therefore could be applied to AJE Group. Mathews contends in contrast to established MNEs, which seek to take advantage their existing competitive advantages to international expansion, EMMNEs internationalize to acquire new competitive advantages, by gaining intangible resources (such as technology, brand power and management expertise).

As EMMNEs are based on the theoretical framework of LLL, we might imply that AJE Group took Venezuela as a learning ground for venturing in Mexico, which during that time was the fourth biggest market of the world in soda consumption. But despite the political and economic climate in Venezuela, they didn't leave the country, as they consider it one of the most important markets for the company. Based on that premise, we will take a deeper look on that market and evaluate the possible reasons for their decision to continue doing business there, even though most of the multinationals that were present there are leaving.

AJE Group is not an exception, the company took the soda market and its competitors by surprise. They revolutionized the industry with their low cost

strategy, which they not only apply to their products, but also used as the model to internationalize and overcome entry barriers.

In this part of the analysis we will validate the LLL framework into the company's internalization process, and evaluate three factors of this theory, by applying it to AJE's strategy and assess the effects of their known decisions. We will test whether the LLL strategy played against or in favor of their business model, how the company coped with the economic changes in the markets they are in, and how the future looks for them.

AJE Group focused on the advantage of exploiting a market that has not been exploited by the major players of the soda industry in the world.

AJE Group's distribution model was specially developed for the specific needs of emerging markets. Ninety-two percent of AJE Group's sales are through third party distributors and small retailers. Sales through wholesalers represent just 8%. This type of model allows them to enter emerging markets faster and create a distribution system supported by local partners and small entrepreneurs. To be globally oriented becomes an advantage, as the opportunities through which it can grow are likely to be found in the global market, instead than in its home environment (Mathews 2006).

6.4 Bonds Issuance and Currency Fluctuation

We put up this case study by understanding the company's chronological events and by doing historical research on the company's investments. As Euromonitor International show on their 2016 Report, AJE Group investment in the Venezuelan market between 1999 and 2006, was more than USD80 million. In the Mexican market, in 2002, they invested USD7 million, and managed to obtain 12% of the market share in the world's fourth major market of soft drinks at the time. By 2006, the company entered in Thailand with a big success, representing 15% of the company's EBITDA. Then in 2010, the company ventured into the Indian market (Euromonitor 2016a, b).

To finance its expansion, in 2012, AJE Group decided to issue USD300 million in bonds, but the deterioration of the markets where the company had presence and intercompany loans, have deteriorated AJE's liquidity, which affected their plans for further expansion. Due to this, AJE Group increased its risk of default in some of its subsidiaries (Bloomberg 2012) (Fig. 3).

Being a MNC had its advantages a few years ago, the re-evaluated currencies in Latin America helped Latin American companies to venture into the internalization path. As we have seen in the previous sections, that encouraged AJE Group to leverage its operations by issuing the bonds. Figure 4 and Table 4 show the development of AJE's bonds value over the past few years and the climate conditions on the four analyzed countries.

As a family owned business, AJE's financial statements haven't been released to the public. But in 2012, the necessity to leverage their operations led them to issue

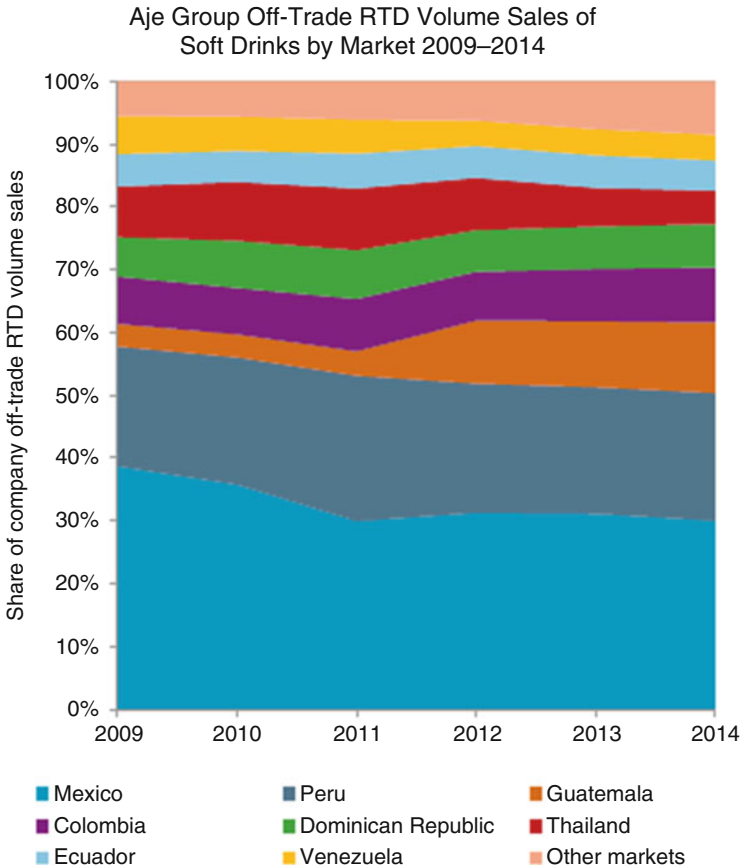


Fig. 3 AJE’s volume sales. Note: Euromonitor (2016a, b). AJE Group in soft drinks (world). Retrieved from <http://www.portal.euromonitor.com.ezproxy.eafit.edu.co/portal/analysis/tab>

bonds worth USD300 million at a 6.5% rate until 2022. Those bonds were rated BB by Standard and Poor’s and BB+ by Fitch ratings. AJE Group doesn’t have corporate strength and lacks view in this sense. The primary decisions made by the company to move into markets, lack strategy and also lack a well-planned vision.

Their founder Angel Añaños believed that a low-cost strategy was the only key element to the success of the company, but as the ratings began to appear, the gold star faded away.

A subsidiary called Atic is covering AJE’s operations in Latin America. The company nowadays is facing serious economic problems, and accordingly Atic is issuing bonds to leverage other subsidiaries that haven’t been doing well economically, as Indonesia for example. Fitch’s warnings were very clear.

As presented by Fitch Ratings (2014) “The loans have benefited a beverage company in Indonesia owned by Atic’s shareholders. The ratings of Atic and AJE Corp will be downgraded if this company is not brought into the guarantor group.



Fig. 4 AJE's evolution of bond's value. Note: Borse Berlin (2016). AJE Group. Retrieved from <http://www.boerse-berlin.com/index.php/Bonds?isin=USN01766AA73>

Table 4 Economic climate

Country	Year	Fact	Pros	Issue	Impact
Venezuela	1999	12% Market share USD80 million	Total market size is equivalent to the 30% of the Peruvian market	Political instability and economic turmoil	Market share fell 38% from 2010 to 2016
Mexico	2002	12% Market share USD7 million	Fourth biggest market in the world	Tax on sugar-sweetened beverages	Market share fell 20% since 2014
Thailand	2006	15% of the Company EBITDA	Biggest Asian market	High market fragmentation	Market share fell 32% since 2010
India	2010	16% Market share	Good customer response	Aggressive pricing strategy	Possibility to introduce more products

Source: Authors' elaboration

Even if this was to occur, the ratings would likely remain with a negative outlook. Fitch remains concerned about the company's weak cash flow generation in crucial countries, such as Peru, Colombia, and Mexico. If Atic's performance in those markets does not recover, negative rating actions will likely occur".

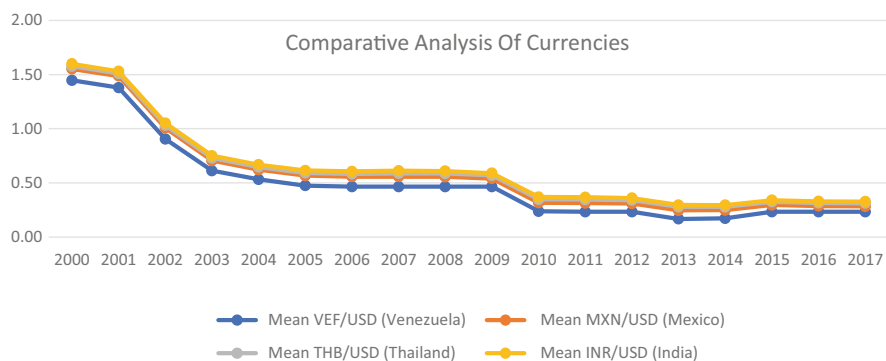


Fig. 5 Currency evolution of AJE's main markets (Source: Authors' elaboration)

Table 5 Currency evolution of AJE's main markets

Year	Mean VEF/USD (Venezuela)	Mean MXN/USD (Mexico)	Mean THB/USD (Thailand)	Mean INR/USD (India)
2000	1.45	0.11	0.02	0.02
2001	1.38	0.11	0.02	0.02
2002	0.90	0.10	0.02	0.02
2003	0.61	0.09	0.02	0.02
2004	0.53	0.09	0.02	0.02
2005	0.48	0.09	0.02	0.02
2006	0.47	0.09	0.03	0.02
2007	0.47	0.09	0.03	0.02
2008	0.47	0.09	0.03	0.02
2009	0.47	0.07	0.03	0.02
2010	0.24	0.08	0.03	0.02
2011	0.23	0.08	0.03	0.02
2012	0.23	0.08	0.03	0.02
2013	0.17	0.08	0.03	0.02
2014	0.17	0.08	0.03	0.02
2015	0.23	0.06	0.03	0.02
2016	0.23	0.05	0.03	0.01
2017	0.23	0.05	0.03	0.02

Note: Currency converter using official exchange rates—fxtop.com (2016, May 6). Retrieved from <http://fxtop.com/>

Eventually, Fitch Ratings downgraded Atic from BB+ to BB, and from B+ to B- in 2016. Even though Atic incorporated the operations of Indonesia, the company was unable to lower its net debt/EBITDA ratio, which increased in 2014 to 4.7× compared to 2013 which was 3.1×. Atic's revenues haven't gone up as the company had expected. In fact, the currency devaluated in their most important markets. Figure 5 and Table 5 show the currency evolution in four of the most important markets of AJE Group.

This downgrade also reflected the increased competition in most markets and the failure of consumers to switch from well-known, established brands to Atic's products during economic distress in Latin America and Indonesia (Fitch Ratings 2016).

Due to this instability, the founder and CEO Angel Añaños, who ran the company for over 20 years, was asked by the board to step down and put Juan Lizariturry in charge to run the company.

The new CEO has already taken steps to straighten up the company's economic instability. The company has been taking steps to cover FX exposure and to cut costs in all of its operations, such as reducing back office and distributors, as well as reducing marketing expenses to improve profitability in a more competitive environment. According to Fitch Ratings (2016) "Atic is now focusing on improving its product mix towards non-CSD products, which have higher potential growth and less mature markets than carbonated soft drinks".

7 Conclusion

Even though there is scarcity in academic information on Latin American multinationals, there is in fact many economic news around AJE Group and its operations, all of which answer the question we stated about the influence of the currencies values and fluctuations in AJE's main markets.

After looking for that answer, we are assured that one of the keys to AJE's initial success, was due to the revaluation of those currencies for almost 5 years, which benefited the economic welfare of AJE. But then, the company executed poor managerial cash flow decisions in the emergent markets. When the CEO had to act more strategically, Mr. Añaños made decisions based on intuition, leaving the company exposed to flaws in those emergent markets, which affected not only their revenues, but also the value of the issued bonds.

For a company that is internationalizing, it is very important to consider many variables, and not just the fact of having low cost products. They should also develop value for the brand. In our case, AJE Group ventured into internalization with the low-cost premise, and didn't consider the devaluation of currencies and the price sensitivity that their products had.

Nowadays, price sensitivity is affecting them, because AJE's customers in emergent markets have been living under the effect of their currency devaluations, which has led many of those countries to higher inflation rates.

The market selection for early expansion was influenced by the decision of managers to minimize risk and exposure. AJE Group's international expansion was driven by the need for new customers, rather than the need to exploit existing resources. Their distribution model had been successful in concentrated markets like Mexico, rather than fragmented markets like Asia.

Repeated application of the linkage and leverage processes may result in the firm learning to perform such operations more effectively (Mathews 2006). Repeating

the initial model that was successful in Mexico helped AJE Group learn and replicate it into other emerging markets.

As per the linkage framework, unlike MNC's in developed countries, it is very hard for AJE and other emerging multinationals to create partnerships, due to the limited amount of cash flows. Accordingly, the best way to raise money for their investment is through the leverage framework. AJE Group followed this premise. And in 2012 they issued 300 USD millions worth of bonds, with an annual rate of 6.50% expiring in 2022. These bonds were rated BB by Standard and Poor's and BB+ by Fitch ratings.

We recommend further analysis to study the reason behind the downgrading of bonds, which most likely happens due to increased competition in most markets, and the failure to trade down bonuses during economic distress in Latin America and Indonesia.

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Strategic Renewal in Corporate Entrepreneurship Context: A Multi-case Study



Amir Mohammad Colabi and Datis Khajeheian

Abstract The main purpose of this article is to explore the delineating process, content, and outcome of the strategic renewal and its potential to affect the long-term prospects of organizations, and its distinctive features in corporate entrepreneurship context. Using the systematic grounded theory method and drawing on 20 in-depth case studies of four entrepreneurial Ceramic-Tile organizations of Iran, the result suggested that the entrepreneurial strategic renewal is the processes of reconsidering the organizational capabilities to balance the exploration and exploitation of opportunities. Within the entrepreneurial context, the interactional strategies of entrepreneurial strategic renewal are product regeneration, organization revitalization, marketing mix reformulation and business model renovation strategies. This process is responsive to intra-organizational inappropriateness, extra-organizational challenges, as well as to the governmental, economical, societal, cultural, geographical, regional, and industrial and market conditions and finally its outcomes are leveraging the industrial position, growth of sales in local market, penetration to the foreign market and inspiration of the entrepreneurial culture in organizations.

1 Introduction

Entrepreneurship is the process of discovery, evaluation and exploitation of opportunities, and creation of future goods and services (Shane and Venkataraman 2000). This process can be done individually or in the form of new venture creation as well as within an existing organization (Khajeheian 2017; Hang 2016; Shane 2003; Venkataraman 1997; Casson 1982). Accordingly, the process of creation or discovery and exploitation of opportunities by established organizations has been conceptualized as the “corporate entrepreneurship” (Burgelman 1983; Kuratko and Audretsch 2013; Kuratko et al. 2015).

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Hang (2016) defined corporate entrepreneurship as “The overall activities of building new business in an established organization are called corporate entrepreneurship in the field of entrepreneurship studies”. Corporate entrepreneurship in its common conceptualization has been defined as a process, including two general approaches of: (1) The birth of new businesses within the existing organizations which is called internal innovation or venturing and (2) the transformation of organizations through renewal of the key idea on which they were built which is called “strategic renewal” (Guth and Ginsberg 1990a).

As it can be considered in this definition, the strategic renewal is one of the two main dimensions of corporate entrepreneurship. This process has been known as an approach for making the organization capable of exploiting the business opportunities and seizing competitive advantages (Kuratko and Audretsch 2009) which eventually leads the organization to redefine its relationship with its market or industry competitors by fundamentally altering how it competes (Kuratko and Audretsch 2009; Morris et al. 2010). In this regard, the strategic renewal can be an organizational ability for coping with the substantial and often upheaval technological, political and economic changes (Albert et al. 2015; Schmitt et al. 2016a).

In spite of the fact that the strategic renewal has been as subset of corporate entrepreneurship, it has also been a prominent theme in other various organization and management research domains (Ben-Menahem et al. 2013; Schmitt et al. 2016a). A review of the literature indicated that this concept has been also considered as a model of strategic changes or a way for changing the path dependency of organizations especially in the strategic management field of research (Agarwal and Helfat 2009; Floyd and Lane 2000).

In principle, in its early conceptualization, the strategic renewal was more close to organizational rejuvenation (Adenfelt and Lagerström 2006; Baden-Fuller and Stopford 1992; Covin and Miles 1999; Kuratko and Audretsch 2009, 2013). While later, it has necessarily implied either the implementation of new business strategies in a way that leverages the firm’s resources (Basu and Wadhwa 2013) a driver for organizational learning (Crossan and Berdrow 2003; Jones and Macpherson 2006) in order to fully exploits available product-market opportunities (Covin and Miles 1999; Kuratko and Audretsch 2009).

As it obvious since 1980s, the broad attention has been paid to strategic renewal. However, the body of research in this case face a growing diversity in both theoretical and empirical perspectives (Schmitt et al. 2016b), and these which create a number of challenges in the field.

First, from the theoretical debate, the strategic renewal body of knowledge faced unequal conceptualizations and assumptions about the construct (Agarwal and Helfat 2009). Prior theoretical studies not only drew on a variety of theoretical foundations, but also had a tendency to focus on selected dimensions of the strategic renewal construct such as its drivers of its internal processes (Schmitt et al. 2016b). Moreover, there is little consensus in the literature on what strategic renewal means and how it differs from other, related concepts, such as strategic change (Agarwal and Helfat 2009), corporate venturing (Verbeke et al. 2007); or strategy process (Volberda and Baden-Fuller 2003).

Second, from the empirical point of view, the strategic renewal has rarely been considered empirically as a distinct phenomenon (Agarwal and Helfat 2009) especially as the subcategory of corporate entrepreneurship (Kuratko and Audretsch 2013). Instead, it has been mostly observed as specific type of strategic (Burgelman 1991), a managerial process promoting changes in a firm's core competences (Floyd and Lane 2000), the redefinition of a firm's mission (Zahra 1993), changes to the resource patterns of business (Stopford and Baden-Fuller 1994), or the alignment of organizational competencies with the environment (Flier et al. 2003).

While these studies have provided rich understandings into strategic renewal, there is little explaining about the manifestation of strategic renewal in the context of corporate entrepreneurship (Kuratko et al. 2015). Evidence suggests that the strategic renewal has more specific meaning and focus especially in the corporate entrepreneurship context (Kuratko and Audretsch 2009, 2013) and could be observed as the entrepreneurial business scenarios including declining firms facing turnaround situation, embracing the new market opportunities and deliver new product or process, to redefining the industrial competitive positions (Covin and Miles 1999).

Nevertheless, the subsequent researches have rarely considered it as a corporate entrepreneurial scenario and thus, according to Corbett et al. (2013) and also Ireland et al. (2009), there is still a debate in the field of corporate entrepreneurship that the structure of strategic renewal as one of the aspect of strategic entrepreneurship should be based on both opportunity and advantage seeking which are among the key concept of entrepreneurship.

In this regard, this article is meant to be a contribution to the exploration of delineating process, content, and outcome of the strategic renewal and its potential to affect the long-term prospects of organizations, as well as its distinctive features, and complexities in corporate entrepreneurship context. In other word, our main purpose is to manifest the inherent entrepreneurial dimensions of strategic renewal as an aspect of corporate entrepreneurship and to develop a coherent theory (scenario) which would describe the entrepreneurial strategic renewal process.

The nature of research inquiry investigated here is qualitative, for a number of reasons. First, there is little consensus in the literature on the strategic renewal and for acquiring knowledge, it require to be interpreted from the perspective of specific group individuals in the particular context who are able to fully explain it based on their shared experience (Mäkelä and Turcan 2007).

Second, our study attempted to explore and uncover the inherent nature of a strategic renewal within a specific context of corporate entrepreneurship. According to (Corbin and Strauss 1990) the research enquiry which aims to explore an innate nature of a specific social construction in a particular context, has the subjective epistemological nature, and understanding the subjective meaning in this state implies grounded theory methodology as the way to acquire rich qualitative data (Glaser 1992).

In short, previous literature agrees to disagree on the nature of the strategic renewal and the construct has been easily applied within the different theoretical debates, and hasn't rarely been empirically investigated in the context of corporate

entrepreneurship. In this regard, the field would certainly benefit from conducting a deep qualitative investigation around the construct.

The structure of the current chapter consists of five sections. The first section outlines the main research statement. The second section explains the literature review and the gap in the existing body of knowledge. The third section presents materials and methods and explains. The research findings about the process, content and outcomes of entrepreneurial strategic renewal are presented in Sect. 4. Finally, Sect. 5 is dedicated to the conclusions and discussion about the research contribution and implications.

2 Literature Review

In order to clarify the body of the literature of the strategic renewal, first, it is helpful to consider the multiple conceptualizations and assumptions that have been emerging around the term. Next, reviewing the empirical investigation can be supportive for directing the research.

In the first conceptualization, Burgelman (1985) defined strategic renewal as an evolutionary process which involved promoting, accommodating and utilizing new knowledge and innovative behavior to modify the core competencies of organization and its product and service domain. This definition was grounded in strategic management perspective and had been referred since Guth and Ginsberg (1990b) redefined the strategic renewal as the transformation of organizations through renewal of the key idea on which they were built. From their viewpoint, this was the process of creating new wealth through new combinations of resources which includes actions such as refocusing a business competitively, making major changes in marketing or distribution channels, rendering product development and reshaping operations. This conceptualization resulted in consideration the phenomenon in the organizational and industrial level of analysis.

Alongside this conceptualization, during the 1990s, Strategic renewal was also defined as the capacity of a firm to sustain renewing itself over time and to balance its resourcefulness in pursuing novel innovations, capitalizing its current capabilities, and rejuvenating its business (Fuller and Stopford 1994).

Following, Sharma and Chrisman (1999), defined the strategic renewal as the process of innovation within that organization. Next, Covin and Miles (1999) specified the label of strategic renewal as a corporate entrepreneurship phenomenon by which the organization seeks to redefine its relationship with its market or industry competitors by fundamentally altering how it competes. This conceptualization has been highly regarded by the corporate entrepreneurship scholars (Dess et al. 2003; Ireland et al. 2009; Kuratko et al. 2015; Morris and Kuratko 2002).

However, in the early twenty-first century, Volberda et al. (2001) rethought the strategic renewal as activities done by organizations to change their path dependence. Their efforts resulted in interpreting strategic renewal as an interactive behavior of managers and resulted in considering it at the individual level of analysis.

In line with these arguments, the period between 2000 and 2011, the strategic renewal literature in the strategic management area had concerned with some empirical investigations which can be categorized in five trends of: (1) applying longitudinal research approach in studying strategic renewal over a long period of time (Kwee 2009; Kwee et al. 2011); (2) investigating the roles of top-, middle- and operating-level managers in this process others (Floyd and Lane 2000; Poskela and Martinsuo 2009; Wielemaker et al. 2000); (3) the changes occurring at the levels of firm or industry during the strategic renewal process (Prashantham 2008); (4) the type of strategic renewal process in the organization (Capron and Mitchell 2009; Lewin and Volberda 2003); (5) The relationship between strategic renewal and other organizational factors (Crossan and Berdrow 2003; Folkeringa et al. 2005; Jones and Macpherson 2006).

Reviewing strategic management literature indicated that the strategic renewal in this category of research has seldom received attention as an independent phenomenon. Moreover, most of the related empirical works in this field conducted their research in the large multiunit firms inside established industries which typically use their core competencies, capabilities and organizational resources, as well as their networks and inter-organizational relations to change their organizational position in the market. Therefore, the strategic renewal in this field is more related to the strategic change (Agarwal and Helfat 2009).

Meanwhile, Agarwal and Helfat (2009) re-elaborated the concept of strategic renewal and conceptualized it as “the process, content, and outcome of refreshment or replacement of attributes of an organization that have the potential to substantially affect its long-term prospects”. On the other hand, scholars from entrepreneurship (Covin and Kuratko 2010; Kuratko and Audretsch 2009) discussed the strategic renewal within the realm of strategic entrepreneurship. In their analysis, strategic entrepreneurship involves simultaneous opportunity-seeking and advantage-seeking behaviors (Ireland et al. 2003). Strategic renewal in this realm is known as a type of strategic entrepreneurship in which the primary focus of the entrepreneurial initiative is the firm’s strategy. However, not all firms that adopt new strategies are pursuing strategic renewal. Rather, new strategies constitute strategic renewal when they represent fundamental repositioning efforts which place the firms in more favorable industrial positions (Kuratko and Audretsch 2009).

Although the strategic renewal has been placed at the heart of corporate entrepreneurship, there are some recent empirical investigation in this field which have mostly focused on the relationship between strategic renewal and other contingencies factors such as: firm level entrepreneurship corporate renewal (Sciascia et al. 2009), small firm performance (Bierwerth et al. 2015), internal and external venturing (Basu and Wadhwa 2013; Chen et al. 2009), competitive advantage and performance in new ventures (Burgers and Sawang 2012), routine communication practices (Zur and Walega 2015), management levels and their interactions (Glaser et al. 2015), as well as the external environment (Kearney and Morris 2015).

The summary of the literature in strategy and entrepreneurship shows that strategic renewal in both fields has received considerable attention since 1980s. However, there seem to be some gaps that cause fragmentations in the body of the knowledge about the construct.

In principle, the strategic renewal has rarely been considered as a unique phenomenon. Rather, it has often been addressed as either change in the strategy of organization, a way for organizational innovation, a capacity of a firm to sustain renewing itself over time or a holistic approach to redefine the organization relationship with its competitors.

However, related research from this field mostly considered the strategic renewal as a given phenomenon and thus have focused on the relation between the strategic renewal and other related organizational concepts. While the process, content, and outcome of the strategic renewal and its potential to substantially affect the long-term prospects of organizations (Agarwal and Helfat 2009), as well as the distinctive features, complexities and unique entrepreneurial characteristics (Zahra and Wright 2011) of this construct should be considered within the corporate entrepreneurship context.

3 Research Methodology

As specified in the introduction part, the subjective epistemological nature of inquiry in this research implies the grounded theory methodology in order to acquiring rich qualitative data for interpreting the subjective meaning of the phenomenon under the study. By doing so, the research is into the line of the interpretive research paradigm. The main purpose in this paradigm is to develop an understanding of social phenomenon and to investigate the meaning of it in a given context, in which the experiences and perspectives of individuals are the main sources of understanding (Kamarudin et al. 2014; Neuman 2006).

As stated by Wei et al. (2016), the goal of grounded theory is to describe the essence of the phenomenon and to establish a ground for its explanation. In this regard, the qualitative grounded theory methodology fits the best for rendering deep perspective to disclose the qualities of the phenomena (Zahra 2007), which is the innate nature of strategic renewal in the context of corporate entrepreneurship.

This methodology has been applied in the previous investigation which the same issues. For instance according to Kamarudin et al. (2014) the qualitative grounded theory approach is the way for investigating the dynamic complexities occurring both within and across organizational levels. Moreover, the grounded theory research methodology is a way to breed a theory that offers insight, enhances understanding and provides a meaningful guide to action based on the empirical areas of the sociological grounds such as organizations (Strauss and Corbin 1990). As such it is the appropriate methodology for understanding the strategic renewal by taking into consideration the characteristic of context in which it is embedded. Meanwhile, the use of the case study approach allows the researcher to focus on the subject and to go through in-depth examination for obtaining the general characteristics of phenomenon in its particular context (Kamarudin et al. 2014). This implies that the researcher gathers data from a group of participants who possess a comprehensive view of the research phenomenon. This would result in an appropriate contribution to the subject.

3.1 The Research Procedure

The research was conducted based on the grounded theory method of Glaser and Strauss (2009) as a systematic, inductive, iterative, comparative, and interactive approach Creswell (2002) to develop new perspectives on strategic renewal in corporate entrepreneurship context. As stated by Grover et al. (2014) the systematic grounded theory methodology is a process of gathering rich qualitative data, coding it into meaningful categories, and then developing meaning from the relationships of those categories. This method enable the researcher to enter the particular field open to new meaning and to focus on core phenomenon by simultaneously collecting and analyzing data (Fischer 2016).

Following the guidelines of Corbin and Strauss (1990), the present research applied the systematic way of grounded theory for collecting data, analyzing information, and reporting of the research results.

3.2 Research Participants

Corbin and Strauss (1990) identified the theoretical sampling as a method for accessing rich data around the subject. In order to not to take the universal view about the nature of strategic renewal in corporate entrepreneurship context and to make our research context-specific (Welter et al. 2016), we concentrated on the relatively homogenous samples of individuals in an industrial organization with a proper corporate entrepreneurship environment. This allowed us to gain much richer and apparently the more valid interpretation.

To determine those organizations with strong corporate entrepreneurship context, The (CEAI)¹ (Kuratko et al. 1990), (CECI)² (Hornsby et al. 2002) and (EI)³ (Ireland et al. 2006) Questionnaires were used for measuring the level of corporate entrepreneurship in ceramic-tile industrial organizations of Iran. The result indicated the suitable corporate entrepreneurship context for implementing the research. Subsequently, the participants were selected among large multiunit organizations of this industry. Using the theoretical sampling method, a set of 20 people were chosen among board members, managing directors, executives, marketing and sale, strategic, product development, administrative and branding managers also marketing experts of ceramic-tile organizations. All participants had experienced the strategic renewal process in their respective positions and were considered as rich sources of data. The participant's information is shown in Table 1.

¹Corporate Entrepreneurship Assessment Instrument.

²The Corporate Entrepreneurship Climate Instrument.

³The Firm's Entrepreneurial Intensity.

Table 1 Participant information

Participant code	Case	Organizational positioning	Experience (years)
I1	Organization A	Board member	20
I2		Managing director	25
I3		Executive manager	19
I4		Marketing manager	11
I5		Branding manager	10
I6		Product development manager	12
I7	Organization B	Administrative manager	17
I8		Marketing and sales manager	21
I9		Strategic manager	7
I10		Managing director	18
I11	Organization C	Strategic manager	14
I12		Marketing expert	6
I13		Branding manager	13
I14		Board member	15
I15		Managing director	18
I16	Organization D	Product development manager	8
I17		Administrative manager	16
I18		Strategic manager	19
I19		Marketing manager	11
I20		Marketing expert	10

3.3 Data Collection

According to Creswell (2002) the grounded theory research should be implemented on rich data. For doing so, we conducted deep retrospective semi-structured interviews Stern (1980) to gather textual-literal rich data about the phenomenon under the study.

The interviews took place face to face in September 2015 and were recorded, transcribed, and translated from Persian into English and the interview with each participant was longitudinal in nature.

According to Strauss and Corbin (1998), the research question in grounded theory should be systematic in nature and arranged in maximum flexibility to provide conditions for discovering the phenomenon deeply. The interview protocol should also be formulated according to grounded theory coding paradigm involving causal and influential conditions, context, core phenomena, action/interactional strategies and consequences of phenomenon (Strauss and Corbin 1990). Thus, the study was guided by the following research questions:

1. What are the causal conditions leading to occurrence of strategic renewal in your organization?
2. What are the core phenomena of the strategic renewal in your organization?

3. What are the action/interactional strategies related to the implementation of strategic renewal in your organization?
4. What are the external condition such as culture and society, economic system, governmental and legal conditions which give rise to the occurrence of interactional strategies of renewal in your organization?
5. What are the characteristics of context, geographical environment, region, industry and market where the strategic renewal occurs?
6. What are the consequences of strategic renewal in your organization?

It should be also mentioned that the “critical incident method” (Byrne 2001) was applied to modify the questions. This means that the questions were adjusted and modified with respect to data received from the earliest interviews.

3.4 Data Analysis

We analyzed the data according to grounded theory paradigm developed by Corbin and Strauss (1990). According to Strauss and Corbin (1990) the coding paradigm of grounded theory is adopted to remain focused on the research questions and encompasses three stages of open, axial and selective coding.

Corbin and Strauss (1990) stressed that for developing the theory based on the grounded theory method, the raw data should be converted in the form of “conceptual labels”. These conceptual labels are transformed to open categories which are a more abstract classification. This is called the open coding procedure, or the process of breaking down, conceptualizing, and categorizing data, in which a line by line analysis of transcribed interviews is conducted to explore initial and secondary’s conceptual codes. As the data analysis process proceeds, these code then connected to each other to achieve the main conceptual categories. Each main category incorporates a number of open coding (Corbin and Strauss 1990).

Axial coding is the second analysis stage of grounded theory method. The main purpose of this intermediate coding stage is reassembling open coding, relating them together to form more abstract construction which conduct the researcher to more precise and complete explanation about phenomenon (Strauss and Corbin 1998). This leads the researcher to specify the phenomenon in term of the conditions that give rise to it; the context in which it is embedded; the actions/interactions strategies by which it is handled; and the consequences of those strategies. In this way the axial coding is the process of relates the structure with the process to capture some of the explanation in real life (Strauss and Corbin 1990). Thus the open and axial coding are not essentially sequential rather they are conducted concurrently and quiet naturally together (Karim Sorour and Howell 2013).

The former two stages are conducted to articulate the selective coding as the final stage of the grounded theory data analysis. Coding paradigm in this step involved the process of selecting those core coding paradigm of interview protocol, by integrating axial categories to each other systematically, validating their

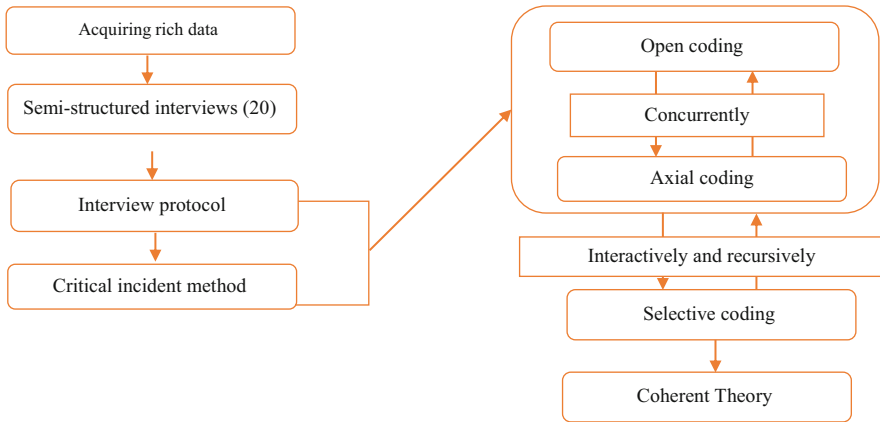


Fig. 1 The relationship between the data collection and data analysis steps

relationships, and filling in those that need further refinement and development (Strauss and Corbin 1990). Analytical activities of this stage are taken place through an interactive and recursive process along with axial and open coding, but in higher level of abstraction (Strauss and Corbin 1990). It continues until the major conceptual categories are fully integrated to form a larger scheme that research findings take the form of a coherent theory (Strauss and Corbin 1998). The relationship between the data collection and data analysis steps are shown in Fig. 1.

The coding paradigm in this study included the 61 open codes and then 18 construct axial categories which finally resulted in developing 6 selective grounded conceptual constructs. It is notable that these three analytic processes were conducted by applying the ATLAS/Ti qualitative data analysis software.

4 The Research Findings

The qualitative grounded theory case study was applied here as the research method for contributing the strategic renewal body of knowledge and to explore the process of entrepreneurial strategic renewal. The findings involved the causal conditions, the core phenomena, the interactional strategies, as well as the context and conditions which give rise to the strategies and lastly the consequences of entrepreneurial strategic renewal process in the large complex multiunit organizations of ceramic-tile industry of Iran.

In the following section both the process and content of each dimensions of the entrepreneurial strategic renewal, along with propositions derived from each dimensions are presented. The coherent process model of entrepreneurial strategic renewal is also offered in Fig. 2.

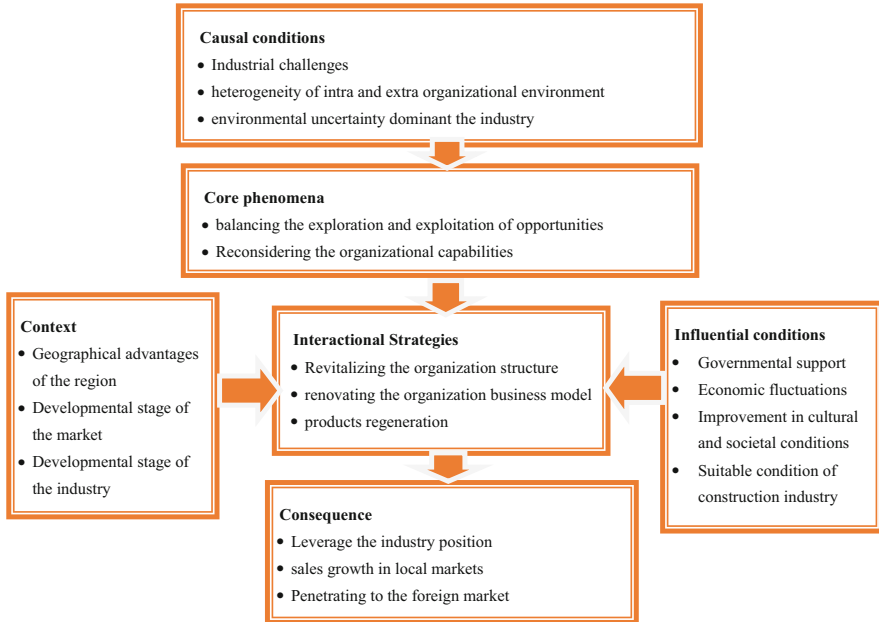


Fig. 2 Coherent process model of entrepreneurial strategic renewal

4.1 The Causal Conditions of Entrepreneurial Strategic Renewal

The experiences of the participants illustrate that there are some causal conditions which have serious and detrimental impact on occurrence of strategic renewal in organizations. The findings uncover three distinctive spheres of influence under which a significant and strategic renewal has taken place. These are: industrial challenges, heterogeneity of intra and extra organizational environment, and environmental uncertainty.

In terms of industrial challenges, there were a general agreement between all of the participants about some major competitive challenges including intense rivalry, price instability and price dumping in the market place which inexorably enforced them to reconsider their processes. While, from the view point of the board members of case A; the increase of the new entrants in the market:

“Reduction of tariff on construction materials by government resulted in unprecedented entrance of micro-manufacturing factories in industry”... is the other major industrial challenge of ceramic-tile organizations which enforced them to renew their competitive strategies.

Whilst the industrial challenges are clearly detrimental, there is a strong sense from the participants that the heterogeneity between organizational goals, strategies, structure and procedures, and dynamic changes in environment; as well as

incompatibility between production plan and customer demand are the most influential causation which have forced ceramic-tile organizations to alter their competitive approaches and reformulate their marketing mix strategies.

Internal defects in the organizational structures and procedures, including the inappropriate use of resources, inflexibility in business unit structures. . . . Not to taking account the customers demand in designing the production plans. . . , instigated us to reconsider our capabilities and organizational objective and strategies, so that being able to cope with changes in the long run (I14).

Besides, several participants disclosed the extreme levels of uncertainty associated with the prediction the competitors' strategies, the demands of the consumers, and more seriously the technological trends and the governmental policies as the major environmental challenges dominant the industry. As I2 from case A puts it: "*these uncertain situations have had inverse effects on our organizations and encouraged us to monitor the market continuously for exploring and exploiting technological opportunities to be able to meet the unmet customer's needs*".

As a result, we suggest our first hypothesis with the following statement:

Proposition 1 The entrepreneurial strategic renewal process is responsive to intra-organizational inappropriateness and extra-organizational challenges.

4.2 The Core Phenomena of Entrepreneurial Strategic Renewal

These findings indicate that the immediate action the organizations in front of the intra-organizational inappropriateness and extra-organizational challenges are their effort to balance the exploration and exploitation of opportunities and to reconsider their organizational capabilities. These are the two core phenomena of entrepreneurial strategic renewal in ceramic-tile organizations.

First, the competitive industrial environment has forced the organizations to be alert in exploring the unmet domestic customer's needs continuously, and to be able to explore them and rectify the market deficiencies. As I12 articulates:

We explore the unanswered needs of customers to products such as flexible scales ceramic-tiles, or the ceramic-tile with carpet designs.

It was remarkable to understand that from the general viewpoint of all of the cases, the most critical renewal phenomena of them was to exploit opportunities arising from the macro and micro environment. These proactive exploitation has enabled them to improve their available products, also introduce entirely new products categories to the domestic market.

Our organization tried to explore any opportunity that guaranties our viability in the market (I8). . . applying the art of Persian architectural designs is one of those opportunities. . . Tacking the advantages of climate variability of the country for introducing the product adjusted to each market segmentation is one our vantage point (I5). . . we concentrate on

the market gap in not considering the needs of manufactures for the waterproof product (I2). . . . We were agile in response to unmet needs as a result we offered products complied with industrial health standards like Anti-stain tile suitable for industrial manufactures (I18). . . . Creating entirely new products based on new formulations like three-dimensional panels tile which result in opening new segment in the market (I12).

It was also declared that penetrating to the adjacent foreign markets was among the core phenomena of entrepreneurial strategic renewal.

Our critical turning point was exporting the product to the adjacent markets such as Iraq and Afghanistan which have required post-war reconstruction (I1).

The second interesting further issue arise from the data that seems significant in shaping the core phenomena of entrepreneurial strategic renewal is the reconsidering their organizational capabilities to pave the way for proactive opportunity exploitation. It was stated by the participants of case A:

. . . We reconstructed and eliminated the obsolete procedures in production and marketing and Reconsider our organizations strategic objectives, especially in the field of strategic marketing to align them to environmental uncertainty. . . .

And also by the members of case C:

Tremendous emphasis on systematic data gathering and analysis, and knowledge management mechanism, also developing networks and organizational relationships with the outside parties in the industry enable us to access resources, information and technology to expand our exploitation efforts.

In this regard, we suggest our second hypothesis with the following statement:

Proposition 2 The entrepreneurial strategic renewal is the processes of reconsidering the organizational capabilities as a way to balance the exploration and exploitation of opportunities.

4.3 The Interactional Strategies of Entrepreneurial Strategic Renewal

Interactional strategies include actions, reactions and policies which have been adopted and implemented in line with the core phenomena of the entrepreneurial strategic renewal process. The findings highlight four Interactional Strategies of: renovating the organization business model, revitalizing the organization structure, and the products regeneration, though which the process of strategic renewal has taken place.

According to all of the participants, the proactive opportunity exploitation needs prominent infrastructures. Strategic action for achieving such infrastructures was to renovate the organization business model.

This was indicated in the viewpoints of the participants from case B:

We renovated the key values of our business model, e.g. we improved our products quality . . . we reformulated our marketing mix components; . . . we remodel our promotion plan for acquiring and maintaining customers, . . . this was include the reconfiguring of our retailing channels too. . . . Continuous analysis of price elasticity of demand enables us to redefine our pricing system and align it to the constant changes in consumer purchasing behavior. . . we also have done well in reducing energy consumption and lowering overhead costs.

Also in the words of members of case A:

. . . Using promotional programs to reach the top customers. . . outdoor advertising particularly in the transport vehicles, regular attendance at related national and international exhibitions, creating a comprehensive database of customers and use them in CRM system, taking the advantage of viral, network, and word of mouth marketing. . .

On the other hand, it was declared by the members of case D:

as you can see there are major changes in our distribution channels we now have direct distribution through first-hand dealers. . . we identified the distribution channels in foreign markets, and interact with them. . . we segmented the customers based on their access to distribution channels, and our online sales system has just been launched.

Revitalizing the organizational structure was indicated in all four cases as a critical strategic action which would lead them to achieve a competitive position in the market. For instance, in case B, this strategy was implemented by creating the culture of continuous organizational learning atmosphere:

Creating a culture of accepting errors and learning from them to revitalize our administrative, production, and marketing structures.

While, cases A and C have tried to revitalize their organization by promoting the spirit of innovation in their internal processes:

Our organizational climate is now stimulating the spirit of idea generation, Initiative and innovation effort among the staff in all levels of the organization.

Finally, the products regeneration was indicated as other important interactional strategy for achieving the strategic renewal. The participants of D provided ample evidences for adopting the product regeneration strategy in order to introduce new product to their existing product categories:

By discovering opportunities for regenerating the products, we have entirely redesigned our production plan to deliver completely new products such as quasi- carpet tiles to the market. . .

While, the members of case C indicated that this strategy was applied in their organization by improving their available products and customized them according to the domestic customer's life styles:

We have applied the technology of digital printing on large scaled tiles and introduced new products to our existing categories of products. . . We customize the products aligned to the traditional art of Iranian tile works.

As the result, the third proposition derived from this category can be stated as:

Proposition 3 The entrepreneurial strategic renewal is implemented by the product regeneration, organization revitalization, marketing mix reformulation and business model renovation strategies.

4.4 The Influential Conditions on the Entrepreneurial Strategic Renewal

The influential conditions are those unexpected contingencies that impress the implementation of interactional strategies. The findings illustrate that there are four external condition of: governmental support, economic fluctuations, improvement in cultural and societal conditions and suitable condition of construction industry which have given rise to the occurrence of interactional strategies of Entrepreneurial Strategic Renewal in the organizations.

The findings from all cases support the fact that the major environmental conditions of governmental support as well as economic forces especially the fluctuations of exchange rate are important intervening conditions which affect the implementation of strategic renewal process in ceramic-tile organizations.

The interplay between economic fluctuations of exchange rate and the governmental supportive policies to construction activities in the country, and setting regulations to protect the domestic products are among important institutional drivers (I11).

As stated by the participant (I16, I18, I9, I13, and I2) the population increase, the growing need for housing, and booming the construction activities altogether have accelerated the renewal process in the ceramic-tiles industry. Besides, improvement in cultural conditions of domestic consumers due to their access to social networks, along with the changes in designing and architecture styles of construction industry are other overriding conditions that have motivated the entrepreneurial strategic renewal process of these organizations. Regarding these findings, we suggest our forth hypothesis with the following statement:

Proposition 4 The entrepreneurial strategic renewal is responsive to governmental, economical, societal and cultural conditions.

4.5 The Context of Entrepreneurial Strategic Renewal

The context includes those the geographical environment, region, industry or market where the entrepreneurial strategic renewal has occurred. The findings presented here demonstrate that the geographical advantages of the region, the developmental stage of the market and the developmental stage of the industry are three main bases for implementing interactional strategies of entrepreneurial

strategic renewal. In terms of geographical advantages of the region, the participants indicated that:

The geographical advantages of the region especially the existence of rich mines especially in Isfahan and Yazd as the supply of raw materials for the industry are some parts of the regional advantage (I1). . . .The background and reputation of the ceramic-tile art in Iran leverages the quality of industrial outcomes (I5). . . .Neighboring of Iran with Iraq and Afghanistan markets with their urgent needs to the construction materials especially in recent years was very important (I10).

Besides the regional advantages, from the view point of the participant from the cases A, C and D the life cycle of the market which was at its developmental stage has brought up some viable opportunities:

existence of the market opportunities originated from unmet customers' needs, customers' orientation to high quality products (I6) . . . increasing consumers' readiness to accept innovative products, emerging the opportunity for offering additional products to compensate the lack of products quality in the market (I11). . . . rising the opportunities to present products proportionate to the country's climate conditions (I19).

The exploration of those opportunities enabled the organizations to offer innovative viable new products to the market.

Alongside the developmental stage of the market, the developmental stage of the industry also was pointed as another context which paved the way for renewing the ceramic-tile organizations. In this regard it was indicated that the evolutions of the industry and its production technologies improvement, as well as advancements in the science of ceramic-tiles production are the industrial contexts which encourage the renewal of organizations.

Altogether, according to above findings, our fifth hypothesis is that:

Proposition 5 The entrepreneurial strategic renewal is responsive to the geographical, regional, industrial and market context.

4.6 The Consequences of Entrepreneurial Strategic Renewal Process

Finally, the findings regarding the actual outcomes of the implementation of entrepreneurial strategic renewal in the organizations are include: leverage the industry position, sales growth in local markets, penetrating to the foreign market and promoting the entrepreneurial culture in organization.

In term of leverage the industry position, all participants agreed on the fact that the renewal process is extended in both organizations and industry. The competition between organization resulted in stimulating R&D, technical specialization and product innovation and these efforts have positioned ceramic-tile industry as one of the advanced industries in the country. As I10 articulated:

In my opinion, the renewal of the industry is the consequence of competitors' effort stimulating the market by offering higher quality and a lower priced product to the extent that the industry experiences the higher level of quality, innovation and technical specialization. . . . the ceramic-tile industry is now one of the advanced industries in our country. . . . the organization are employing high levels of research and design and are providing the bulk of new inventions, while driving down consumer prices.

For cases D and C, and D the products regeneration strategy especially in existing segments of domestic market, have resulted in acquiring and steady state sales growth, they also achieved to high level of sales in new segments of the market. This is while for case A, the penetrating to the adjacent foreign markets, resulted in gaining huge export revenues.

Overseas exports to Iraq and Afghanistan, as well as Macedonia, Russia, Kazakhstan, Azerbaijan, Uzbekistan, and Armenia have led us to increase the level of income in the organization (I4).

And as a final point, the important consequence of entrepreneurial strategic renewal has been the promotion of the entrepreneurial culture in the ceramic-tile organizations. It was mentioned by the participants that:

Our strategies for reconsidering the intra-organization processes and structures have resulted in improvement of innovation culture within the organization and have created an ongoing atmosphere of idea generation (I13). . . Promoting entrepreneurial thinking and spirit of synergy, the integration of knowledge and collective wisdom with emphasis on learning (I1). . . and the social capital training to learn new technical, personal and inter-personal skills are among the internal outcomes of renewal (I3).

Now the organizational atmosphere welcomes to any innovative idea, initiative and creativity and the spirit of synergy, knowledge interaction and most importantly continuous learning have been spread within these organizations. As the result, the sixth proposition derived from this category can be summarized as follows:

Proposition 6 The consequences of entrepreneurial strategic renewal are leveraging industrial position, growth of sales in local market, penetration to the foreign market and inspiration of the entrepreneurial culture in organizations.

Finally the coherent process model of entrepreneurial strategic renewal is presented in Fig. 2.

5 Conclusions and Discussion the Contribution

Recently, increasing attention has been addressed towards strategic renewal and the ability of firms to engage in strategic renewal is a fundamental issue that concerns both the fields of entrepreneurship and strategic management. Although, despite the considerable research in both fields, questions concerning the conditions leading to strategic renewal efforts and the outcomes of such efforts have not been fully resolved (Scifres et al. 2016).

Researchers in the corporate entrepreneurship referred to strategic renewal as a corporate entrepreneurial process of applying innovation for renewing the firm and to achieve the competitive advantages. However, the strategic renewal, has not been considered inherently in the context of corporate entrepreneurship. Thus, the purpose of the study was to manifest the inherent entrepreneurial process, content and outcome of strategic renewal as an aspect of corporate entrepreneurship and to develop a coherent theory which describe the entrepreneurial strategic renewal process.

As the result, the research has demonstrated that the entrepreneurial strategic renewal is the processes of reconsidering the organizational capabilities as a way to balance the exploration and exploitation of opportunities. This is in line with the Kwee (2009) which indicated that the balancing between the exploration and exploitation concurrently over the time is positively influenced strategic renewal.

We argued that the process entrepreneurial strategic renewal is responsive to intra-organizational inappropriateness, extra-organizational challenges, as well as to the governmental, economical, societal, cultural, geographical, regional, and industrial and market conditions. Prior strategic renewal studies have also emphasized that the environmental context impacts the organizations' renewal activities (Agarwal and Helfat 2009; Flier et al. 2003; Schmitt et al. 2016a). For instance Kwee (2009) stated the aligning the firms' internal rates of change with the external rate of change of their environments as an influential factor on strategic renewal.

The findings are also indicative that within the entrepreneurial context, the interactional strategies of entrepreneurial strategic renewal are consisting of product regeneration, organization revitalization, marketing mix reformulation and business model renovation strategies.

Eventually, as a final point the findings have highlighted that the implementation of entrepreneurial strategic renewal is resulted in leveraging the industrial position, growth of sales in local market, penetration to the foreign market and inspiration of the entrepreneurial culture in organizations. Here Rajagopalan and Spreitzer (1997) has also mentioned the impact of various changes in magnitude and direction, as well as the environmental conditions of the firms as the result of strategic renewal operation.

This research makes a number of important empirically grounded contributions. First, while previous studies made significant contributions towards strategic renewal as the way to build innovative capabilities to confront changes in the environment (Rajagopalan and Spreitzer 1997). We further illustrated the other various potential of strategic renewal in corporate entrepreneurship context. We indicated the firm's propensity for exploring the entrepreneurial opportunities and further exploiting them proactively. The balance between these two action would pave the way for innovation in term of business model renovation, product regeneration or organization revitalization.

Second, While strategic renewal has often been defined as a process, prior empirical studies frequently took a rather static approach (Ben-Menahem et al. 2013; Schmitt et al. 2016b), We illustrated the "when", "where", "how" and "why" state under which organizations adopt and not just temporal strategic renewal

process which is raised from an entrepreneurial context. This is in the line with Kwee et al. (2011) who have argued that the strategic renewal manifests in trajectories, which are continuous processes of multiple, different renewal activities.

Third, past strategic renewal studies have generally focused either on identifying contingency factors that drive organization in to renewal, or renewal activities and their outcomes that influence the firm's subsequent renewal behavior (Volberda and Lewin 2003). Our research specified the process, content and outcome of the strategic renewal and its potential for affecting both the prospects of organizations and industry.

Forth, while previous research mostly described strategic renewal as an inter-organizational phenomenon (Schmitt et al. 2016b), we investigate the causal conditions leading to occurrence of strategic renewal, external situation which give rise to the occurrence of its interactional strategies, the characteristics of context, where it occurs, as well as its long-term and outcome for both organization and industry.

Findings of this study have implication for large complex multiunit organizations which have corporate entrepreneurship characteristics, especially those in emerging markets. Our model of entrepreneurial strategic renewal will allow these organizations to consider their macro and micro environments as both constraining and facilitating, leading them to renew their structures, also will enable them to adopt their strategies in the markets based on opportunity identification, discovery and exploitation.

Finally this chapter has provided a clear framework and a new lens to investigate the new concept of entrepreneurial strategic renewal and to guide future research. It's worth mentioning that the model needs to be further refined and tested empirically using cross sector and cross national samples in order to enhance its generalizability.

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Measuring the Competitiveness Factors in Telecommunication Markets



Md. Nekmahmud and Shafiqur Rahman

Abstract Telecommunication sector has emerged as the fastest growing tech market in the world. This chapter measures the competitiveness of factors in telecommunication markets and focuses on service quality and customer satisfaction in telecommunication markets. Moreover, this chapter is mainly descriptive in nature and, is conducted based on a mixture of primary and secondary data. It proposes an approach to develop the conceptual framework of service quality, competitive factors of customer satisfaction and loyalty in the telecommunication markets. It is also proved in the constructed model and hypotheses development on the six-independent competitive factors and those are value-added service (VAS), price and tariff, conveniences, customer care which has a positive significant influence on customer satisfaction, communication and coverage and sales promotion which has a negative influence on customer satisfaction in telecommunication markets. It emphasizes on emerging telecommunication markets where having seven features as emerge from the change in technology, change in Government law and regulation, change in value-added service, change in social media demand, change in sales promotion, change in user behaviour and change in market competition. A summary of the main findings of the study has been presented with addressing managerial implications and recommendations in telecommunication markets. The chapter can help researchers to generate new thoughts and service provider of telecommunication operators to retain the customer on the basis of findings.

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1 Introduction

The telecommunication sector is playing an important role in the economic development of any country because of increased progress in technology and a massive competition among all service providers in telecommunication sector (Roos and Edvardsson 2008). Due to privatization and liberalization of policy, telecommunication sector is experiencing phenomenal global change all over the world (Beard and Hartmann 1999).

In the age of information communication technology (ICT), usage of mobile phone or cell phone is increasing and business environment of developing country is becoming more competitive day by day. Mobile phone or cell phone is the most lucrative weapon that helps to keep in aware of the changes of information (Huq et al. 2015). Mobile or cell phone is such a device that has made the communication easier, even for the countryside people (Lee et al. 2001).

Telecom sector has emerged as the quickest rising telecom market in the world. With more reasonable services, expanded penetration and a supportive government, alongside the regular drop-in tariffs in the sector have brought significant changes in a number of consumers and usage of mobile telecom services (Sinha and Wagh 2008). Today's telecommunication is an inseparable part of our everyday life. Besides, nowadays cell phone is becoming more popular and user-friendly device due to its convenient using and availability of low-cost to communicate with all classes of people. Gender, occupation, education, and income level of the consumer have a strongly significant influence on attitudes towards the usage of smartphone (Nekmahmud et al. 2017). It is projected that Bangladesh will be the third biggest telecom market in Asia after China and India (Uddin and Akhter 2012; Hasan 2008). According to The Mobile Economy Report 2017, 65% of the world's population had a mobile subscription—a total of 4.8 billion unique mobile subscribers at the end of 2016. The total is set to reach five billion in mid-2017. By 2020, almost 860 million new subscribers will be added, taking the global penetration rate to 73%. Regional penetration rates are forecasted to range from 50% in Sub-Saharan Africa to 87% in Europe. Total mobile revenues reached \$1.05 trillion in 2016, up 2.2% in 2015, marking the second consecutive year of rising revenue growth.¹

The mobile platform is emerging as the single most powerful way to extend economic opportunities and key services to millions of people, said World Bank economist (Qiang 2009). The telecommunications industry is one of the leading contributors to economic growth, mainly in developing countries. In addition to the economic contribution, the telecom industry also influences the growth and advancement of many other sectors including education, health, e-governance and rural development. In 2016, mobile operators and the ecosystem provided direct employment to more than 11 million people globally. In 2016, around 17 million extra employments were indirectly supported in this way, bringing the

¹The Mobile Economy 2017, website at www.gsma.com

aggregate effect (both direct and indirect) of the mobile industry to more than jobs.² This excessive economic activity produced a further \$430 billion, in 2006. Furthermore, the utilization of mobile technology also improves the productivity for workers and businesses, which was 1.85 trillion in 2016. Finally, if we consider the total impact of mobile phone productivity, directly and indirectly, it accounts for 3.3 trillion in 2016 equal to 4.4% of global GDP. Agribusiness is the main contributor to GDP in emerging markets and the biggest employer. Mobile technology is uniquely situated to deliver the critical information quickly that rural smallholder farmers require, empowering them to make better decisions and investments that increase their productivity and profit. Telecommunications operators help to achieve the SDGs. The ubiquity and affordability of mobile technology provide a unique platform for improving and enhancing social and economic development. The GSMA 2016 Mobile Industry Impact Report, which evaluates the performance and impact of the telecommunication (mobile) industry on the SDGs, fields that mobile is already contributing to all 17 SDGs to changing degrees. Globally, the industry has already connected 4.8 billion people, where including 3.6 billion people in developing countries, as long as access to tools and applications that a wide range of socioeconomic challenges in vulnerable communities and also empowering new technologies and innovations for building all the more effectively and environmentally sustainable societies.³

The spread of information and communications technology and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies (p. 5).⁴

Telecommunication core service usually comprises of networks to use mobile phones, broadband etc. and support service usually support and facilitate the core service (Vargo and Lusch 2004a, b). “The most important thing for telecommunications companies has to be developed for achieving customer’s loyalty, quality and satisfaction” (Roos and Edvardsson 2008, pp. 87–107). A global research identified that higher service quality gives customer’s satisfaction and loyalty, greater willingness to commend to someone else, improve customer retention rates and reduce complaints (Danaher 1997; Mägi and Julander 1996; Levesque and McDougall 1996 cited in Dhandabani 2010). The mobile telecommunication companies in Bangladesh are aiming at providing cost effective and quality services to the customer (Neogy 2014). Consumer satisfaction and loyalty is long-term agenda for each mobile telecom company. Without the customer’s satisfaction, the mobile telecom operator companies can’t run long term with successfully. Customers’ fulfillment relies upon the distinctive service, which shows the mobile telecom operator companies for their customers. Customers’ satisfaction has now become a major concern of the mobile service providers (Hossain et al. 2012a, b).

²GSMA Intelligence Analysis.

³Mobile Industry Impact Report 2016: Sustainable Development Goals, GSMA, 2016.

⁴Transforming our world: the 2030 Agenda for Sustainable Development, United Nations (UN).

The chapter basically highlights the competitiveness of factors in telecommunication markets. At the same time, however, we measure the service quality and customer satisfaction on telecommunication markets in developing countries. The chapter addresses the attributes of service quality that affects the users in the selection of the different mobile phone operators in developing country of Bangladesh. This finding of the chapter helps the telecommunication operators to manage their business and improve their service quality.

In this chapter, we focus on the present scenario of telecommunication markets in the world. The literature review includes reviewing some important theories such as service quality, customer satisfaction, and loyalty on telecommunication markets of the previous study is presented. It attempts to differentiate the present study from the past studies in telecommunication markets.

Our approach explores some factors that are affected by emerging telecommunication market. We also measure some competitiveness of factors in telecommunication markets, which have a significant influence on customers' satisfaction and loyalty. Then the methodology deals with the selection of a sample of respondents, sources of data, methods of data collection, research questionnaire, measurement techniques, and processing and analysis of data in perspective in Bangladesh. The chapter proposes an approach to develop the conceptual framework of service quality, competitiveness factors of customer satisfaction and loyalty in telecommunication markets. It is also proved in the construction of model and hypotheses development.

A summary of the main findings of the study has been presented. At the end, the chapter will be concluded by addressing a set of recommendations and suggestions with a view to improving customers' satisfaction towards the service and competitiveness factors in telecommunication markets.

2 Present Scenario of Telecommunication Markets in the World

A recent GSMA's 'Mobile Economy' global edition report of 2017 revealed that the five billion-subscriber milestones are expected to be achieved by mid-year 2017 and 5.7 billion by the end of this decade, globally. Asian markets such as India is predicted to add 310 million new unique subscribers by the end of this decade.

GSMA Intelligence and Ericsson report slightly differ for both unique users and active mobile connections, total the unique number of mobile users is 4.9 billion and mobile connection is 8.0 billion. According to Ericsson mobile report, at present, there are 5.1 billion of unique individual mobile users and 7.5 billion

mobile connections. So, the overall trend is clear: mobile phones have become an indispensable part of today's life for most people globally.^{5, 6}

The recent data also strongly indicate that over half of the world's inhabitants use the smartphone, which is yet another major milestone included in this year's report. However, the number of the mobile user varies from country to country and region to region. South Asia and Africa are having the world's lowest levels of connectivity compared to the populations. On the other hand, people in Eastern Europe are enjoying the highest number of active mobile connections.

The top ten telecommunications companies of the world, each having a market value of over \$50 billion. To serve world's fast-growing telephone and wireless connection demands, the telecommunications industry is expected to expand further. Increased number of individuals in emerging markets is subscribing telephone and internet connection day by day. Also, new telecommunications technologies in developed nations are expanding among the pre-existing customers. Although several companies' can distinguish the top telecommunications companies globally, market value aids as the determining factor that arranges the list of the top ten companies in this sector (Table 1).^{7, 8}

Bangladesh enters the mobile telecom world through the Citycell (Pacific Bangladesh Telecom Limited) in 1993. At present, there are six (Grameenphone, Robi, Banglalink, Airtel, Citycell and TeleTalk) mobile telecom operator companies in Bangladesh. The total number of mobile phone subscriptions and internet subscribers has reached 129,584 and 67,245 million at the end of February 2017. The mobile phone subscribers of different companies are Grameenphone (59,306), Banglalink (31,309), Robi Axiata (27,017), Airtel (8219), Teletalk (3733).⁹

3 Literature Review on Customer Satisfaction

Marketing scholars have thoroughly studied customer satisfaction (e.g. Oliver 1980, 1999; Johnson et al. 2001; Anderson et al. 2004; McQuitty et al. 2000; Eshghi et al. 2008). "Satisfaction as a person's impression of pleasure or dissatisfaction resulting from comparing a product's perceived outcome in relation to his/her anticipations" (Kotler and Keller 2009, p. 128). Many other studies have supported this definition, for example, Tse and Wilton (1988) and Oliver et al. (1997). Other scholars defined

⁵GSMA Intelligence report, web site at <http://gsmaintelligence.com/>

⁶Ericsson report, web site at <https://www.ericsson.com/mobility-report>

⁷Investopedia, The World's Top 10 Telecommunications Companies!Investopedia website at <http://www.investopedia.com/articles/markets/030216/worlds-top-10-telecommunications-companies.asp#ixzz4mXnU2RKo>

⁸Web site at <http://alert-komunikacije.com/2016/10/31/top-10-telecom-companies-world-2016/>

⁹Bangladesh Telecommunication Regulatory Commission (BTRC) Report 2017, website at <http://www.btrc.gov.bd>

Table 1 Top 10 telecommunication companies list in the World and its subscriptions

Rank	Company	Country (main market)	Total Subscriptions (in million)	Country origin
1	China mobile	China Mobile operates over four countries: Mainland China, Hong Kong, Pakistan, Thailand	859.9 (April 2017)	China
2	Vodafone	Vodafone has a reach of more than 150 countries	469.7 (September 2016)	United Kingdom (UK)
3	Airtel	Airtel serves more than 21 countries	372.4 (March 2017)	India
4	America Movil	America Movil has a reach of 18 countries in the Americas and 7 countries across the Europe	279.8 (March 2017)	Mexico
5	Telefónica	Telefónica has a present from over 22 countries	274.1 (March 2017)	Spain
6	China Unicom	China Unicom provides services in the chain	267.3 (April 2017)	Chain
7	Veon	Veon provides services more than 18 countries	237.7 (March 2017)	Netherlands
8	MTN Group	MTN operates in over 20 countries	236.8 (March 2017)	South Africa
9	China Telecom	China Telecom operates in the chain	224.1 (March 2017)	Chain
10	Orange	Orange is present in about 28 countries in the Europe	203.5 (March 2017)	France

Source: Wikipedia

customer satisfaction as the feeling of customers toward a product/service once it has been used (Solomon 1996; Wells and Prensky 1996; Hansemark and Albinsson 2004).

A customer becomes satisfied, if the perceived performance matches or exceeds his/her expectations. On the other hand, when perceived performance goes below expectations, the customer gets dissatisfied (e.g. Oliver 1993; Mittal et al. 1999; Westbrook and Oliver 1991; Banker et al. 2000). So, satisfied customers repeat the purchase, become brand loyal, spread positive word-of-mouth advertising, leading towards increased sales (Dispensa 1997; Aaker 1992; Fornell 1992; Oliver et al. 1997). Conversely, dissatisfied customers may not buy the product, spread negative word-of-mouth advertising, leading towards the decline of (Day et al. 1981; Hirschman 1970). All the above indicate the importance of identifying customer satisfaction (Metawa and Almossawi 1998).

“Friendly, courteous, knowledgeable, helpful employees, the accuracy of bills, competitive pricing, and service quality impact customer satisfaction” (Bamfo 2009, pp. 299–311). Some customer satisfaction studies identified positive correlations between importance quality and customer satisfaction (Cronin and Taylor 1992; Taylor and Baker 1994). A few other studies also identified that service excellence plays a key role in customer satisfaction (Bartell 1993; Kotler and

Armstrong 1991; Bitner 1990; Chitwood 1996). Consequently, many companies apprehend that customer satisfaction must begin from their employees' satisfaction (Bitner 1990; Surprenant and Solomon 1987; Lian 1994; Gremler et al. 1995). Exceed customer's expectations, friendly behaviour & efficient employees, fair price, competitive service quality, repeating to purchase, brand loyalty, positive word-of-mouth and comfortable environment are facilitated to determinant customer's satisfaction (Nekmahmud et al. 2016).

4 Service Quality

“Service quality is the gap between customers' expectancy and actual performance of a service” (Parasuraman et al. 1985, p. 42, 1988, p. 17). Parasuraman et al. (1988) developed the SERVQUAL model, where assurance, reliability, responsiveness, empathy, tangible are key elements.

According to Yang et al. (2005, p. 578), “service quality depends on the usefulness of content, usability, adequacy of information, interaction and accessibility”. Besides, Kuo et al. (2009) proposed four dimensions of service quality of mobile value-added services, which include customer service and system reliability, navigation and visual design, content quality, and connection speed.

5 Customer Satisfaction in Telecommunication Markets

Service quality has a positive impact on satisfaction and loyalty. Such a positive relationship between service quality and satisfaction is supported by many studies, for example (Sureshchandar et al. 2003; Cronin et al. 2000; Caruana et al. 2000; Negi 2009; Agyapong 2011).

Customer satisfaction is explained by customer services, personal and market factor, perceived quality, perceived value, technological advantages and company image have positively related to customer satisfaction except for customer services (Uddin et al. 2014). According to Islam and Rima (2013) stated that core service, product variation, and promotion have a significant influence on the customer experience that significantly affected by core activities of telecommunication services like network, promotion and product variety. Hossain and Suchy (2013) identified six factors of customer's loyalty, which are communication, value-added service, price structure, convenience, customer service and sales-promotions. The result indicated that excluding for sales-promotion, all other five factors are having positive correlations with customer loyalty.

According to Arokiasamy and Abdullah (2013, p. 1), “all service quality dimensions of SERVQUAL model positively induced customer satisfaction in terms of loyalty and attitudes, although there was a significant gap between the perceived satisfaction and expectancy on these service quality dimensions”. Almossawi (2012) stated that payments and savings (such as offers, rents, and charges) are

the most significant in determining satisfaction, retention, and likelihood of switching from one mobile provider to another. Customer service, friendly employees, and user-friendly websites were found to be the least significant. On the other hand, Hossain et al. (2012a, b) emphasized that there are some factors including quality of air time, service of the information centre, service of the helpline, and high billing rate are acting behind customers' dissatisfaction and need to be improved to gain higher market share.

Leelakulthanit and Hongcharu (2011) investigated that promotional value, quality of customer service at shops and corporate image play the most important role in determining customer satisfaction. According to Alireza et al. (2011) addressed that customer satisfaction plays a significant mediating role in relationships from service quality, corporate image, and perceived value of loyalty. Loyal customers tend to remain longer with their service providers. Service quality is the determinant of customer satisfaction (Cronin and Taylor 1992) and by ensuring good service quality; telecom operators can enrich customer satisfaction (Kuo et al. 2009). Osei-Owusu and Henten (2017) highlighted that the communal lands constitute the dominant land proprietorship system. The authors further added that it when it faces a private ownership system, a number of land ownership cases were grown increasing the costs for the telecom companies. It has been calculated that the total transaction costs in terms of the ownership issues related with mobile towers were estimated between GHC 6.9 and 13.9 million in 2015.

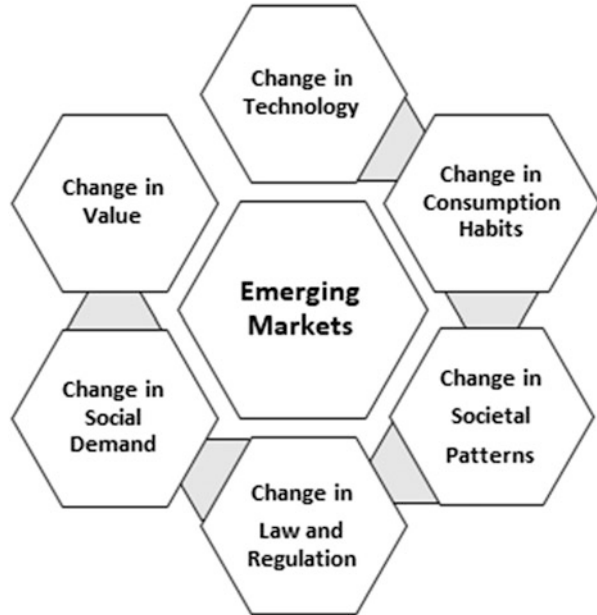
Malik et al. (2012) stressed that brand image, service quality, and price are correlated to customer satisfaction. Interestingly, there was a negative correlation of customer satisfaction with the price, and positive correlation with brand image and service quality. Khan (2012) identified that many factors have impacts on customer satisfaction, but price fairness, coverage and customer services were three major factors highly impacted the customer satisfaction.

Loke et al. (2011) attempted that reliability, assurance, responsiveness, and empathy significantly positively inclined towards customer attitudes in terms of loyalty. Furthermore, a significant gap between the perceived satisfaction and importance of all of the service quality dimensions was also found. Alom et al. (2010) interviewed that two factors, brand image, and perceived call rate, to have the most influence in the consumers' selection decision of a mobile service provider in Bangladesh. Kabir et al. (2009) looked for the presence of a significant direct relationship between service quality and customer satisfaction. It has also recognized that switching costs, service quality, and trust is significant forecasters of customer loyalty. Among other factors, trust has been identified to be the most significant forecaster of customer loyalty.

6 Emerging Telecommunication Markets

“Emerging markets are high-growth developing countries that represent attractive business opportunities for Western firms that share remarkable features in terms of economic potentials” (Cavusgil 1997, p. 87). According Emerging to Markets

Fig 1 Emerging markets as output of changes (Source: Khajeheian 2017b)



Directory “An emerging market is a country trying to change and improve its economy with the goal of raising its performance to that of the world’s more advanced nations”. “Emerging markets are those markets that emerge from changes: change in technology, change in demography, change in law and regulation, and change in media” (see Chap. 2 by Feldmann and Zerdick 2005, pp. 19–29). Khajeheian (2017b, p. 3) develops their definition in ‘emerging media markets are those that emerge from changes in (1) technology, (2) consumption habits, (3) societal patterns, (4) law and regulations, (5) social demands, and, (6) values (See Fig. 1).

Emerging telecommunication markets are those as emerge from a change in technology, change in Government law and regulation or political change, change in value-added service, change in social media demand, change in sales promotion, change in user behavior, change in market competitions. A range of the characteristic of emerging telecommunication market is illustrated in Fig. 2.

Technological environment forces that create new technologies, creating new product and market opportunity (see Chap. 3 by Kotler and Armstrong 1991). A technological change or up gradation has a great influence on emerging telecommunication markets. New technology expands the existing market and increases the new market with large share. Changing technology brings an inordinate revolution on telecommunication markets. In addition, the fast change of technologies gives rise of too many new markets while many existing markets diminish (Khajeheian 2017a).

Companies native to emerging market countries have grown in prominence in the twenty-first century. In emerging markets, regulations and policies are some of the main factors that are shaping the industry (Venkatram and Zhu 2012). The importance of regulatory and policy changes is stressed upon in order to adapt to the

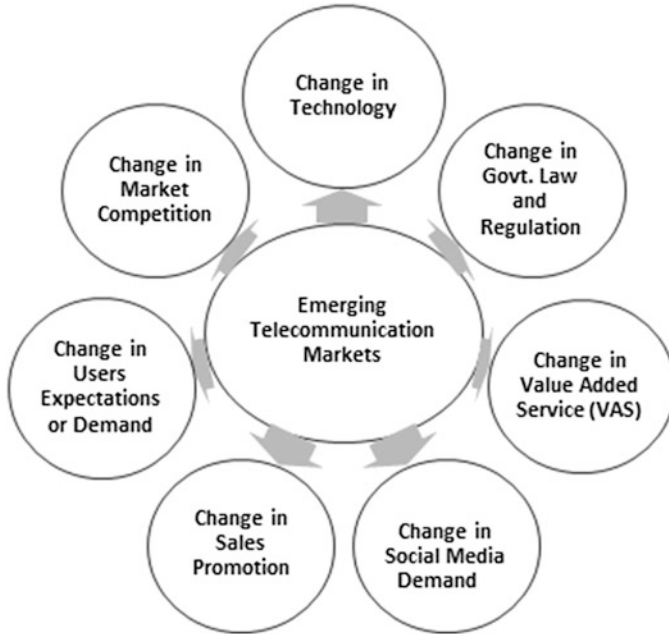


Fig. 2 Emerging telecommunication markets (Source: Elaborated by Authors)

future and maintain the growth rate of the telecom industry (Bhattacharya 2001; USCC 2011). The role of the government is a vital advocate of the industry, employing a host of policies to support directly to the competitive performance of target industries (Porter 1990). The telecom companies with the most exposure to emerging markets are usually the ones that are politically favoured. Telecommunication companies flourish in emerging economies based on the political and regulatory context as well as their business expertise. Telecoms businesses are regulated by the governments, and require licenses to operate. For example, Vodafone, a U.K.-based telecommunications companies spent many years to peruse the policy makers in India to allow it access to consumers (Ross 2015).

A large number of competitors in telecommunication markets offer similar products and services and increase its value line with the core services. Value-added service is the most changeable characteristic in emerging telecommunication markets. In emerging telecommunication market, value-added service depends on demography variable such as location, gender, race, occupation, education, generation, income, and technology. Telecommunication operators offer a large number of value-added services (e.g. caller tunes and alerts, friends and family (fnf) facilities, mobile banking, internet speed, missed call alert and call block facilities, entertainment, insurance coverage, caller identity display, conference call, online service etc.), which raise the market growth and profit that support to change markets.

A central feature of the Internet is its nature as a network, which fosters the emergence and development of positive externalities (see Chap. 2, Feldmann and Zerdick 2005). In emerging market, social media is the vital part of

telecommunication industry. Different kinds of social media (e.g. Facebook, Twitter, LinkedIn, Google plus, Instagram, Tagged, Skype, Tumblr, Flickr, Meet up, Vine etc.), are connecting the world as a global village. Without a SIM card, it is not feasible to use the social media. The users connect with social media network by using SIM card or telecom operator. Social media interconnects with telecommunication markets. It is building the new markets and the market growth. Social media exposes the emerging markets by providing new innovation.

Although sales promotion does not a huge effect on emerging market, but companies always try to make a sustainable relationship with its customers. Various types of sales promotions are offered to the customer to attract the new markets. Sales promotion has a sound contribution in emerging and economic development in Asian developing countries like India, Bangladesh, Nepal, and Maldives.

Market competition strategy is changing. Telecommunication companies take different types of competitive marketing strategy to stay in markets. Customer demand or customer expectations rapidly changes and customers are always searching out for innovative packages or services (Khajeheian 2017b). Thus telecommunication industry always tries to fulfill the customer expectation and satisfies their demand by expanding the emerging market.

Competition is one of the important characteristics of the emerging telecommunication markets. The intensity of rivalry in a competitive market is the major determinant of the competitiveness of the industry. The importance of industry competition force is the number of competitors and their ability to threaten a company (Porter 2008). Telecommunication industry has an existing strong competition to expose the emerging market. Telecommunication operators always hardly compete with existing competitors to keep up its present market share and revenue (Nekmahmud and Rahman 2016). So, it has a strong influence in emerging telecommunication market. The telecommunication industry helps by extending and upgrading its infrastructure, connecting remote and underserved communities, stimulating economic participation, and supporting new telecommunication innovation.

7 Competitiveness Factors in Telecommunication Markets

7.1 Communication and Coverage

Communication guarantees that negotiable call failure rates are to be influenced by the loyalty. All telecommunication operators updated their technological communication coverage, e.g. connection, network coverage, wire line voice, internet and GPRS, signal quality, international roaming etc. in the world. Communication and coverage are the first steps to enter the emerging market. Moreover, network coverage, signal quality, uninterrupted communication, international roaming facilities are significant competitive factors for building the loyalty of telecom market of

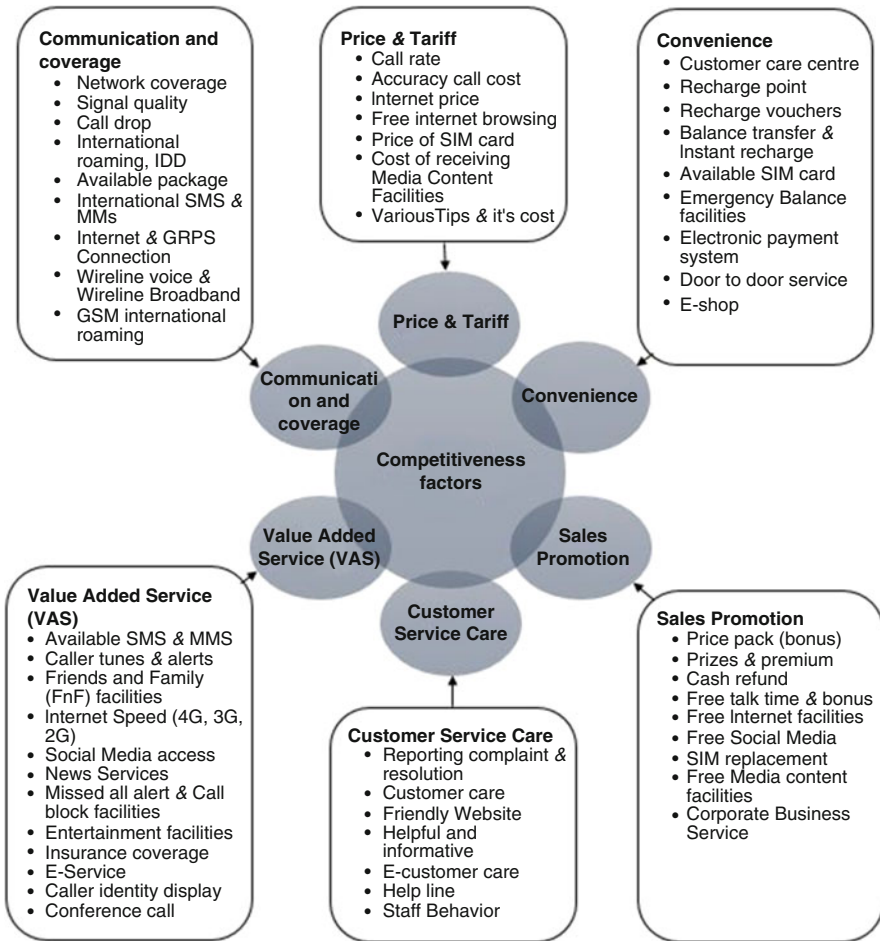


Fig. 3 Competitiveness factors in telecommunication markets (Source: Elaborated by Authors)

Bangladesh (Hossain and Suchy 2013). If the certain cellular company fails to provide coverage where customer needs, then it will lead to customers' dissatisfaction. Firstly, users use the operators by considering the communication and coverage factors. If the operators are unable to provide better communication and coverage, users or subscribers will switch to other operators. A range of characteristics of communication and coverage in telecommunication is illustrated in Fig. 3.

7.2 Value-Added Services (VAS)

A value-added service (VAS) is popular in the telecommunications industry. There are two common reasons why the value is added to a product or service: (1) to satisfy customer needs (2) to create profits for the company and shareholders. “Value-added services are service options that are complementary to but also ancillary to a core service offering” (Managing Value 1995, p. 6). Value-added is an economist’s term meaning that the service offered would have added value to the user compared with more basic telecommunications (or other) services. The DTI, Value-added and data services, which define anything beyond the basic telephone, telex and leased line services as being of a value-added nature (Collins 1986, pp. 193–218). The term for non-core services, or in short, all services beyond standard voice calls and fax transmissions. Value-added service and customer loyalty embrace a positive relationship. Value-added services include SMS, MMS, GPRS facilities, caller tunes and alerts offered by the service providers that quickly come into focus and considered important by the users in case of building loyalty towards the operator of the telecom market of Bangladesh (Hossain and Suchy 2013). It also highlights the continuing growth of the importance of value-added services, including mobile Internet, multimedia services, location-based services and camera-enabled phones, as mobile telecommunications technology evolves rapidly. Mobile carriers must concentrate their efforts on developing value-added services to increase enjoyment and convenience (Kim et al. 2004). Value-added services are attitude, followed by perceived ease of use, perceived cost, and perceived usefulness. Service providers need to develop mobile value-added services (Kuo and Yen 2009). Which types of Value-added service offered by the telecommunication that is as shown in Fig. 3.

7.3 Price and Tariff Structure

Customers perceptions about the price of a product or service are the determinants of supply and demand they also resonance that price is a sign of product or service quality. Also, customer satisfaction is echoed by the price consciousness (Lyer and Evanschitzky 2006; Varki and Colgate 2001). Similarly, the price level, value for money, and special offers may impact both satisfaction and dissatisfaction. Furthermore, among others price fairness, price possibility and price perceptibility may dissatisfy the customers (Zielke 2008). Additionally, the various levels of price, product, and a combination of price consciousness scopes are having the potentiality to terrify the customers’ satisfaction (e.g. Diller 2000; Pramhas 2004; Matzler et al. 2006). Customers can be enticed to a retail store by utilizing price and special promotions (Grewal et al. 1998). Figure 3 illustrates Call rate, internet price, price of SIM (Subscriber Identity Module) card, costs of receiving media content facilities, various tips and its cost, accuracy call cost etc. are significant competitive

factors in the telecommunication markets in the world. Market penetration pricing and tariff structure to help keep it up its existing customers and attract the new customers. Users always consider lower pricing and tariff structure. Price and tariff structure is moving factors in telecommunication markets.

7.4 Convenience

Convenience has a positive correlation to customer satisfaction and loyalty. It is also evident that customers “convenience to reach customer care centre and availability of recharge points and vouchers can influence customer loyalty” (Hossain and Suchy 2013, p. 78). Figure 3 shows as convenience characteristic in telecommunication markets.

7.5 Customer Service Care/Point

Customer care is initially concerned with the perceptions of an organization reflected in associations with reaching customers. Customer service can be defined as a system of activities that comprise customer support systems, ease of reporting and speed of processing complaints; friendliness when reporting complaint (Hossain and Suchy 2013). “Handling customer-complaint effectively leads to customer satisfaction” (Jawaria et al. 2009, p. 4). The promptness of all these activities grounds for creating customer loyalty towards the service operator in the telecom market in Bangladesh. Customer service care is a comparatively new practice of mobile telecom operators in Bangladesh but their presences have partially influenced customer loyalty. Different types of customer service care in telecommunication in the world are illustrated in Fig. 3.

7.6 Sales Promotion

Sales promotion can be defined as short-term incentives to encourage the purchase or sales of a product or service (see Chap. 3 by Kotler and Armstrong 1991). Sales promotion has a significant impact on consumer’s brand choice, purchase time, and purchase quantity decision (Khan 2012; Hossain and Suchy 2013). In Bangladesh, the mobile telecom operators are intensifying their offerings in case of sales promotions (bonus, price-offs) to attract existing and new customers (Hossain and Suchy 2013). Sales promotion can affect the consumer’s buying decision, such as brand choice and brand switching (Oyeniyi 2011). The purpose of sales promotion is to increase the cellular subscribers; therefore, cellular companies offer extra free minutes, limited offer to get double balance, free VAS, MMS at low rate etc. (Shahzad Khan 2012). Sales-promotion services divert attention to financial

incentives and encourage brand-switching behaviour, as well as increased price sensitivity, which minimizes the importance of quality criterion (Omotayo 2011; Aaker 1996). Figure 3 shows as the different types of sales promotion activities that are offered to the customer.

8 Customer Satisfaction on Loyalty

According to Foss and Stone (2001), customer loyalty relates to what customers think and do (or try to do). As mentioned earlier in the literature review that in marketing literature, a strong positive correlation exists between customer loyalty and customer satisfaction (Donio et al. 2006; Cheng et al. 2008; The story and Hess 2006). Most of the studies concluded that customer satisfaction is an indicator of customer loyalty (e.g. Faullant et al. 2008; Terblanche 2006; Leverin and Liljander 2006). Communication, price, value-added service, convenience in usage and customer service are positively related to customer loyalty and less-promotion is not related to the customer loyalty (Hossain and Suchy 2013).

Figure 4 highlights that customer satisfaction on telecommunication depends on six competitiveness factors. Strong communication and coverage, customer’s expected price and tariff, available convenience package, offering superior value-added service, exciting sales promotion and effective and friendly customer care satisfy the customer wants and demands. If customers are satisfied that it helps mark the customer loyalty to the particular telecommunication operator. Customer loyalty makes the sustainable and profitable relationship, which helps to emerge the telecommunication markets.

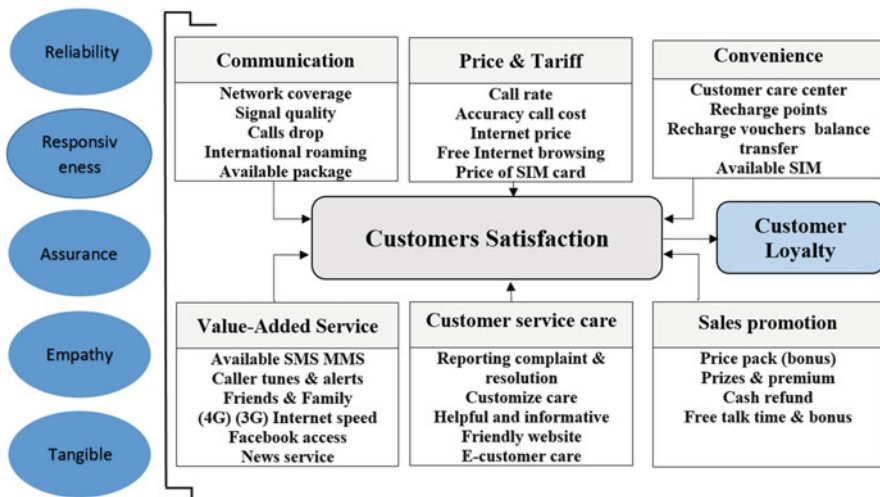


Fig. 4 Conceptual framework of service quality, competitiveness factors of customer satisfaction and loyalty in telecommunication markets (Source: Elaborated by the authors)

9 Hypotheses Development

H₁ Communication and coverage has a significant influence on customer satisfaction in telecommunication Market in Bangladesh.

H₂ Value-added services (VAS) has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₃ Price and tariff has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₄ Convenience has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₅ Customer service care has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₆ Sales promotion has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₇ There is a positive correlation between customer satisfaction and customer loyalty in the telecommunication market in Bangladesh.

10 Methodology

The chapter has been designed to measure the competitiveness of factors in telecommunication markets. It also highlights the service quality and customer satisfaction on telecommunication market in Bangladesh. This study is descriptive in nature and conducted based on a mixed of primary and secondary data. The designated population for the study includes all customers who regularly use SIM card of different mobile phone operators in Bangladesh.

The random sampling method is used to select respondents from developing a country of Bangladesh. Primary data were collected over a 4 months' period during the October 2016 to January 2017. The field survey method is used to collect primary data by taking direct interviews through the questionnaire and observation. The secondary data are collected from different sources such as previous articles, books, different related publications, news, reports, and websites etc.

A questionnaire was designed which has been considered as the major tool of study. In the questionnaire, respondents were asked 45 questions those are usually considered for telecommunication. To develop the research questionnaire and collect data from the determined sample, the extended semantic differential scale was used in this study. To get the respondents original and active opinion, Liberty's 7 (Seven) point rating scale is used. Where, 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither Agree nor Disagree (Neutral), 5 = Somewhat agree, 6 = Agree, 7 = Strongly Agree.

The questionnaire was designed in three (3) parts. The first part identifies respondents' specific demographic criteria and some basic questions about mobile operators were framed; the next part includes 29 measurement questions of identifying dependable variables sales promotion, value-added service (VAS), price and tariff structure, customer service care, communications and convenience competitiveness that measure the service quality and customer satisfaction on telecommunication market in Bangladesh, Third part includes five factors under two dependable variable of customer's satisfaction and loyalty that measure the customer's present satisfaction on the brand loyalty. For this research, data are collected from direct and online interviews through the questionnaire. In this study, researchers distributed 390 questionnaires to respondent for measuring the service quality and customer satisfaction on telecommunication markets in Bangladesh. Among them, 340 respondents returned the completed questionnaires. Because of respondent's inability, unconsciousness, and excessive missing values, we had to drop 40 questionnaires. Lastly, the size of the sample stands at 300 (three Hundred). The collected data were analyzed by various statistical tools and techniques, which includes frequency distribution, reliability test (Cronbach α) and factor analysis (KMO and Bartlett's test). We also conducted multiple regression analysis using IBM SPSS (Statistical Package for Social Science) 20.0 version to test the hypotheses.

11 Results and Discussion

The summary of respondents' demographic statistics, Table 2 shows that 74.2% ($n = 230$) male and 25.8% ($n = 80$) female. The age of respondents belongs to less than 20 years ($n = 16$) 5.2%, 20–25 years ($n = 148$) 47.7%, 25–30 years ($n = 62$) 20.0% and 30–35 years ($n = 44$) 14.2%, above 35 years ($n = 40$) 12.9%. Here, the analysis also illustrates that 60.0% of respondents are students, 15.2% of belonging to service holder, 13.5% of business people and 6.1% of household and rests of them are retired and other professionals.

Table 3 Exhibits that 3.9% of customers use their current SIM less than 1 year, 5.8% of customers 1–2 years, 9.4% of customers 2–3 years, 13.2% of customers 3–4 years and 67.7% of customers use their SIM more than above 5 years. 64.8% of customers use Grameenphone, 16.8% use Robi, 12.9% of Banglalink and 1.9% of Teletalk and 3.5% use others SIM operators. 61.0% of customers have 1–3 biometric SIM card, 24.2% of 3–6 SIM card, 7.1% of 6–12 SIM card, and residual 5.2% of customers have 9–12 biometric SIM card. 36.5% of customers recharge to their mobile phone less than 4 \$ per month, 31.0% of recharge to 4–8 \$, 21.3% of recharge to 8–12 \$, and remaining 11.3% of users recharge to 12–16 or above 16 \$ per month to their mobile phone.

The table also demonstrates that 66.1% of customer use the mobile phone for keeping in touch with family member, and rest of 33.9 % of customers use mobile phone for business, office, friends and others motives. 26.8% of customers are

Table 2 Summary of socio-demographic profile of telecom operator users

Profile	Groups	Frequency	Percent
Gender	Male	230	74.2
	Female	80	25.8
Age of the respondent	< 20 years	16	5.2
	20–25 years	148	47.7
	25–30 years	62	20.0
	30–35 years	44	14.2
	> 35 years	40	12.9
Occupational status	Student	186	60.0
	Service holder	47	15.2
	Business	42	13.5
	Household	19	6.1
	Retired	8	2.6
	Others	8	2.6

satisfied to usage mobile phone operator for call rate, 27.4% for the network, 12.9% for internet packages, 10.6% of FnF number, rest of them satisfied to others reasons. 24.2% of customers would like to switch to the others phone operator to attract the call rate, 17.1% for network, 29.7% for internet packages, 8.1% for FnF number, 7.1% for 3G internet speed and others attractive new offers or factors (see Table 3).

11.1 Reliability Analysis

The research computed Cronbach Alpha test to discover the inner consistency that shows reliability of different factors of the survey questionnaire. Reliability analysis has been measured via Cronbach's coefficient alpha to check for internal consistency of the constructs. All constructs had no problems in reliabilities as Cronbach's Alpha values exceeded the criterion of 0.700 (Anderson et al. 2010). Cronbach's alpha has been applied widely in social science and it gives a conventional result and subsequently, analysts recommended composite reliability as an option measure (Wong 2013). An acceptable reliable esteem will be between 0.60 and 0.95 (Hair et al. 2013; Bagozzi and Yi 1988). On the other hand, George (2003) provides a commonly accepted the following rules of thumb for describing internal consistency is: " $\alpha \geq 0.9$ —Excellent, $0.9 > \alpha \geq 0.8$ —Good, $0.8 > \alpha \geq 0.7$ —Acceptable, $0.7 > \alpha \geq 0.6$ —Questionable, $0.6 > \alpha \geq 0.5$ —Poor, $0.5 > \alpha$ —Unacceptable".

Table 4 illustrates that computed value of the Cronbach Alpha of the factors is 0.908, which that implies data is excellent and reliable because the pragmatic value is comparatively higher than the standard reliable value of Cronbach Alpha. Thus, the survey appliance is reliable to measure all constructs resolutely and free from random error.

Table 3 Frequency distribution of customer's general information about telecommunications operators

Variables		Frequency	Percent of respondents
Usage duration of current SIM	< 1 year	12	3.9
	1–2 years	18	5.8
	2–3 years	29	9.4
	3–4 years	41	13.2
	> 5 years	210	67.7
Name of the operator	Robi	52	16.8
	Grameenphone	201	64.8
	Banglalink	40	12.9
	Teletalk	6	1.9
	Others	11	3.5
Total number of biometric SIM card	1–3	189	61.0
	3–6	75	24.2
	6–9	22	7.1
	9–12	16	5.2
	12–15	4	1.3
	15–20	4	1.3
Recharging the mobile phone Amount (\$) per month	< 4 \$	113	36.5
	4–8 \$	96	31.0
	8–12 \$	66	21.3
	12–16 \$	29	9.4
	> 16 \$	6	1.9
Why you are using a mobile phone	Keep in touch with family	205	66.1
	Business	39	12.6
	Keep in touch with friend's	0	0
	Office use	0	0
	Above all	66	21.3
The major reason for my satisfaction to the mobile operator is	Call rate	83	26.8
	Network	85	27.4
	Internet package	40	12.9
	Service package	21	6.8
	Attractive advertisements	8	2.6
	Number of FnF	33	10.6
	Package	6	1.9
	3G speed	10	3.2
Others	24	7.7	

(continued)

Table 3 (continued)

Variables		Frequency	Percent of respondents
I would like to switch to another operator	Yes	88	28.4
	No	222	71.6
Which factors attract to switch the mobile phone operators?	Call rate	75	24.2
	Network	53	17.1
	Internet package	92	29.7
	Service package	12	3.9
	Brand image	4	1.3
	Attractive advertisements	6	1.9
	Number of FnF	25	8.1
	Package	14	4.5
	3G speed	22	7.1
	Others	7	2.3

Table 4 Reliability coefficients

Reliability statistics	
Cronbach's Alpha	No. of items
0.908	34

11.2 Descriptive Analysis

The descriptive analysis of the statistics (Table 5) illustrates that the mean as well as the standard deviation value of all the questions, which have been designed under seven (7) point's semantic scale. According to this scale 7-strongly agree and 1-strongly disagree. The mean of all variables ranged from 2.6548 to 6.1065. Meanwhile, the standard deviation for the below variables ranges from 1.80961 to 1.17620. The observed mean value is 6.1065 or more with little value of standard deviations of all statements that experienced the customers' satisfaction on telecommunication markets in Bangladesh.

The overall mean value of communications (4.5413), value-added service (4.8522), customer service care (4.3226) and customer loyalty (4.4613), which indicates customers somewhat agree towards the service. The mean value of price and tariff structure (3.5890), sales promotion (3.6581) on customer satisfaction variable measure somewhat disagree towards the telecommunication market. Customers agree to the convenience factor mean value, which is 5.0258. The overall result justifies that respondents are showing the multi-coloured attitude towards the telecommunication industry.

Table 5 Descriptive statistics on competitiveness factors of customer satisfaction and loyalty in telecommunication markets

Item statistics					
Constructs	Items	Mean	Std. deviation	Over all mean	Over all std. deviation
Communications	I am satisfied with the network coverage	4.9065	1.56653	4.5413	1.15382
	Signal quality is high	4.7065	1.34416		
	Drop calls is low	4.3774	1.68646		
	International roaming services are available	4.1548	1.79226		
	Service packages are available that my mobile operator provides is very attractive and easy to go	4.5613	1.61940		
Value-added services (VAS)	Provide Information through available SMS, MMS	5.2935	1.58909	4.8522	1.00238
	Caller tunes and alerts are available	5.3258	1.59904		
	Friends and Family Number (FnF) facility	5.1806	1.69129		
	Quality, facility and high speed of Internet and GPRS Connection (3G), (2G)	3.7516	1.80961		
	Facebook access service by mobile phone	5.1839	1.77407		
	Sports news, job news, news service are available	4.3774	1.69984		
Price and Tariff structure	Lower call rate	3.5097	1.70803	3.5890	1.15694
	Lower price of internet	2.7903	1.77484		
	Free Internet browsing	2.6548	1.77365		
	Price of SIM is moderate	4.7387	1.59270		
	Accuracy of call cost	4.2516	1.58510		
Convenience	Availability of customer care centre	4.7129	1.56566	5.0258	0.98919
	Availability of recharge points	6.1065	1.17620		
	Different types of recharge vouchers	5.1677	1.43159		
	Balance transfer system is good	3.7548	1.72491		
	Availability of SIM Card	5.3871	1.44315		
Customer service care	Ease of reporting complaint and Speed of complaint resolution	4.1548	1.35170	4.3226	0.91485
	Customize (Personalize) care	4.3032	1.40214		
	Customer care department is helpful and informative	4.4161	1.51724		
	Having user-friendly website/E-customer care	4.4161	1.35975		

(continued)

Table 5 (continued)

Item statistics					
Constructs	Items	Mean	Std. deviation	Over all mean	Over all std. deviation
Sales promotion	Price pack (bonus)/my mobile operator gives frequent special Offers	4.1419	1.57216	3.6581	1.20963
	Prizes, premium and price-off are available	3.9839	1.36166		
	Cash refund offers	3.0839	1.53473		
	Free talk time and bonus facilities are good	3.4226	1.66211		
Customer satisfaction	I am satisfied with using the mobile telecommunication services	4.0935	1.50972	3.9387	1.11518
	Telecom company has effectively provided mobile telecommunication services	4.0548	1.47258		
	Mobile telecommunication service is better than expected	3.6677	1.60378		
Customer loyalty	Say positive things about telecommunication in Bangladesh	4.5484	1.47775	4.4613	1.28160
	Intend to continue doing as a customer	4.3742	1.33244		
	Valid N (list wise)	300			

11.3 Factor Analysis (KMO)

Factor analysis is suitable for determining whether the data set of this study or the strength of the inter correlation test were carried out applying Bartlett's Test of Sphericity (Bartlett 1954) and the Kaiser-Mayer-Olkin measure of sampling adequacy (KMO) (Kaiser 1970, 1974). Bartlett's trial of Sphericity esteem value ought to be considered ($p < 0.05$) for the significance of the factor analysis and KMO esteem ought to be considered in the range of 0 to 1 with 0.6 suggested as the minimum value for good factor analysis (Tabachnick and Fidell 2007). The result of the study (see Table 6) shows the calculated value of Bartlett's test of Sphericity measure 0.000 which was highly significant and KMO test 0.561 was close to 0.6 which directly indicates that data collected from the respondents is acceptable for factor analysis.

Table 6 KMO and Bartlett’s test

Kaiser-Meyer-Olkin measure of sampling adequacy		0.708
Bartlett’s test of sphericity	Approx. Chi-Square	8851.586
	Df	561
	Sig.	0.000

11.4 The Test of Hypotheses

11.4.1 Regression Analysis (ANOVA)

Model 1a linear regression analysis was used for hypothesis testing, Adjusted R², the coefficient of determination, which shows that overall service quality and customer satisfaction in the telecommunication market can be explained 44.3% of sales promotion, value-added service (VAS), price and tariff structure, customer service care, communications and convenience (see Table 7).

Model 2b exhibits that customer satisfaction can be explained 63.6% by customer loyalty.

From the ANOVA Table 7, we get F-value is 40.174 and (P = 0.000) is less than 0.05, the null hypothesis is rejected, then alternative hypothesis is significant accepted at the 95% level of confidence, which means that the sales promotion, value-added service (VAS), price and tariff structure, customer service care, communications, and convenience statistically significantly explained of overall customer satisfaction in telecommunication market in Bangladesh. Same as F-value is 198.016 and P = (0.000) which is less than 0.05 that customer satisfaction explained by customer loyalty. ANOVA Model 1a and 2b we see that the significance value is 0.000 (Table 7), thus proving that the model is valid and significant.

11.5 The Result of Hypotheses and Interpretation

First Hypothesis (H1): The results of multiple regression analysis of the alternative hypothesis H1 as presented in Table 8 indicated that communication concerns significantly negative influenced on customer satisfaction on telecommunication market in Bangladesh and disclosed a significant negative result ($\beta_1 = 0.014$; t-value = 0.239; <0.05). According to the analysis, the significance value for the hypothesis is 0.811, which is higher than the level of significance $p = 0.05$. So, an alternative hypothesis is rejected and null accepted, H1 implying the significant negative relation.

Second Hypothesis (H2): The alternative hypothesis, H2, Value-added service (VAS) of service quality has a strongly positive significant influence on customers satisfaction on telecommunication market in Bangladesh, the significance value for the hypothesis is 0.001, which is less than the level of significance $p = 0.05$. So, an alternative hypothesis is accepted and null rejected. H2 implying the significant positive relation between values added service and customer’s satisfaction (see Table 8).

Table 7 Illustrating the regression analysis

<i>Model summary</i>						
Model	R	R ²	Adjusted R ²	Std. error of the estimate		
Model 1a	0.666 ^a	0.443	0.432	0.84044		
Model 2b	1	0.626 ^a	0.391	0.389		
<i>ANOVA</i>						
Model		Sum of squares	Df	Mean Square	F	Sig.
1a	Regression	170.259	6	28.376	40.174	0.000 ^b
	Residual	214.021	303	0.706		
	Total	384.280	309			
a. Dependent Variable: Customer satisfaction						
b. Predictors: (Constant), sales promotions, value-added service (vas), price and tariff structure, customer service care, communications, convenience						
2b	Regression	198.611	1	198.611	198.016	0.000 ^b
	Residual	308.925	308	1.003		
	Total	507.535	309			
a. Dependent Variable: Customer loyalty						
b. Predictors: (Constant), Customer satisfaction						

Table 8 Regression coefficient (test result of hypotheses) coefficients^a

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	95.0% confidence interval for B	
		B	Std. error	Beta			Lower bound	Upper bound
1a	(Constant)	-0.218	0.283		-0.770	0.442	-0.775	0.339
	Communications	0.014	0.058	0.014	0.239	0.811	-0.100	0.128
	Value-added service (VAS)	0.220	0.068	0.198	3.216	0.001	0.085	0.355
	Price and tariff structure	0.242	0.053	0.251	4.585	0.000	0.138	0.346
	Convenience	0.243	0.072	0.215	3.353	0.001	0.100	0.385
	Customer service care	0.174	0.073	0.143	2.381	0.018	0.030	0.318
	Sales promotions	0.050	0.055	0.055	0.917	0.360	-0.058	0.158
a. Dependent Variable: Customer satisfaction								
2b	(Constant)	1.630	0.209		7.793	0.000	1.218	2.041
	Customer satisfaction	0.719	0.051	0.626	14.072	0.000	0.618	0.819
a. Dependent Variable: Customer loyalty								

Third Hypothesis (H3): Alternative hypothesis H3, customer's price and tariff service quality has a highly positive significant influence on customer satisfaction on telecommunication market where ($\beta_3 = 0.251$; $t\text{-value} = 4.585$; $p < 0.05$). Thus, proves as per the evidence that significance value for the hypothesis is 0.001, which is less than the level of significance $p = 0.05$. Thus, the significant relation between customer satisfaction and price and tariff. So alternative hypothesis is accepted (see Table 8).

Fourth Hypothesis (H4): The alternative hypothesis, H4, convenience has a positive significant influence on customers satisfaction on telecommunication operators in Bangladesh and released a significant result ($\beta_1 = .215$; $t\text{-value} = 3.353$; $p < 0.05$). The significance value for the hypothesis is 0.001, which is less than the level of significance $p = 0.05$. So, an alternative hypothesis is accepted and null rejected. H4 implying the significant strongly positive relation between the customer's satisfaction and convenience of telecommunication market in Bangladesh (see Table 8).

Fifth Hypothesis (H5): The alternative hypothesis, H5, customer service care has a negative significant influence on customers satisfaction on telecommunication operators in Bangladesh ($\beta_1 = 0.143$; $t\text{-value} = 2.381$; $p < 0.05$). Thus, proves as per the evidence that the significance value for the hypothesis is 0.018, which is less than the level of significance $p = 0.05$, the significant positive relation between customer satisfaction and customer service care in telecommunication market in Bangladesh (see Table 8).

Sixth Hypothesis (H6): The alternative hypothesis, H6, sales promotion has a negative significant influence on customers satisfaction on telecommunication market in Bangladesh ($\beta_1 = 0.055$; $t\text{-value} = 0.917$; $p < 0.05$). The significance value for the hypothesis is 0.360, which is higher than the level of significance $p = 0.05$. So, an alternative hypothesis is rejected and null is accepted. H6 is not supported indicating that the significant strongly negative relation between customer sales promotion and customer's satisfaction on mobile telecommunication market (see Table 8).

Seventh Hypothesis (H7): The alternative hypothesis, H7, Loyalty has a highly significant positive relationship with customer satisfaction on telecommunication market where ($\beta_1 = 0.626$; $t\text{-value} = 14.072$; $p < 0.05$). The significance value for the hypothesis is 0.00, which is less than the level of significance $p = 0.05$. So, an alternative hypothesis is accepted and Null is rejected (Table 9). H7 is signified that the significant strongly positive relation between customer loyalty and customer's satisfaction on mobile telecommunication market (see Table 8).

12 Recommendations

The recommendations are given below based on suggestions to improve the customer service to fulfill the customer satisfaction and make a sustainable relationship with the customer. Recommendations are made based on survey findings and

Table 9 Illustrates the summary of hypotheses accepted or rejected

HN	Hypotheses	Accepted or Rejected
H1	Communication and coverage has a significant influence on customer satisfaction in telecommunication market in Bangladesh (0.811 > 0.05)	Alternative (H ₀)— Rejected Null (H _a)— Accepted
H2	Value-added Services (VAS) has a significant influence on customer satisfaction on mobile telecommunication market in Bangladesh (0.001 < 0.05)	Alternative (H ₀)— Accepted Null (H _a)— Rejected
H3	Price and tariff has a significant influence on customer satisfaction on telecommunication market in Bangladesh (0.000 < 0.05)	Alternative (H ₀)— Accepted Null (H _a)— Rejected
H4	Convenience has a significant influence on customer satisfaction on telecommunication market in Bangladesh (0.001 < 0.05)	Alternative (H ₀)— Accepted Null (H _a)— Rejected
H5	Customer service care has a significant influence on customer satisfaction in telecommunication market in Bangladesh (0.018 < 0.05)	Alternative (H ₀)— Accepted Null (H _a)— Rejected
H6	Sales Promotion has a significant influence on customer satisfaction on telecommunication market in Bangladesh (0.360 > 0.05)	Alternative (H ₀)— Rejected Null (H _a)— Accepted
H7	Customer satisfaction has a significant influence on customer loyalty (0.00 < 0.05) in telecommunication market in Bangladesh	Alternative (H ₀)— Accepted Null (H _a)— Rejected

analysis. Some customers have been switching to other operators because of their poor network infrastructure, internet packages, 3G speed, and promotional packages. Telecommunication operators should have quick expansion in the network, lower internet price with 3G and 4G high speed over Bangladesh if they want to keep its customers to stay with them. The value-added services (VAS) department should be coming up with more ideas to entertain its customers. This department has its potential but should be used it to the full range to provide more useful services to customers' needs. Although telecommunication operators provide latest technology and services, should clarify that to the customers. As it has been observed that many customers are unaware off the use of value-added services, they may not be well informed about the recent packages of the companies. If the customers are happy and satisfied on telecommunication sectors than it makes sustainable customer loyalty on service provider operators. So, service providers need to provide customers' expected service to make loyalty. Different programs should be taken in the customer care centres to educate the customers by providing

pertinent advice regarding different essential features of the mobile phone and its operations and services. The result shows that some dissatisfaction among the respondents about the charge of internet packages in Bangladesh. The respondents said that the internet package charge is higher. So, telecommunication operators need to reduce internet package rate. Based on the findings of this study service quality of telecommunication companies should focus on the tangible, reliability, and assurance of service quality, these three dimensions of service quality have the significant relationship with customer satisfaction in using telecommunication service in Bangladesh.

13 Managerial Implications

The result of this chapter has important managerial implications. It will support to generate new thoughts for researchers, consultants and telecom experts. The key competitive factors like [sales promotion, Value-added service (VAS), price and tariff structure, customer service care, communications and convenience] touching the customers' perception in mobile phone operators (service providers) will put the practitioner in a better position to design appropriate strategies to deal with marketing practices that will enhance the benefit of the operators. The study also finds improvement areas for telecommunication investors and sellers for serving better than the before and helps to achieve remarkable progress. Mobile telecommunication operators should pay attention to improving the quality of different services and customer image to build sustainable customer loyalty.

14 Limitations and Further Research

The research area, the data collection only focused on customers of developing the country in Bangladesh. The result of developed and under developing countries may be variation. Further, researchers should collect data from some part of developing and developed countries. Based on the proposed theory in this chapter, it is highly suggested to the researchers in the field of telecommunication markets to conduct researches on the implementation of applying the emerging markets theory, the emerging telecommunication markets theory and conceptual framework of competitiveness factors of customer satisfaction and loyalty in telecommunication markets which are discussed in this chapter.

15 Summary and Conclusions

Telecommunication market is going up by modernizing and emerging its technology. The mobile telecom industry has a higher impact across developed economies, as investments in and connectivity and networks over a long period of time leading to higher infiltration of voice and data. On the other hand, in developing countries, this business has made progress against the SDGs mainly through rising connectivity and access to information, with explicit services like mobile money and agricultural platforms leading to higher productivity and poverty eradication. Moreover, for the survival of telecommunication companies in any country, they should also consider the competitive factors. The phone is not only used for making calls, among many other functions, it is used for communicating through text-messages, multi-media messages (MMS), as well as to connect us to the internet. Telecom industry is now a paramount importance in developing countries with emerging markets (Huq et al. 2015; Arokiasamy and Abdullah 2013). In Emerging telecommunication markets, we focus some characteristic of change in technology, change in government law and regulation or political change, change in value-added service, change in social media demand, change in sales promotion, change in user behaviour, and change in market competitions. Telecommunication market is growing fast in the world by extending its market share. Telecommunication companies should increase its strong networks in everywhere. Communication and coverage, price and tariff, convenience package, value-added service, sales promotion, and customer care are the competitiveness factors in telecommunication markets. Telecommunication operators compete with their competitors by providing this effective competitiveness factor. In Bangladesh, telecommunication has become a very popular communication to all professional persons, even the X and Y generation are using this product intensively for their personal and occupational purposes. Telecommunication provides mobile banking service to the rural area in Bangladesh. The telecommunications service quality depends on both the supporting services and networking. The mobile telecommunications service quality is typically measured in terms of some common parameters like call completion rate, call drop rate, voice quality, complaints resolved percentage within a timeframe and customer service etc. (TRAI 2008; Sutherland 2007; Australian Communications and Media Authority 2008). The mobile telecom companies in Bangladesh need to eradicate several concerns that enable them to draw the attention of customers and retain them in the long run. It is an established fact that both customers' perceived service quality and satisfaction have been the most significant success factors of business competition either for manufacturers or for service providers (Munusamy et al. 2010; Buzzell and Gale 1987). Communications, value-added service, customer service care and customer loyalty, which indicates customer, are somewhat satisfied towards the service quality. That's mean customer are not satisfied towards their providing service. The result of this research is illustrated that value-added service (VAS), price and tariff, convinces and customer care competitive factors have a positive significant influence on

customer satisfaction in telecommunication operators in Bangladesh. Other sides Communication and coverage and sales promotion competitive factors have a significant negative influence on customer satisfaction in the telecommunication market in Bangladesh. So company operators in Bangladesh need to develop the communication coverage, sales promotion, and customer service care. In addition, these operators need to consider the factors of competitiveness in the telecom sector in order to survival and growth the market share. Companies need to segment the markets and provide the particulars offers to the customers. In developing country, quality education, sustainable cities and communities, industry, innovation and infrastructure are provided by telecommunication industry. It creates more employment in different sectors, ensures standards of living, and develops the economic growth. It also helps to achieve the sustainable development in the world. By upgrading the new telecommunication technology, they create new market opportunity.

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Competitiveness in Banking Industry: A Study of Employee Satisfaction, Customer Satisfaction and Productivity in Service Quality



E. Enaworu, F.B. Adegboye, and H.U. Wara

Abstract This research attempts to assess customer and employee satisfaction as well as productivity in service quality. In doing so, a commercial bank, was used as a case study aimed at finding out if there are linkages between employee satisfaction, customer satisfaction and productivity in service quality. Others were to determine whether employee satisfaction can lead to customer satisfaction; customer satisfaction with the quality of services of an organization can lead to organizational productivity; and customer satisfaction with product of an organization could translate into its productivity. To achieve these objectives, 230 customers (82 savings account holders and 148 current account holders) of the bank were stratified and randomly selected. The selected respondents were given questionnaires that contained questions relevant to the above objectives. These questionnaires were self-administered. The responses gotten thereof were analysed using cross tabulations and percentages and the stated hypotheses were tested using chi-square test statistics. The findings showed that there is a linkage between employee satisfaction, customer satisfaction and productivity. Employee satisfaction does lead to customer satisfaction; customer satisfaction with the quality of services of an organization can lead to organizational productivity; and customer satisfaction with product of an organization can translate into its productivity.

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1 Introduction

With respect to the operating environment of financial institutions, environments where banks operate in are very competitive such that they compete with others for deposits, credit unions, institutions offering unsecured investment alternatives as well as savings institutions. Their competition usually offers higher interest rates and this normally decreases the funds they would attract or make them increase their own rates forcefully in order to attract new funds. This increase in deposits leads to an increase in cost of funds for these banks, thus disrupting their cash flow and ability to get funds to lend to customers and therefore reducing their profit margin. Despite these competitors and the intense competitive environment, there are other factors of success in the banking sector such as location, company size image brand, product innovation best rates quality and technology (Mbalectures 2010).

In order to ascertain the extent of effective degree of competition, Bikker and Spierdijk (2008) stated that several issues such as network, technology, investment in relationships just to mention a few, are important determinants of the behaviour of the financial institutions.

The tense competition in the banking sector has caused the quick growth in technological developments, changing industry standards and recurrent releases of novel products. The development of technology has allowed the competition, non-depository firms inclusive, to contend effectively in emerging markets and this has enabled the expansion of various financial products, services and availability of funds to key customers. But with the advent of the application of technology and its inherent changes despite the competitive environments banks operate in has led to the creation of emerging markets in emerging economies. From these emerging markets, customer satisfaction and performance are key success factors in these markets as such they must not be taken for granted.

This study is aimed at investigating whether there are trade-offs between customer satisfaction and productivity, and to ascertain if customer satisfaction via an organizations products and quality service leads to organizational productivity.

2 Statement of the Problem

The statement of the problem serves to elaborate upon the information implied in the title of the study. Similarly, the problem that necessitated this research work is as follows:

1. Is customer satisfaction an overall evaluation of an organizations products or quality service through the efforts of personnel?

3 Hypotheses

The following hypotheses relating to the research were formulated:

1. H_i: There is linkage between employee satisfaction, customer satisfaction and productivity.
2. H_i: Employee satisfaction does lead to customer satisfaction.
3. H_i: Customer satisfaction with the quality of services of an organization does lead to organizational productivity.
4. H_i: Customer satisfaction with product of an organization does translate into its productivity.

4 Scope of Study

Generally, the research is on commercial banks with emphasis on a commercial bank. This research work covers all forms of the banks products and the respective customers that have signed-on to these respective products. This idea is to facilitate convenient collection of needed data for the research.

5 Background of Organisation

The organisation heralded into the market in 1990 when it commenced operation. The vision of the bank is to be an institution that sets the pace in banking, devoted to providing good service and promote staff excellence in order to gain the loyalty of her customers and in return obtain optimum profits. The bank had a crystal-clear mission from the onset which entails being the most preferred bank that syndicates technical capability with up-to-date information technology, in order to ensure a lasting relationship with her clientele. With its culture that is customer service driven, the bank has been able to guarantee that quality services are adequately offered to her ever-increasing customers. Apart from other common services being offered by banks, it has a very high rating in various sectors of the bank such as management of portfolios, corporate finance, financing of consumer loans, financing of the public sector, and retail banking. The establishment is also well known for creating personalized goods and services.

6 Literature Review

According to Stevenson (1993), quality of a service is the potential of a product or service to continuously meet or exceed the expectations of the customer. Culiberg and Rojsek (2010), stated that service quality is taken to be a quality that results due

to customers perception and conclusion based on a particular kind of service rendered to them. Quality of service can also be seen as the way a company shows her lowliness/dominance based on her services rendered (Bitner and Hubbert 1994).

The quality of a service offered by a firm is considered to be key in order for that firm to stand out from her competitors. Service quality is important to companies because it offers them a competitive advantage, thus putting them in a favourable position than their rivals and enabling their customers to be satisfied (Ladhari 2009). A study was conducted by Warraich et al. (2013) using two hundred and twenty companies in the telecommunications sector in Pakistan. From their study, it was discovered that service quality is a basis for the competitive advantage for a firm, thus enhancing their competitiveness.

It has also been confirmed by Schumpeter (2013), that the competitiveness of a company is crucial to the existence of that company. It has been demonstrated that several factors such as competitiveness (competitive products and competitive productivity) are in addition to service quality, forecasters of customer loyalty in financial companies (Edvardsson et al. 2000; Baumann and Pintado 2013). From the key findings of Baumann et al. (2017), it was discovered that competitiveness has the capacity to expand on customer loyalty in unstable and stable markets for local banking in the retail sector. The study further proposes that competitiveness in the financial sector affects customers loyalty behaviour and their future intents facilitated by how much they perceive regulations.

There is wide spread acceptance that organizations that are to engage firms should pursue dominance in both productivity and customer satisfaction. Nevertheless, these goals are hardly in agreement. In the interim, an organization could achieve an increase in her productivity by reducing her staff size but may end up decreasing her profitability if the satisfaction of customers lies on the efforts of the employee (Anderson and Sullivan 1993). In the current economy, to have a competitive advantage, cost effectiveness and customer behaviour need to be understood properly in order to properly manage customers (Gurau and Ranchod 2002). The profitable customers of an organization are not always the most satisfied. There are arguments from professionals stating that some organizations have confirmed that points from satisfaction do not actually relate directly to increase in earnings; but findings have even corroborated these facts with a direct relationship between sales and satisfaction not confirmed in most cases (Scharitzer and Kollarits 2000).

6.1 Customer Satisfaction

Satisfaction is defined as the comfortable feeling a customer has over time due to the constant engagement with an organization that provides goods and service. It could also be seen as the state of the customer due to her needs being met constantly by an organization that provides goods and services. It was stated by (Lee and Marlowe 2003; Lam and Burton 2005) that the location of a bank with respect to the distance of the abode of the customer determines the decision that would be made by the customer to sign-on to that bank (Berry et al. 2002). A key factor of customer

satisfaction is the convenience of the location. The level of satisfaction of a customer is usually increased when their shopping time and energy are properly managed due to the availability of wide range of services and products usually offered in a one-stop shop (Berry et al. 2002).

The satisfaction and subsequent retention of a customer is actually dependent on the analysis of past interactions and transactions. Usually the retention of a customer is not based on the analysis of satisfaction (Selnes 1998). From previous research, it was discovered that customer satisfaction is directly proportional to customer retention (Ranaweera and Prabhu 2003; Gustafsson et al. 2005; Mittal and Kamakura 2001). Conversely, studies have shown no effect of customer satisfaction when it comes to cross-buying which shows that customers might not always display increased cross-buying activities (Verhoef et al. 2002). Customer satisfaction is not a key factor when it comes to cross-buying because it could be affected by the pull or lure of substitutes (Verhoef 2003). Let us take an example from satisfied customers that are pleased with their main bank but could also be more pleased with other services and products being offered by the banks competitors. Also, Gustafsson et al. (2005) contented that when confronted with a desire to purchase a diverse product, satisfaction would not be as key compared to loyalty (Keaveney and Parthasarathy 2001).

Trust is seen generally as a key factor in order to sustain a lasting relationship with customers.

The advantages of an organizations status and skills based on the trust factor has been thoroughly examined and analysed in literature (Johnson and Grayson 2005). Experienced sales personnel are usually more convincing because it is expected of them to have good communication skills which subsequently leads to more trust in the relationships. Additionally, the status of a company usually affects how well the customers sees the company as being trustworthy because the organization will always keep to a particular standard of quality in order to maintain her status (Johnson and Grayson 2005). So, the reputation and skills of a firm can develop customers trust. From the view of marketing relationships, previous research has shown that trust is a key factor in the retention of customers and expectation of engagements with customers in the future (Johnson and Grayson 2005). Generally, there is a need for trust in any situation that involves risks. Cross-buying could result to lack of trust as there are more risks involved which subsequently creates high uncertainty in buying decisions by the customer. But when customers see a firm as being trustworthy the uncertainty linked with cross-buying as seen by the customer becomes reduced. Also, Johnston and Madura (2000) and Lymberopoulos et al. (2004) maintained that banks are usually seen by customers to uphold honesty and integrity which enhances their chance to cross-sell products.

6.2 Customer Satisfaction, Productivity and Loyalty

Customer satisfaction influences customer loyalty, which in turn affects profitability (Gurau and Ranchod 2002). There are various arguments concerning customer satisfaction in terms of the perception of the customer with respect to the value

obtained in a business deal. In this case, value is equivalent to envisaged quality service in relation to price and costs from goods acquired by the customers, with respect to the anticipated value from businesses and relationships with the competition (Blanchard and Galloway 1994; Zeithaml et al. 1996).

6.3 Customer Satisfaction and Loyalty

Andre and Saraiya (2000), noted that Customer satisfaction influences and determines the intensity and period of loyalty of a customer. It is expected that a customer will offer her loyalty to a company if the company is offering what would gratify the client's needs. The extent to which customer satisfaction is measured can ultimately lead to the establishment of a platform for estimating, forecasting and growing customer productivity (Gurau and Ranchod 2002).

By tradition, the loyalty of a customer depends largely on cross-buying, the retention of the customer and encouraging words of mouth (De Wulf et al. 2001). There are few researches related to cross-buying as most of them are fixated on customer preservation. An example of this is shown with the merger between Travelers and Citicorp in the year 1998 which was intended to create an opportunity of cross-selling banking and insurance goods and services to exiting clients (Mulligan and Gordon 2002). The retention of a customer is the continuation of an existing relationship while cross-buying could be seen also in the light of growth of an existing relationship (Verhoef 2003). Also, retaining the customer involves the reduction in loss of your customers to your competition while cross-buying concentrates on the growth of the relationship with customers (Verhoef and Donkers 2005). Intrinsically, the emphases that would be placed on cross-buying would be much different to the one placed on retaining a customer. To be specific, cross-buying is a more complex procedure unlike customer retention which is a monotonous decision (Verhoef et al. 2001). Therefore, the retention of a customer involves a reduction in uncertainty and lower grade of envisaged risks compared to cross-buying (De Wulf et al. 2001).

6.4 Marketing and Customer Satisfaction

The idea of relationship in marketing was introduced in the beginning of 1990 into marketing service field. It has been confirmed that organizations made better profits when nearer relationships were built with their respective customers. The expensive nature of acquiring customers has driven companies into maintaining and creating lasting relationships with their respective customers thereby enhancing profitability (Ennew and Binks 1996).

Currently, banks have shifted from a marketing method that is based on transactions to an approach that is mainly based on appreciating and acknowledging their customers due to their existing long loyal relationships. Satisfaction is key in the creation of existing relationships and it is defined as the meeting of someone's full expectations (Oliver 1980). It could also be the emotion of a customer to a unique service or product after being consumed.

Satisfying and retaining customers are usually seen as the most vital long-term aim of companies. Market perception advocates that a purchaser will most likely buy again or at least think of buying again than a customer that is disgruntled and displeased. In addition, reducing customer exits and increasing customer preservation are key tactical aims of most establishments as shown by current emphasis on managing customer relationships (Verhoef 2003). Thus, previously satisfied buyers may help firms both reduce marketing costs and develop more stable levels of sales when many satisfied buyers are retained to purchase again in the future.

7 Research Design

The researchers adopted the use of the survey research design as this suit their purpose. This is because the data was collected from a cross-section of current and savings account customers.

7.1 Population/Sample Size

In research, it is hardly possible to include all members of a given population in the investigation. This is because the members may be too large to be reached at a point in time. If a researcher attempts to cover all the population needed for the investigation, it might be discovered that more time, money and efforts will be spent. Thus, a sample should therefore be selected from the population for the investigation. The more representative the sample, the more the reliability the result drawn from it.

A population is the totality of the people, subjects or observations which relate to the situation of interest in the study to be conducted. A sample on the other hand, is the reasonable number of selected members from the population as a representative of that population which are used for the investigation or study.

Therefore, in this study, the population used consisted of the entire current account and saving account holders. Sample for the study is made of randomly selected 150 current account holders and 50 saving account holders, which gave a total sample size of 200 respondents.

7.2 *Sampling Technique*

Samples were selected from population by statistical means, to ensure even selection of the subjects involved and thus avoid bias in the selection process. This technique was divided into two categories—probability and non-probability. Probability sampling which is the technique used in this research is sub-divided into simple random sampling, systematic sampling, stratify sampling and cluster sampling.

For the purpose of this study, the stratified random sampling technique was employed. Here, the customers were stratified into two strata (current and savings account operators). In each stratum, independent random sampling of 148 current and 82 savings account holders were then carried out.

7.3 *Instrument for Data Collection*

To achieve the objectives of this study, questionnaire which contained questions that relate to the research objectives were administered to the respondents. The research instrument (questionnaire) was divided into two sections. Section one (A) sought for demographic data of the respondents such as age, gender and educational qualifications. Section two (B) elicited information that was relevant to the research objectives. These included amongst others the following: Is there any linkage between employee satisfaction, customer satisfaction and productivity? Do you believe that employee satisfaction leads to customer satisfaction? Do you agree that customer satisfaction with the quality of services of an organization can lead to organizational productivity? Can customer satisfaction with product of an organization translate into its productivity? How would you rate the services/products rendered by the bank to her customers? Other questions were related to the type of services/products offered by the bank.

7.4 *Procedure for Data Collection*

The importance of data collection as a major step in research cannot be overemphasised. Although there are several methods of collecting research data (interview, questionnaire, observation among others), the questionnaire procedure was adopted for this study. This is a research instrument specifically designed by the researcher to source for primary information.

In this study, the questionnaire was designed to gather data and elicit responses or information from the respondents on the subject matter “Employee Satisfaction, Customer Satisfaction, and Productivity in Service Quality”. These questionnaires were distributed to the randomly selected 230 customers of the bank to respond to.

7.5 *Method of Data Analysis*

Research is considered incomplete if the data generated from the field is not analysed. This analysis must be done using the appropriate statistical tool. This analysis could be manual or computerised. For this research, data collected from the respondents were computer analysed.

The results of the analysis are presented as percentages in the form of frequency tables and cross-tabulations. The formulated hypotheses of this research were tested using the chi-square statistical test. The chi-square was used to test the stated hypotheses because the data involved is of nominal scale measurement.

8 **Data Analysis and Interpretation of Results**

The results were based on the analysis of the responses as given by both categories of respondents. That is, savings and current account holders of the bank that were involved in the study. The following investigations were carried out based on the research questions below. Research hypotheses tested are also presented here.

9 **Research Questions**

Table 1 presents the demographic data of the respondents studied for this research. The analysis of their ages showed that 35.7% falls in the age bracket of 30–39. This is followed by 20–29 years (32.2%) and 40–49 years accounted for by 27.8% while those from 50 years and above were represented by 4.3%. Majority of them (54.8%) were females' respondents the remaining 45.2% were male. Analysis by educational qualification indicated that 47.4% were holders of secondary school certificate. This was followed by tertiary education graduates (43.5%) while first leaving school certificate holders stood at 6.1% and the rest (3.0%) have not attended any formal school. Over 60% of the respondents operated current account and 35.7% are savings account holders of the bank.

Research question 1: Is there any linkage between employee satisfaction, customer satisfaction and productivity?

The result of linkage between employee satisfaction, customer satisfaction and productivity is as displayed in Table 2. It showed among the savings account holders that 97.6% of them opined there is linkage between employee satisfaction, customer satisfaction and productivity while only 2.4% were of a contrary view. A similar result was observed among current account operators with 89.2% in favour and 10.8% against. Overall, 92.2% agreed that there is a link between the three, that is, employee satisfaction, customer satisfaction and productivity.

Table 1 Demographic information of respondents

Characteristics		No.	Percentage
Gender	Male	104	45.2
	Female	126	54.8
Age group	20–29	74	32.2
	30–39	82	35.7
	40–49	64	27.8
	50 and above	10	4.3
Qualification	None	7	3.0
	Primary	14	6.1
	Secondary	109	47.4
	Tertiary	100	43.5
Type of account	Savings	82	35.7
	Current	148	64.3

Table 2 Linkage between employee satisfaction, customer satisfaction and productivity?

Linkage between employee satisfaction, customer satisfaction and productivity	Type of account operated					
	Savings		Current		Total	
	No.	%	No.	%	No.	%
Yes	80	97.6	132	89.2	212	92.2
No	2	2.4	16	10.8	18	7.8
Total	82	100.0	148	100.0	230	100.0

Table 3 Employee satisfaction can lead to customer satisfaction

Employee satisfaction can lead to customer satisfaction	Type of account operated					
	Savings		Current		Total	
	No.	%	No.	%	No.	%
Yes	78	95.1	117	79.1	195	84.8
No	4	4.9	31	20.9	35	15.2
Total	82	100.0	148	100.0	230	100.0

Research question 2: Do you believe that employee satisfaction can lead to customer satisfaction?

Table 3 seeks to find out if employee satisfaction can lead to customer satisfaction. The results indicate that among the saving account holders, 95.1% are of the view that employee satisfaction can lead to customer satisfaction, while 79.1% of current account operators hold the same view. Overall, 84.8% of the respondents answer in the affirmative with only 15.2% having a converse opinion. The table above provides more information.

Research question 3: Do you agree that customer satisfaction with the quality of services of an organization can lead to organizational productivity?

Analysis on Customer satisfaction with the quality of services of an organization can lead to organizational productivity is as presented on Table 4. Among saving account operators, 92.7% hold a strong opinion that Customer satisfaction with the

Table 4 Customer satisfaction with the quality of services of an organization can lead to organizational productivity

Customer satisfaction with the quality of services of an organization can lead to organizational productivity	Type of account operated					
	Savings		Current		Total	
	No.	%	No.	%	No.	%
Yes	76	92.7	135	91.2	1	91.7
No	6	7.3	13	8.8	19	8.3
Total	82	100.0	148	100.0	230	100.0

Table 5 Customer satisfaction with product of an organization can translate into its productivity

Customer satisfaction with product of an organization can translate into its productivity	Type of account operated					
	Savings		Current		Total	
	No.	%	No.	%	No.	%
Yes	69	84.1	18	79.7	187	81.3
No	13	15.9	30	20.3	43	18.7
Total	82	100.0	148	100.0	230	100.0

quality of services of an organization can lead to organizational productivity, thus making the organization more competitive. Also with respect to current holders, 91.2% agreed that Customer satisfaction with the quality of services of an organization can lead to organizational productivity. This view was held by 91.7% of the entire respondents that involved in the study. Only 8.3% were of contrary view.

Research question 4: Can customer satisfaction with product of an organization can translate into its productivity?

Table 5 is aimed at finding out if Customer satisfaction with product of an organization can translate into its productivity. The analysis showed that 79.7% of the saving account respondents believe that customer satisfaction with product of an organization can translate into its productivity. While 79.7% of current account held the same view with saving account holder regard to if Customer satisfaction with product of an organization can translate into its productivity. Generally, 81.3% of the respondents agreed that Customer satisfaction with product of an organization can translate into its productivity with only 18.7% having an opposing view.

Research question 5: Which of the following service(s) is/are offered by the bank?

Analysis of services offered by the bank to her customers is as presented in Table 6. It is shown that majority (41.5%) of sampled saving account holders are aware that the bank offered the following services: Public Sector Financing, Consumer Financing, Retail Banking, Corporate Financing and Portfolio Management. This followed those that know of only Consumer Financing (31.7%). Whereas, Portfolio Management as service was known to 1.2% of saving account customer. More than half (58.1%) of the current account holders of all the different services offered by the bank as enumerated in the table. 34.5% know of consumer financing as service

Table 6 Service(s) offered by the Bank

Service(s) offered by the Bank	Type of account operated					
	Savings		Current		Total	
	No.	%	No.	%	No.	%
Public sector financing	8	9.8	6	4.1	14	6.1
Consumer financing	26	31.7	51	34.5	77	33.5
Retail banking	3	3.7	2	1.4	5	2.2
Corporate financing	10	12.2	1	0.7	11	4.8
Portfolio management	1	1.2	2	1.4	3	1.3
All of the above	34	41.5	86	58.1	120	52.2
Total	82	100.0	148	100.0	230	100.0

Table 7 Service(s) offered by the organisation as products to its customers

Service(s) offered as products to its customers	Type of account operated					
	Savings		Current		Total	
	No.	%	No.	%	No.	%
Quick loan	41	50.0	59	39.9	100	43.5
Auto loan	5	6.1	5	3.4	10	4.3
Motor cycle loan	14	17.1	11	7.4	25	10.9
Personal asset acquisition loan	0	0.0	1	0.7	1	0.4
Salary advances	0	0.0	8	5.4	8	3.5
Others	2	2.4	1	0.7	3	1.3
All of the above	20	24.4	63	42.6	3	36.1
Total	82	100.0	148	100.0	230	100.0

offered to customers by the bank. The least is corporate financing as reported by only 0.7% of the sampled current account holders. Analysis at the entire respondents showed that 52.2% of them knew that the various services contained in the table are offered by the bank. Portfolio management as one of the services rendered by the bank is known to be 1.3% of the entire sample.

Research question 6: Which of the following services is/are offered by the organisation as products to its customers?

Table 7 shows the analysis of products offered by the organisation to her customers. It indicates that half (50.0%) of sampled saving account holders and 39.9% of current account operators are aware of quick loan as a product that the bank offered to its customers. 24.4% and 42.6% of savings and current account operators respectively are aware of the following products of the bank to its customers: Quick loan, Auto loan, Motor Cycle loan, Personal Asset Acquisition Loan, Salary Advances and Others. Analysis of the entire respondents showed that 43.5% of them knew quick loan as a product offered by the bank to its customers. While 36.9% of the respondents involved in this study are aware of all the products as enumerated in Table 7. Personal Asset Acquisition Loan as one of the products offered by the bank is known to only 0.4% of the entire sample. Table 7 provides more details.

Table 8 Rating of services/products rendered by the bank to her customers

Rating of services/products rendered by the bank to her customers	Type of account operated					
	Savings		Current		Total	
	No.	%	No.	%	No.	%
Excellent	9	11.0	18	12.2	7	11.7
Very good	27	32.9	93	62.8	20	52.2
Good	39	47.6	30	20.3	69	30.0
Fair	6	7.3	7	4.7	13	5.7
Poor	1	1.2	0	0.0	1	0.4
Total	82	100.0	148	100.0	230	100.0

Research question 7: How would you rate the services/products rendered by the bank to her customers?

Results of analysis of rating of services/products rendered by the bank to its customers as rated by the customers is presented in Table 8.

The results showed that 32.9 and 62.8% of savings and current account operators respectively rated the services/products rendered by the bank to its customers as very good. 11.0 and 12.2% of savings and current account holders in that order rated the services/products as excellent. Generally, 52.2% and 30.0% of the entire sample used in this research rated the services/products rendered by the bank to its customers as very good and good respectively. While 0.4% reported that rated the services/products rendered by the bank to its customers as was poor.

10 Hypotheses

Hypothesis 1 There is no linkage between employee satisfaction, customer satisfaction and productivity

This hypothesis seeks to discover if there is no linkage between employee satisfaction, customer satisfaction and productivity. The null hypothesis above is rejected since the P calculated value of 0.000 as shown in Table 9 is less than 0.05 being our level of significance. We therefore, accept the alternative hypothesis that there is a linkage between employee satisfaction, customer satisfaction and productivity.

Hypothesis 2 Employee satisfaction does not lead to customer satisfaction.

The null hypothesis “Employee satisfaction does not lead to customer satisfaction” is tested in Table 10. The null hypothesis above is rejected since the p calculated value of 0.000 obtained in the above table is less than 0.05 being our level of significance. We therefore, accept the alternative hypothesis that employee satisfaction does lead to customer satisfaction.

Hypothesis 3 Customer satisfaction with the quality of services of an organization does not lead to organizational productivity.

Table 9 Responses from respondents based on hypothesis 1.

Response category	Observed frequency	Expected frequency	Chi-square value	Df	P value
Yes	212	115	163.635	1	0.000
No	18	115			

Table 10 Responses from respondents based on hypothesis 2

Response category	Observed frequency	Expected frequency	Chi-square value	Df	P value
Yes	195	115	111.304	1	0.000
No	35	115			

Table 11 Responses from respondents based on hypothesis 3

Response category	Observed frequency	Expected frequency	Chi-square value	Df	P value
Yes	211	115	160.278	1	0.000
No	19	115			

Table 12 Responses from respondents based on hypothesis 4

Response category	Observed frequency	Expected frequency	Chi-square value	Df	P value
Yes	187	115	90.157	1	0.000
No	43	115			

Hypothesis 3 aimed at finding if Customer satisfaction with the quality of services of an organization does not lead to organizational productivity. Result of this test shows that the null hypothesis “Customer satisfaction with the quality of services of an organization does not lead to organizational productivity” was rejected since the p calculated value of 0.000 obtained in Table 11 is less than 0.05 being our level of significance. The alternative hypothesis that “Customer satisfaction with the quality of services of an organization does lead to organizational productivity” is therefore accepted at the 5% level of significance. This implies that Customer satisfaction with the quality of services of an organization can lead to the organizational productivity.

Hypothesis 4 Customer satisfaction with product of an organization does not translate into its productivity.

Test concerning the null hypothesis that “Customer satisfaction with product of an organization does not translate into its productivity” was carried out and the result presented in Table 12. Our statistical analysis shows that the null hypothesis is rejected because the p calculated value of 0.000 as shown in the above table is less than 0.05 being our level of significance. The alternative hypothesis that

“Customer satisfaction with product of an organization does translate into its productivity” is hereby accepted. This implies that Customer satisfaction with product of an organization can translate into its productivity.

11 Conclusion

Based on the findings of this research work, it was discovered that employee and customer satisfaction are indispensable tools to organizational productivity.

Banks would remain competitive when their quality of service in terms of products designed to meet the aspirations and needs of the customers are offered with satisfied employees to these customers.

This study would enable newcomers gain better insight into the effects of competitiveness and could also help current providers in the banking industry to uphold their share of the market. The quality service rendered by a company due to its satisfied employee would inevitably lead to customer satisfaction loyalty and organizational productivity.

Furthermore, financial institutions in emerging markets and developing economies face stiff competition but the emergence of technologies and its diversification has helped to create more emerging markets as well as ensuring the success of these banks. This in the long run ensures that customers are satisfied and ensuring the productivity, competitiveness and profitability of these organizations.

12 Recommendations

In the light of the findings of this research, the researchers therefore make the following recommendations for effective and greater productivity in achieving organizational goals.

Organizations should make working environment of their employee conducive for them to have job satisfaction so that they can give in their best. This will no doubt translate into better customer service.

Since customer satisfaction with quality of services can lead to organizational productivity, there is the need for them to be treated in such a way that they can derive maximum satisfaction with the quality of services rendered by the organization. Indeed, customer loyalty is determined and influenced by the extent of their satisfaction.

Organizations should introduce products that are relevant to their customers need as this can have a positive impact on the organizational objectives.

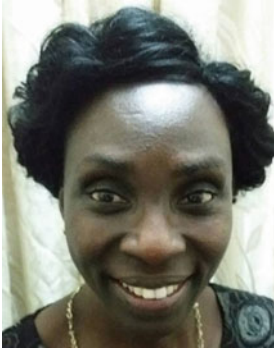
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Audience Engagement as a Competitive Advantage in Public Television: Case of Gamification Use in IRIB IPTV



Kianoosh Karimi and Siavash Salavatian

Abstract Islamic Republic of Iran Broadcasting (IRIB), as the pervasive and exclusive nationwide broadcasting service in Iran, recently started to launch the IPTV to provide new services for its demanding audiences. Such decision to be successfully implemented, requires high amount of financial resources, as much as technical ones. One of the major concerns of strategic decision makers was to increase audience engagement with IPTV, and Gamification is considered to be one of the techniques associated with audience engagement. The present study using the Delphi method (in three rounds) and documentary research trying to identify services that have the greatest potential to Gamify as well as identify capabilities of Gamification to increase audience engagement with the IPTV. In continuation, to be tangible capabilities identified, have tried using depth interview, expression examples of effective use of the capabilities. To achieve the main goal in this study, in the first step, was required to identify services that have the greatest Gamification Capability. Therefore, in the second round of Delphi and according to expert's opinion among more than 35 main services of IPTV, 12 services were selected. In the third and final round of Delphi, researcher has tried to identify the capabilities of Gamification to increase audience engagement with the IPTV. So among the 24 Gamification Capabilities by expert's opinion the 13 Capabilities such as Levels, Badges and etc. were selected. At the end of the study has tried using interviews with Gamification experts, efficient examples of the use of Gamification Capabilities to engage the audience with the IPTV were expressed.

1 Introduction

Three properties are straightforward in constant evolving media marketplace: first is that media content are growing in a very rapid rate and new information is unlimited (Anderson 2009). Second is that both old and new versions of media

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are at users' disposal via fully integrated digital networks which allow them to move easily from one cultural product to another (Webster and Ksiazek 2012). And the third is that the total capacity of human attention to engage in those products has a limit (Webster 2008). The widening gap between unlimited media and limited attention means that it is difficult for any media to attract significant public attention (Ibid, p. 44). Considering the limited audience attention and unlimited growth in media "attention economy" has been coined to show the importance of attention as a scarce source in media economy and to point out that attracting the audience attention is the prerequisite for success of media (Davenport and Beck 2001; Goldhaber 1997; Lanham 2006; Webster 2010). Therefore, there is a competition among media companies in order to direct the attention of audiences. The audiences involved are more varied, active and selective compared to past (King and Neil 1995). Various media using tools and unique comparative benefits, try to surpass their rivals and attract more audiences. One of the most powerful tools and techniques in this competitive market is "gamification". According to the predictions, in 2018 this concept will reach a market worth more than \$5.5 billion in various businesses (Karimi and Nickpayam 2017, p. 34). Gamification has been succeeded not only in business and trade, but also in attracting audiences to media that might be used as one of the new tools to surpass rivals. The application of gamification is abundantly found in social networking websites such as Facebook and Twitter. TV also uses this technology to attract audiences. An example of successful Iranian program in this regard is the 2014 world cup produced by Adel Ferdosipour in which he used gamification process to predict the results of matches and obtained interesting findings. According to statistics released by the producer, a total of nine million mobile numbers have participated in the program that resulted in 4–8 billion tomans (two million dollars) in revenue just through sending messages (Online News Agency 2014).

The main objective of this study is to investigate the implementation and feasibility of gamification designing on interactive protocol television (IPTV). IPTV is the result of computer, telecommunication and multimedia industries convergence and it is considered as new technological advances of communication and information. IPTV defines a system that uses internet protocol and broadcasts television programs through broadband connections. Therefore, by using different services, producers of electronic contents can represent their products and find new ways to raise revenue. Launching IPTV increases costs, including the implementation of essential infrastructures, creating an integrated system and producing specific receivers for this type of TV. Due to the high costs of launching and for audiences, launching such a protocol requires tools and methods to ensure its effectiveness and efficiency in order to direct the attention of parallel media audiences and acquire a proper position in the media economy.

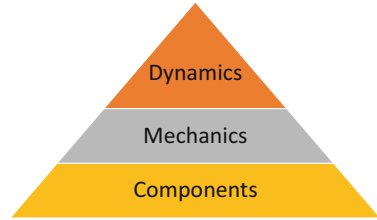
Therefore, in this study we have chosen the IPTV of Islamic Republic of Iran as the case study and we have tried to recognise the capabilities of gamification based on the perspective of IPTV of Islamic Republic of Iran which are able to attract more

audiences to this media. Thus, in this study we are going to find appropriate answers to two main questions: (1) Which services of IPTV are capable of gamification in order to engage the audiences? (2) Which capabilities of gamification have the highest ability to integrate with IPTV services in order to engage the audiences to those services?

2 Gamification: A Tool to Create a Competitive Advantage

Nowadays, with the expansion of the Gamification, the boundary between games and business has become increasingly blurry. Gamification has raised significant interests in various fields such as business and commerce (Amy Jo 2009; Bittner and Schipper 2014; Cechanowicz et al. 2013; Terlutter and Capella 2013; Hamari and Koivisto 2015; Huotari and Hamari 2012), education (Arnab et al. 2015; Denny 2013; Farzan and Brusilovsky 2011; Christy and Fox 2014) healthcare (Johnson et al. 2016; Jones et al. 2014; Hamari 2017; Huotari and Hamari 2017). In recent years, several definitions have been proposed for gamification. Deterding et al. (2011), provide an appropriate definition of gamification as “the use of game design elements in none-game contexts.” Werbach (2014), adopted the designer’s point of view and presents a definition of gamification as “the process of making activities more Game-like”. Also Huotari and Hamari (2012) from the perspective of service marketing defined gamification as ‘a process of enhancing a service with affordances for gameful experiences in order to support user’s overall value creation’. According to the aforementioned definitions, gamification is not necessarily a game design. It also provides solutions to conflicts and problems (Blohm and Leimeister 2013). In order to design a gamified system first you have to fully explain the specific purposes of the providers of service or system and then these objectives are translated into appropriate game-design elements that are compiled with gamified enhancing services. And by creating a game-like experience, this enhancing service activates individual user to use the proposed core (Huotari and Hamari 2012) and consequently develop the product. Moreover, bundling proposed core and enhancing services also requires the adaption of the core to the enhancing service (Blohm and Leimeister 2013). The structure of a Gamification system consists of three parts: dynamics, mechanics, and components (González et al. 2014). At the highest level they are dynamics, Dynamics are the big-picture aspects of the gamified system in which you have to consider and manage but you can never directly enter the game. Mechanics are the basic processes that drive the action forward and generate player engagement and components are more specific forms that mechanics or dynamics can take (Fig. 1) (Werbach and Hunter 2012).

Fig. 1 Classification of game elements (Werbach and Hunter 2012)



3 Psychological and Social Foundations of Gamification

Primary motivation for gamification is based on psychology. Gamification uses elements of the game, motivates its users to perform a particular task or engage with a particular service (Ašeriškis and Damaševičius 2014). Various models are presented to illustrate gamification functions. Based on Fogg's behavioral model, motivation to perform and ability to perform, must converge at the same time for a behavior to occur. Positive feedbacks from game mechanics support motivation; and this game mechanics continuously triggers users to perform specific actions and keeps them interested in the game (Fogg 2009). Gnauk et al. (2012) have also conducted research in this field. He studied extrinsic and intrinsic motivation and analyzed its relationship with external incentives and rewards. Neuroscience researchers found that playing video games releases high amounts of dopamine in the human brain (Koepp et al. 1998). Dopamine generates a sense of pleasure, increases learning and increase concentration. With an increase in motivation, the amount of released dopamine also increases (Berridge and Robinson 1998). For example the rewards the users take to do a particular activity will motivates them to try to repeat the action (Csikszentmihalyi 2000). Such behaviors with internal intention, engage people completely and lead to "enjoyable, satisfying, and meaningful emotional states that we can experience" (Herzig 2014).

4 Interactive TV

Interactive TV has always been considered as one of the best types of TV. Interactive TV is a collaborative experience which relies on full interactivity (Dugow 2015). Interactive TV can be delivered over terrestrial, cable and satellite transmission. Viewers can watch interactive TV either on television sets or on personal computers (Georgios et al. 2001). This type of TV is divided into different types based on the level of TV and user interaction. Jansen (2005) introduces three forms of interactive television. One form is the Enhanced TV, where the content—often text and graphics—are placed at the top of the actual video content; Then, the viewer can reach this content interactively, Enhanced TV is a kind of super teletext service and thus, a pure expression of the "crawl" phase.

Another form is the personalized TV that is linked to a piece of hardware through a personal video recorder (PVR) which offers the user the same control over the broadcast flow as well as linking to the video recorder, This means there is a possibility of pause, rewind, fast-forward, slow motion, etc. The third form is the “cross media” interaction; This kind of interactive TV in addition to providing services that offer the other two types of interactive TV, provides the two-channel interactions to produce interactive-programs or interactive moments in TV programs. This type of TV also offers facilities such as chat, web, fax and more (Ibid 2005, pp. 90).

5 IPTV, Interactive TV

IPTV is an IP-based interactive TV. This interactive TV is a type of “cross-media” interaction in which a two-way channel is used to send information and the content is streamed from both the media and the user (Martinsson 2006; Gawlinski 2003; Levy and Nebenzahl 2008). IPTV was first launched in form of digital terrestrial TV, with the advent of advanced networking and storage technologies coupled with Increase in the available bandwidth on new types of access networks together with improving media coding algorithms, the traditional television station is at risk (Zahid et al. 2008).

These events have made IPTV a unique communicative technology that has potentially hundreds of millions of users watching streams of 500 kbps or more, IPTV would not only revolutionize the entertainment and media industries, but could also be considered as the internet backbone and have access to networks with traffic (Hei et al. 2007). On the other hand, the various IP-based services can be a source of revenue and make extraordinary profits for its operators (Hei et al. 2007; Xiao et al. 2007). IPTV offers a variety of services including HDTV, digital video recording, video on demand, and interactive applications (Jain 2007).

Zeadally et al. (2011) divided IPTV chain spans into four domains: (1) the consumer domain presenting services to the final user, (2) the network provider domain allowing the connection between the consumer domain and the service provider domain, (3) the service provider domain which is responsible for providing consumers with the services, and (4) the content provider domain that owns or is licensed to sell contents or content assets.

6 Research Methods

In this study, two methods of documentary research (DR) and Delphi consensus were used to achieve the main objectives of this study. For this purpose, DR was first used to reach the maximum indicators in the fields of IPTV and gamification.

In this step, by studying more than 60 local and foreign sources, more than 150 indicators in two fields of gamification and IPTV were extracted. In the next step, in order to achieve the objective of research that is “Identification of Gamification Capabilities to Increase Audiences Engagement with the New Media: a case study of IRIB IPTV” Delphi consensus method was used. For this purpose, in the first round of Delphi and to limit obtained indicators and enrich these indicators, an interview was carried out with 22 experts in these two fields. Finally, 35 indicators in the field of IPTV and 24 indicators in gamification were identified. Following the Delphi method, we have tried to achieve consensus opinion of experts on the obtained indicators through representing questionnaire and receiving feedback from experts in both fields. For this purpose, in the second round of Delphi and with the participation of 15 experts in both fields, among the 35 indicators obtained in the first round of Delphi in the field of IPTV, 13 final indicators with a minimum consensus percentage of 60% were specified. In the following and in the third round of Delphi and with the participation of 15 experts in both fields, among the 24 indicators obtained in the first round of Delphi in the field of gamification, 13 final indicators with a minimum consensus percentage of 67.7% were specified. The measures taken in this study are represented in Table 1.

7 Research Findings

To achieve the main objective of the study, we must initially have a list of IPTV services. Therefore; after specifying a complete list of IPTV services at the first and second rounds of Delphi and categorizing them for core services and value-added services (Fig. 2) based on the experts’ viewpoints of IRIB IPTV, 12 services with the most capabilities for gamification were determined which are listed in Table 2.

8 Identification of Gamification’s Capabilities to Increase Audience Engagement with the IPTV

After identifying the services that have the highest gamification’s capabilities, in the third round of the Delphi we tried to identify gamification capabilities with highest ability to engage audiences with the IPTV services based on interviews carried out with gamification experts. In the following, a list of 13 selected capabilities by the experts are introduced (Fig. 3).

Table 1 Actions taken in the this study

Part	Phase	Target	The study group	Sampling method	Sample size	Research method	Collection method	Analysis methods
First	First	Obtain a complete list of IPTV services and Gamification capabilities	Books and articles in the field of Gamification and IPTV	Purposeful sampling	90 books and article	Documentary research	Taking notes	Qualitative coding
	Second	Obtain maximum number of IPTV services and Gamification capabilities	IRIB managers, university lecturers and experts in the fields of IPTV media and Gamification	Purposeful sampling	22 participants	Delphi	Depth interview	Qualitative Coding
Second	Second	Identify services from IPTV that have the greatest potential to Gamify	IRIB managers, university lecturers and experts in the fields of IPTV media and Gamification	Purposeful sampling	15 participants	Delphi	Questionnaire	Descriptive statistics
	Third	Identify Gamification capabilities that have the greatest ability to integrate with IPTV services	IRIB managers, university lecturers and experts in the fields of IPTV media and Gamification	Purposeful sampling	15 participants	Delphi	Questionnaire	Descriptive statistics
Third	First	Expression successful examples of Gamify of IPTV services	IRIB managers, university lecturers and experts in the fields of IPTV media and Gamification	Purposeful sampling	10 participants	Interview	Depth interview	Qualitative coding

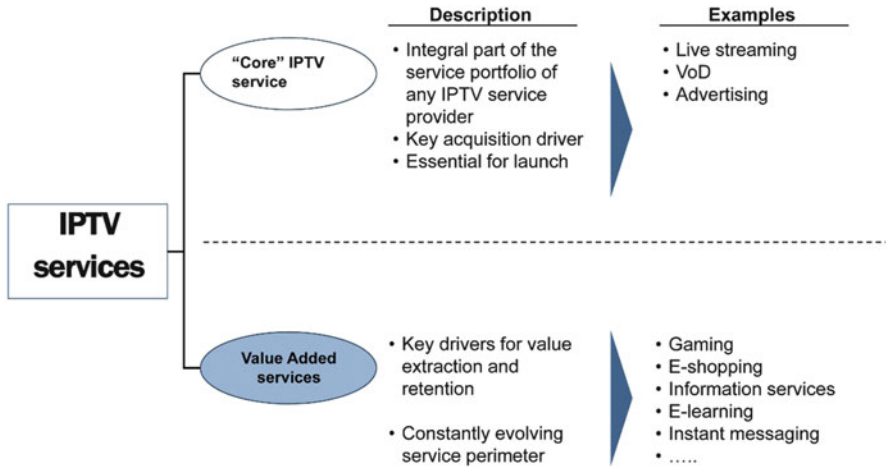


Fig. 2 Classification of IPTV services

8.1 Achievement and Success Capability

The sense of victory in a competition or access to certain services or facilities as a reward and gifts for the audience is considered a great success and induces a pleasant feeling to the audience. This capability is one of the main capabilities of gamification which will usually work in combination with other capabilities. This capability is very effective for audiences who are seeking success, especially children and young people. In IPTV Media when the user reach a certain score level (which is determined by the system), he can achieve new facilities (for example new content or new games) or he will be able to go to a higher user level with more facilities.

8.2 Scoring Capability

According to scoring capability, the given scores in each service matches the behavior and function of the audience. Scores can be either positive or negative. Scoring capability is the base for more gamification’s capabilities Such as levels, badges and ranking. Using this capability can easily induce a sense of progress to the audience. In IPTV Media, users get score for various activities (such as watching videos, participating in the tournament, playing games and etc.) and these scores can be displayed on their user’s page. Scores can be the basis for users’ access to different services, For example, a user by achieving a certain level of scores (determined by the system) can achieve a certain level of credit to use VOD service.

Table 2 The services that have the most functionality to Gamifying

Services	Description	Consensus percent
Time shift	An IPTV service in which subscribers can access (pause, rewind, fast forward, and etc.) IPTV contents without time limitation	86.7
Catch-up TV	The user can hold the program live and archived at certain times and at another time it looks	73.3
Participate in surveys and voting of programs	While watching the program shows audience can also participate in survey and competitions program. And even the audience also be associated with the other	86.7
Audience participation in television shows	During the program, the audiences can express his opinion via text or phone call As an expert or audiences	86.7
Personal video recording (PVR)	A personal video recorder (PVR) is an interactive TV recording device, in essence a sophisticated set-top box with recording capability (although it is not necessarily kept on top of the television set) (Rouse 2005). Subscribers typically have the ability to pause, rewind, fast forward the content, or even stop viewing it and return to it at a later time (Focus Group on IPTV 2007)	66.7
Purchase and lease of TV programs	The audience can buy an archive of scarce and important programs and himself share them for free or money with another audiences	66.7
Multi-angle service	Multi-angle service is to provide more various different camera angles than the one station view. The viewer can select angle which he likes to watch. For example, when the customer watches the baseball game in TV, he can see the first base, third base, or backfield according to view's wish not by the channel director's attention (Moustafa and Sherali 2012)	66.7
Parental control	By using this service, provided programs could be managed. For example, some films not suitable for children, if needed, you can manage their access	66.7
VOD and AOD	A service in which the subscriber can view video content whenever desired. The operating assumption is that the content is stored on the provider's VoD server. Subscriber accesses the movie from a library directory which may include search engine that accesses movie description and rating (Minoli 2012)	100
live streaming HD and SD	Pictures, videos, and movies in different resolutions appropriate to the audience of the media will be there	60.0
The possibility of surveys and voting about VOD and AOD	The audience can choose their favorite programs. Based on the points that audience give to it	86.7
Channel thematic	Creating and delivering issues packages such as child, family, movies, TV shows, etc. According to your request	60.0

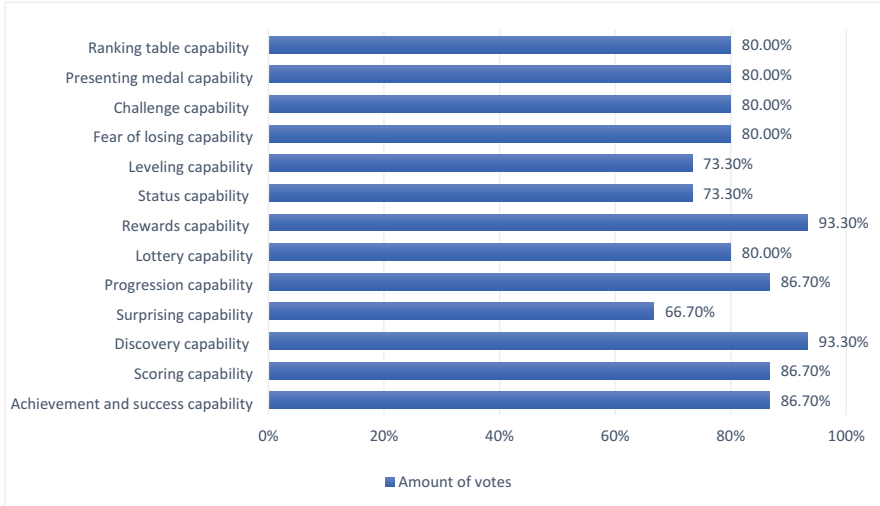


Fig. 3 Percentage of consensus expert opinions about selective capabilities

8.3 *Discovery Capability*

Discovering something that is hidden to others and no one has never been able to discover it will induce a sense of uniqueness to the audience. This capability in IPTV can be a discovery of specific content, a unique work, discount code or the answer of a question. If you want your media to be the first choice for audiences, you should always have something new and unexpected for the audience. In IPTV Media, the system can create puzzles and challenges during a TV series and consider a reward for those who solve them. Solving these puzzles requires watching all the episodes of a desired TV series.

8.4 *Surprising Capability*

Surprise is a pleasant feeling for all of us. We will be happy by surprises. This capability increases the motivation of audience. In IPTV media, different services, many new facilities, audience’s interested contents, discount codes, lottery prizes, etc. can be offered as a surprise. To use this capability and its benefits, IPTV media should always have the choice to surprise their audience. Therefore, by offering those in the alternate periods it can maintain the necessary motivation in them.

8.5 *Progression Capability*

The progression capability can be considered as the foundation of the other gamification capabilities. Most of the capabilities such as scoring, going to the

next levels, and ranking etc. are presented to inspire a sense of progress to the audience. This capability can be considered as one of the best features of gamification and one of the best tools available to keep the audiences motivated. In IPTV media this capability is often visible in the form of a progress bar by the audience. These progress bars can be different based on different services and activities of audience in this media. Progress can be the result of using a service, solving challenges, riddles, media usage history, and etc. that is visible to other users.

8.6 Lottery Capability

The lottery has been always used in various television programs. The lottery capabilities can be considered as the simplest and easiest capability to implement. The lottery in the last few years helped the survival of many popular programs such as sports programs “90”. More efficient outcomes can be achieved as a result of combining this capability with other ones. If you use it creatively and properly, it can be named as one of the cornerstones of the success of a project. This capability in IPTV can be performed among all audiences, audiences of special services, audiences of special programs or winners of a TV contest. For example, in the IPTV media, a lottery code can be awarded to people who arrive at a certain point in the day or answer the weekly question. And at the weekend owners of this code will participate in the lottery in order to receive the limited services or games or receive monetary credits.

8.7 Rewards Capability

Rewards can be given to audiences as a result of a specific action by them. Rewarding the audience is essential to maintain and increase his motivation. And not using this capability and not rewarding the audience means ignoring a very effective tool to engage audiences. On the other hand, offering unsuitable rewards frequently at short intervals may result in losing the impact of the reward and its value. Reward schedules should be presented according to the audience and his interests and provided at reasonable intervals. A large variety of rewards can be provided in IPTV such as movies, music interest, discount codes or using of a special service.

8.8 Fear of Losing Capability

A gamification project cannot be used without having risky challenges and a fear of losing the obtained scores. A gamification designer should design capabilities such

as going to the higher levels, rewarding as well as designing risky challenges for the audiences. It will act as a flip to the audience because it reminds them for developing and maintaining their previous position they should be more active and earn more points so as to not fall behind from the others. The flip increase audience engagement with the media. For example, In the IPTV, users who have reached level 4, receive the appropriate facilities according to their levels. But the user is warned that if he does not earn the necessary minimum score to survive at that level, he will fall to a lower level. This capability creates many challenges for users. And the fear of the falling behind the rivals provides them with the necessary motivation.

8.9 Challenge Capability

This capability reached the consensus of 80.0% of experts. The life of each person is full of diverse challenges. Life without challenges is a misconception. All of us will experience numerous challenges during our life from going to work to get married and find a job etc. Gamification projects is also impossible to be designed without the challenge. In other words, without Challenge gamification projects is doomed to failure. A gamification project that is designed for IPTV to engage the audience with services must specify challenges for the audiences that lead to intellectual engagement of the audiences with IPTV services, otherwise, the project will fail. In IPTV, challenges can be defined based on individual interests. These challenges can also be created by the system for the audience and by audience himself for the others. For example, getting the lottery code by solving a system-created challenge can be a fascinating challenge for users.

8.10 Leveling Capability

This capability reached the consensus of 73.3% of experts. This capability like the other capabilities such as scoring and presenting medal, shows the users' improvement with a different function. Users by getting scores or a special medal can improve their position and go to the next level. This will allow the audience to get much more and better facilities. Each level should offer better and more attractive facilities than the previous levels so that the audience will have motivation to go to a higher level. Otherwise this capability loses its motivational properties. In IPTV media, this capability can be used for any of the services and create motivation to engage audience with the services. The result of users' ratings is displayed on the page for various services, and users can use it as their status.

8.11 Presenting Medal Capability

This capability reached the consensus of 80% of experts. In all challenging situations and sports competitions winning medals has always been pleasant for everyone. In each tournament hundreds of people will compete for medals. A medal is not only valuable for individuals because of its price but also because of showing superior position compared to other competitors. Winning a medal creates higher motivation for people to try harder to win another one. This amazing tool is also used in the process of gamification designs and has produced excellent results. In the IPTV media this feature can be used for gamifying all services and take full advantage of its potential. In this way, users are given a special medal for using a service for a specified period of time. Moreover, as a result of solving an important challenge or winning a lottery, a special medal will be awarded to him. Everyone's Medal is visible to other users in his personal page.

8.12 Status Capability

This capability reached the consensus of 80.0% of experts. Status capability is common among all social networks. This capability provides the user with the possibility of sharing his status like a success, going to a particular place, etc. in a form of text, images or videos in his personal page. It is enjoyable to the person since it gives a person self-confidence among his friends. This capability can be very effective in IPTV media. For example, the user can share the gained scores or medals in any specific service as status in his personal page. This will give self-confidence to the person. And user profile page will be a safe place for him. Therefore, it creates the necessary motivation to audience's engagement with the IPTV media.

8.13 Ranking Table Capability

This capability has reached the consensus of 80% of experts. Ranking table is also one of the inseparable parts of the various competitions. This capability has a close relationship with leveling and presenting medal capabilities; it also represents the user's progress. All of us when we participate in a competition and see our positions in the ranking table compared with other competitors, would like to be on the top of the ranking table and exert ourselves to improve our position. This persuasion is the same as encouragement to progress and excellence; that with a tool called ranking table can be created in users. This capability in IPTV media can be based on the earned score, received medals or the result of higher levels of users. Ranking table

can also be considered as a kind of status. Undoubtedly, the proper use of this service will have valuable results for gamified IPTV media.

9 Conclusion and Discussion

With considering the previous similar studies and a comparative comparison, some differences were found compared with this study which are being discussed in the following:

Seung-Kwan Ryu et al. in their study entitled “Adoption of the Gamification Model for IPTV Contents Promotion Strategy” tried to offer a gamification model for IPTV media according to personal studies, citing personal experiences and individual knowledge. But it seems that based on the opinions of gamification experts and for some reasons this modeling would not be successful:

1. First step for designing a gamification project is providing the required instruments. In the first step, gamification experts should determine which capabilities would have the most efficiency in their projects. Hurriedly use without a sufficient research of a capability causes that other capabilities would be overlooked unconsciously, while those capabilities may probably have had more and better influence on the aimed project.
2. The model presented in the study of Seung-Kwan Ryu has been designed using the minimal interaction with IPTV experts and mostly based on personal experiences and self-studies. While one of the most important points in designing a gamification project is the interaction between the gamification’s designers and the managers of that business. Because the gamification’s designers without having enough interaction with managers of that business in order to understand their expectation and getting information about different aspect of their work are unable to implement successful gamification projects and the project will be failed entirely.

In comparison with Seung-Kwan Ryu study, the present study, first focused on designing gamification project in order to engage audiences to the IRIB programs as the vital phase of project. Therefore, by using a consensus of the opinion of gamification and IPTV experts, gamification capabilities that had the most ability to combine with IPTV services were determined. In the last step, as a unit for each service, successful cases of applying the gamification capabilities for gamifying those in order to engage the audiences with the IPTV services were presented. There are some reasons for the priority of this study over the Seung-Kwan Ryu study. First this study has been fulfilled using a correct and scientific method and based on the opinion of gamification and IPTV experts. Accordingly, based on the experts of both fields, some services of IPTV that had the most ability to gamify were initially determined and then some capabilities of gamification that had the most ability to combine with IPTV services in order to engage the audiences with

them were specified. This policy leads to more and better concentration of gamification experts on the present project and help them to avoid confusion.

However, the question that might be asked by the audience is that why no comprehensive model has been presented in this study. There are so many reasons for that. It should be first mentioned that the numbers of IPTV services that have been studied in this research was too much and offering a comprehensive model for all this services needed to more time and cost. That was impossible to do in the case of this study. Because it needs to make numerous and specialized meetings with managers and gamification and IPTV experts. On the other hands, for each of these services a model should be presented and finally an effective and comprehensive model from all of them as a unit should be presented. The main reason is lack of IPTV media launching. Because all the services that has been mentioned in this study is in accordance with international famous IPTV Media and the expectations of the internal experts from IPTV media that is going to be launched. Therefore, it is reasonable that the media should be initially launched and then according to the given infrastructure and facilities offered by that, a comprehensive and complete model will be designed.

10 Suggestions

1. Organizing gamification special group in virtual deputy for using the advantage of this technology to attract and engage the audiences to national media programs in different media fields. It is suggested that IRIB can use this technology and with appropriate employing of this technology can further stable its place over the country, Middle East and international levels.
2. Launching gamification special group in deputy of humanity affairs in order to use this modern technology to employ and train the specialists and revolutionary forces of media. Employing and training expert forces is one of the contexts that gamification technology has greatly done. On the other hand, one of the main needs and troubles of IRIB is to have specialist and revolutionary forces of media Therefore we can use gamification technology for employing specialist forces.
3. Using modern methods of broadcasting and producing programs in order to raise the quality of programs and attract more audiences. One of the tools that can enhance the quality of news is Gamification technology. This technology has been used in many international broadcasters to enhance the quality of news production. Using the Gamification capability such as rewards and challenges for encourage users to generate the contents by themselves is an example of the use of this technology in the news broadcasters. Therefore this technology is suggested for the news channels of IRIB to take its advantages.
4. Organization of the research workgroup for exploring the new technologies in the field of audiences and media. If a media wants to be successful in the competitive atmosphere of international media, it should always be aware about all the technologies used in this field. Therefore having a dedicated

group to monitor these technologies and exploring new technologies in the field of audience engagement and media development are needed.

Using the capability of Gamification technology to seek the audience's opinions and suggestions in order to increase the quality of productions and broadcasting IRIB programs. One of the best ways to improve the situation of IRIB is to use of the audience's opinions as the main assets of media. The audiences can express their expectations about the performance and programs of media better than experts.

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Competition Outside the Field: Economics and Marketing of Football in Iran



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Abstract Iranian football clubs are experiencing a difficult period of time. Financial crisis has been a trend in last three decades and majority of clubs are suffering from heavy debts. Premier league, that aimed to lead football clubs to be managed professionally, was not successful in establishing a sustainable economic structure. Considering these, this research provides an analysis of economics of Iranian football from a marketing perspective. Considering competitiveness as a common concept in business and football, authors suggest that the first step to economic success is to turn sport clubs into sport firms. Accordingly, organizational structure must be adapted with this paradigm shift, including a marketing department that acts in such important levels as that of sporting department. Following these structural changes, some B2B and B2C strategies have been suggested. In B2B, authors recommend co-marketing alliances as a solution to exploit the clubs' brand value; and in B2C, they propose application of customer engagement programs and integrated marketing communication as a solution to generate income from supporters and also to co-create clubs' brand.

1 Introduction

Following decades of national league in the country, Iranian Premier League (Jam-e Khalij-e Fars) started in 2001–2002, aiming to promote professional football nation-wide. Besides, it was planned to transform highly government-supported clubs with public-funded structures to private clubs with professional structures that are enabled to generate income and to support themselves with no reliance on the public funds.

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After 16 years, unfortunately, the economic purposes have not been met yet. Iranian football is still highly depended on public-funds and most of clubs are struggling with tight economic situations. Two superior clubs with millions of fans nation-wide are under heavy debts. F.C. Persepolis debts are 2110 billion Iranian Rials (appx. 55 million USD) while F.C. Esteghlal debts are 1180 billion Iranian Rials (appx. 31 million USD) (Tabnak 2017).¹

Evolution of football as an industry in modern time implies that what happens in the field is just part of a competition. Another part, and more important part, happens in the marketing battleground. Leading football clubs are the ones which have a successful financial performance out of the field. They have shown that success in the field is associated with the success in marketing departments of clubs. For this reason, to be successful in the football field, a club must be competitive in its managerial processes, in doing business and in exploiting of business opportunities to generate money.

At the time of writing of this article, Iranian football faces with a crisis of debt. The nation's qualifiers in Asian champions league are under the threat of withdrawal from these competitions because of their heavy debts. A premier league club that is the winner of last season cup, 'Naft-e-Tehran', is in a total chaos and an accumulation of debts endangers survival of this club. Esteghlal Ahvaz, champion of last season of premier league was faced with tight financial constrains to travel abroad and to host the international matches; and besides, unable to pay the players' salary. In last two decades there are many similar stories of debts, bankruptcies, requests for urgent government supports, and financial challenges of Iranian clubs.

Although AFC required all member clubs to balance their income and expenses, and in spite of FFIRI's (Football Federation of Islamic Republic of Iran) emphasis on economic organization of all member clubs, no success in marketing and economic performance has been reported yet. Marketing and economic management of clubs have been widely criticized and performance of Iranian clubs to exploit their capacity of brand and supporters to generate income has been neglected.

To understand how to improve the financial performance of Iranian clubs, firstly a knowledge from sources of income is necessary. A football club normally generates money from different sources; most important of them include sponsorship, TV right, merchandising, media relation, transfer of players and ticket sale. According to Desbordes (2006, p. 6), three main sources of income for five major leagues of Europe are TV right, sponsorship and Tickets and public relations. Following is the status of each window of income in Iranian context:

¹<http://www.tabnak.ir/fa/news/719961/%D8%B1%D9%82%D9%85-%D8%AF%D9%82%DB%8C%D9%82-%D8%A8%D8%AF%D9%87%DB%8C%E2%80%8C-%D8%A7%D8%B3%D8%AA%D9%82%D9%84%D8%A7%D9%84-%D9%88-%D9%BE%D8%B1%D8%B3%D9%BE%D9%88%D9%84%DB%8C%D8%B3-%D9%85%D8%B4%D8%AE%D8%B5-%D8%B4%D8%AF>

Sponsorship Most prominent income source for Iranian clubs has been sponsorship revenues (Khajeheian 2009). However, this revenue source has been historically inconsistent and challenging. Salimi et al. (2012) showed that just three of 18 teams in the sample period of their study were owned privately, none of them currently plays in premier league and just one of them still competes in the first division. A sign of failure exists in private ownership of football clubs. By their findings, most of Iranian clubs are owned by industrial organizations or public institutions, including municipalities, military, or ministry of youth and sport.

Another finding of Salimi et al. (2012), that is one of two academic sources of football marketing in Iranian context found by the authors, is that sponsorship incomes never supported costs of clubs. Firstly, the sponsorship contracts have been problematic, partly because of intellectual property rights and sport law issues, and partly because of not performing of obligations and judiciary procedures. A recent interview with advertising manager of one of major banks reveals that because of their bad experience of sport sponsorship, they have decided not to advertise and support any of sport clubs (source: Authors' interview). Secondly, the sponsorship contracts are a fraction of expenditures. For Esteghlal Ahvaz club sponsorship of Samsung electronics in whole season generates 200,000 USD comparing with 6.5 million USD expenses. In another case, for Bargh Shiraz Club, sponsorship of Samsung electronics generates similar 200,000 USD comparing with 1.8 million USD expenses. Figures and data extracted from their research shows a big gap among the income and expenses of Iranian football clubs.

Recent data from newspapers and common debate in media do not show significant difference. Almost all of football clubs face with heavy debts and low amounts of income. At the time of writing of this article, Asian Football confederation alerted two major Iranian clubs that if they cannot pay their debts until end of August 2017, they will be excluded from the Asian Champions League. Accordingly, the clubs request the government organizations and ministry of youth and sport to assist them to pay their debts.

Direct support from fans has been generated considerable income in recent years too. 3090, as a mobile short message system has been promoted by national TV to encourage supporters of three popular clubs to send related digit and pay an amount by daily basis (Fig. 1).

Broadcasting Rights Three of big five football leagues are very dependent on broadcasting right, representing more than 50% of the clubs' income in Italy, Spain and French (Desbordes 2006, p. 6). British Premier League recently signed a TV right deal that worth 5.14 billion Pounds over 3 years (2016–2019).² Situation in Iran is quite different. Based on the Constitution, Iranian Television and Radio is exclusively controlled by public government administration. In this situation and in absence of private owned broadcasts, broadcasting rights have been denied by public Television, reasoning that football is a public good and IRIB doesn't charge

²<https://www.sportskeeda.com/football/looking-importance-shirt-sales-club>



Fig. 1 3090, a solution for direct support of fans by daily fee on their phone bills

license fee. There is an ongoing discussion between FFIRI and IRIB and no broadcasting rights have been set yet. IRIB has paid some specific amounts of money in some periods, but no fixed amount of money has been compromised.

Merchandising Selling official jersey and accessories with club's brand is one of the major revenue sources for football clubs. In a very recent trend, by transfer of Neymar from F.C Barcelona to Paris Saint German, 10,000 PSG jersey sold in 1 day, by average price of 100 €. ³ In five major European football leagues, merchandising generates following figures: Spanish La Liga: 190.1 million euros, English Premier League: 167.5 million euros, German Bundesliga: 129.7 million euros, Italian Serie A: 76.9 million euros and French Ligue 1: 66.6 million euros. Top Five European football clubs (Real Madrid CF, FC Barcelona, Manchester United, Liverpool FC, FC Bayern Muchen), annually sell 1.2 million jerseys on average. ⁴ Again, in Iran things are completely different. In absence of intellectual property rights, clubs' kit can be bought in many independent sport shops with no permission of the clubs. In fact, the kits are produced by local tailors on their own format and personalization. No money comes to the pocket of clubs and no commission is paid. Practically, there is no restriction in use of a club's brand and logo for self-made products. In such markets, the income of clubs from merchandising is almost zero.

Tickets Ticketing is a controversial debate in the country. Recently a scandal of commissioning 35% of ticket price to a private contractor was covered by media. Also in recent years the number of attendants is reduced gradually and many of fans prefer to watch the match at home. In association with the economic situation in the country, ticket sale doesn't raise a considerable amount of money.

Transfer of Players Iranian clubs started transfer of players to European league in 2000s, but in 2010s, after several years of success, the transfer of Iranian talents decreased significantly. At the time of writing of this article, no Iranian player is hired in one of five big leagues (England, Spain, Italy, Germany, France) and few players are playing in middle level clubs in Netherlands, Greece, Russia, Sweden

³<https://www.thelocal.fr/20170805/psg-sell-10000-neymar-shirts-on-first-day>

⁴<https://www.quora.com/How-much-do-Football-clubs-make-with-merchandising>

and Norway. In spite of easy and quick qualifying Iranian national team to work cup Russia, Asian football is generally failing and success of Iran has not necessarily led to transfer of players to top leagues (see economics' article of Iran's success reflects the failure of Asian football at 14 June, 2017).⁵

Above mentioned depicts a portrayal of inefficient economics of Iranian football. It underlines the importance of scientific study of the reasons of such historical poor performance and to find a solution for improving competitiveness of Iranian football in different levels. This article reports an analysis of football economics and proposes some solutions to assist the Iranian football to restructure the professional clubs toward a profitable performance and to enhance the competitiveness of clubs in the battleground out of green football field, in the clubs' marketing departments.

2 Theoretical Framework

This article, part of a larger study of football economics and marketing, is based on a framework that mainly consisted of two major factors: co-marketing and co-creation.

2.1 Cooperative Marketing

A co-marketing alliance is a lateral relationship among firms or individuals that intends to amplify or build user awareness of the benefits that they offer. This involves partnership in one or more aspects of marketing and may extend into research, product development or even production (Bucklin and Sengupta 1993). According to Thoumrunroje and Tansuhaj (2004) co-marketing is a type of strategic alliance in business level competitive strategy that focuses on creating a competitive advantage in specific product markets by sharing resources and capabilities of partner firms at the same stage of the value chain. Farrelly and Quester (2005) emphasize that co-marketing is to market a product, brand or corporate image together as a system. Ahn et al. (2010) argue that co-marketing alliance happens among companies from different sectors, but in similar level of the value chain. Their position in value chain allows them to cooperate on an equal and independent status. By Grieco and Iasevoli (2017) discuss that the term co-marketing includes several different typologies of alliance, such as brand alliances, advertising alliances, co-promotion, co-development of new products, cause-brand alliances and online retail alliances. Salimi et al. (2012) differentiates co-marketing from sponsorship based on the characteristic that partners play a more

⁵<https://www.economist.com/blogs/gametheory/2017/06/how-east-was-lost>

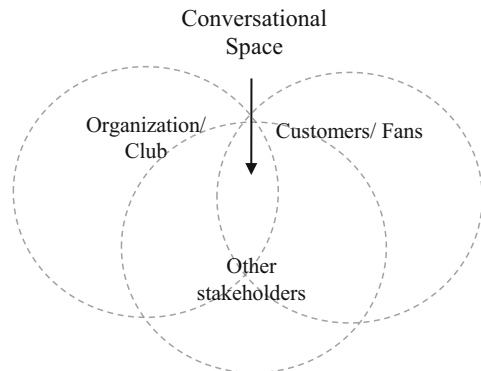
active role in co-marketing. According to them, a football club can use experience, resources, capabilities of the partner to offer value to the supporters and fans. Another important aspect of co-marketing is to provide the club a window to exploit the opportunities in other markets by using its brand advantage to lesser the risks of entry to new markets.

2.2 Brand Co-creation

To exploit a club's financial potential, it must be appreciated that a corporate brand plays a fundamental role in the creation and maintain a sustainable relationship between an organization and its multiple stakeholders (Schwaiger and Sarsted 2011). These stakeholders include clients, employees, investors, suppliers and citizens (Davies et al. 2010). Balmer (2012) discusses that a brand must be mentioned as a share property among the organization and its stakeholders, that organization carry the legal ownership and stakeholders own emotional ownership of the brand. In our case, a club's brand is a shared property between the club and its supporters and fans. Following this idea, Iglesias et al. (2013) proposed "organic view of brand" (PVB) as a co-creation model of brand. By their approach, creation of a brand is a social process that involve multiple stakeholders that build this brand together and in a social interaction (p. 671). By de Chernatony et al. (2006), "a brand is a name as well as a set of perceptions based on functional and emotional values and benefits"; Thus, a football club's brand is an image that carries values and emotions that are made from conversation and interaction of club's owners, managers, employees, history, fans, host city and other stakeholders.

Vallaster and Lindgreen (2011), argue that building a brand is an interactive process in a conversational environment. Merz et al. (2009) also emphasize that brand value is co-created by multiple stakeholders (Fig. 2).

Fig. 2 Brand is a set of perceptions that shape in a conversational space between organization and stakeholders (Adopted from Iglesias et al. 2013)



3 Methodology

This study was conducted by application of document study and expert opinion. In the lack of resources about Iranian football economics and absence of formal statistics of income and expenses, the researchers had to collect fragmented data from various sources. Newspapers, websites, interviews, TV reports, and any source of information were used for data collection. Then some experts of marketing, sport economics, media management and business requested to provide the researchers with their expert opinion about the collected data. Findings are extracted ideas of experts organized by researchers and framed by the research theoretical framework.

4 Analysis

There are three levels for income generations in football industry: (1) Federation Level, (2) League Level, (3) Club Level. In federation level, the main asset is National teams; adult, youth, women, under-19 years, under-16 years, etc. In league level, the main asset is Premier league and first division. In Iran Organization of League (Sazeman-e-League) is in charge of this level. And in club level, the main asset is the clubs' brand. Findings of this article are focused on the third level, football clubs.

4.1 *To Change Approach: Sport Firms Rather Than Sport Clubs*

All of Iranian clubs in premier league and many other clubs nation-wide carry a prefix of "Cultural-Sport Club of ...". Officially they are Cultural-Sport Club of Persepolis, Esteghlal, Sepahan, Zob Ahan, Traktorsazi, Gostaresh Foolad, Padideh, Siahjamegan, Foolad Khuzestan, Esteghlal Khuzestan, Sanat Naft Abadan, etc. This prefix helps form the perception of managers, players, stakeholders, policy-makers and society from their identity as a "cultural and sport not-for-profit organization". A sports club is a non for profit organization oriented to sport competition (Callejo and Forcadell 2006, p. 52). In a business-oriented paradigm, this prefix and the subsequent perception must be changed into a "sport firm". A sports firm, in reverse, aims to make profit from business activities in the area of sports. Thus sport and other operations aim towards profit making.

4.2 Restructuring the Club as a Sports Firm

Following the business approach toward identity, the clubs must also be restructured to be appropriate with the new mission. Benchmarking from Florentino Perez's Real Madrid restructuring, the following arrangement can be assumed: Sporting department, marketing department, corporate-economics departments. These departments will be supported by Administrative domains (Fig. 3).

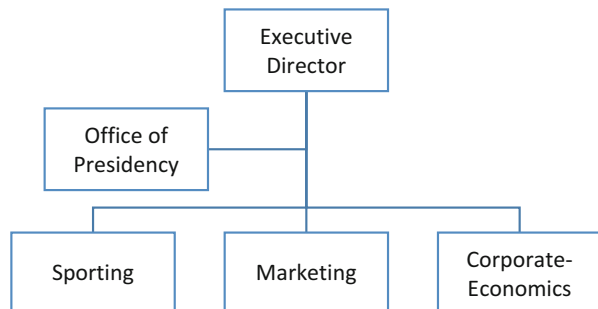
In such organizational structure, sporting department manages operational activities that are core competency of a sports firm. The output of this department is to offer the value of entertainment to the club's customers and fans. Marketing department generates income from the value of sporting department as well as corporate branding and social capital.

Currently, most of studied Iranian clubs lack a real marketing department, and their marketing committees, mostly include one of two persons who are in charge of sponsorship contracts. None of the studied clubs benefit from a marketing department that professionally and knowledgeably explore and pursue the business opportunities rather than usual sponsorship.

Although AFC requires all clubs to be financially independent and to establish their own economic and marketing establishments, and FFIRI has mandated this financial independence, after 16 years of premier league it is still significantly ignored. Authors suggest the FFIRI to require all football clubs of premier league and first division establish their marketing departments with a benchmarked structure and qualified related personnel within a year. Such establishment must be mentioned as pre-requisite for being included in the next season of the related league. With this policy, the clubs that mostly rely on public budgets or industrial funds will start to think and act marketing and business oriented.

An alternative can be to outsource marketing activities of a club to a professional and expert sports marketing agent. In this case, the mechanism is similar and a marketing department undertakes the revenue generating activities, but because of lack of proper sporting marketing staff nation-wide, an external professional agent must be commissioned.

Fig. 3 Restructuring model of Real Madrid (Adapted from Callejo and Forcadell 2006)



4.3 Co-marketing Activities

Historically, Iranian sport clubs were unable to exploit their brand capacity of revenue generation. Some brands are nationally capable (mainly Persepolis and Esteghlal), some regional (e.g. Traktorsazi, Malavan) and some other local. To exploit the money making potential in non-sports areas, established models of co-marketing might be considered. An excellent instance can be seen in Juventus co-marketing alliance with Caffé Mauro.

As it is shown in Table 1, a sports “firm” of Juventus FC exploited the potential of its corporate brand by a commercial partner to earn income from a new market. This successful partnership opened a new window of income by offering the club’s

Table 1 Co-marketing alliance of Juventus FC and Caffé Mauro (Source: Cherubini 2007) with minor changes

Juventus FC co-marketing alliance with Caffé Mauro
<i>Product</i>
• Name: Juvespresso (Juventus Espresso)
• Packaging: tin, from 250 g, black in color
• Mixture of high quality (70% Arabic/30% robust), beans, grinding by express
<i>Objectives</i>
• To create and market a line of coffee targeting a specific customer market
• To launch the Juventus brand in the coffee market
<i>Target customers</i>
• Supporters of Juventus FC and their social connections that are characterized by young age, medium/low budget and with an above-average female presence
<i>Opportunities</i>
• The distribution of Juventus FC supporters in Italy is in line with the disruption of selling outlets if Caffé Mauro. (brand coverage)
• The typical consumers of Caffé Mauro and Juventus FC have similar characteristics in terms of income, age, sex and geographical distribution
• Both the partners have similar values (energy, passion, popularity, tradition, Italian spirit)
<i>Distribution</i>
• Traditional channels: sold using the distribution channel used by Caffé Mauro (modern distribution, specialized retail, public exercises, overseas market)
• Other channels: innovative distribution channels, such as the merchandising catalogue of the Juventus FC, and the Juvestore
<i>Communication</i>
• The launch of the Juvespresso product was implemented by the following initiatives
– Presentation mailing to the retailer
– Promotion on the point of sale, with testing opportunities in an ad hic stand with the Juventus FC and Caffé Mauro brand
– An advertising campaign on Hurra Juventus characterized by a friendly message, simple and immediate, and structured according a ‘tease and reveal’ approach (double page)
– Promotional activity during the house matches of Juventus
– Consumer promotion with access to exclusive premiums and with loyalty cards

supporters a new value by a new product. The strategic partner also benefited from the market of the club supporters and increased the sale of product and also attached its brand with the club (Fig. 4).

Obviously, establishing such co-marketing alliances will be challenging in an inexperienced context of Iranian football. There are requirements to be met. For example, Salimi et al. (2012) extracted some requirements for a successful co-marketing activity, including strategic compatibility, convergence of goals, mutual commitment, and mutual trust. Finding partners in similar stage of value chain with such common features required for co-marketing is difficult and in lack of previous knowledge and history, will be challenging. However, to reconstruct the collapsed economic building of Iranian football clubs, it is necessary to start. Benchmarking, hiring external experienced experts, international visit of marketing staff from successfully launched projects might facilitate the start of such marketing activities.



Fig. 4 Jovespresso: Co-marketing product of Juventus FC (Photos: Google Image)

To design and perform a co-marketing program successfully, a club must be aware of different stakeholders. There are many different stakeholders in football marketing and dealing with these stakeholders creates a managerial complexity for football executives. Cherubini (2007) coined 'football convergence' to imply different types of interested parties that are involved in a football club. He articulates these different types as following:

Commercial Partners Mainly corporations that sponsor sports clubs to promote their product/service/brand using the fans, supporters and audience of a club. Normally, the main sponsor's logo will carry on the team kit for a season.

Coopetition with Competitors It is normally the League and the Cup, and teams that compete for trophy following a set of rules and regulations.

Local Government and Communities Federation, public institutions and local government are playmakers. They set the rules and regulations and football marketing must be done inside the framework they set.

Media Cherubini (2007, p. 111): "Football clubs must offer their services to supporters, as part of a match or a practice, creating entertainment and emotions that can be greatly amplified by the classic media (magazines, radio, television) and more innovative high-tech media (the Internet, mobile phones, etc.). Thus, a match becomes an event to discuss 7 days a week. In fact, no other sport is as attractive to the media as football."

Football Consumers They are direct customers that football clubs must deliver them value of entertainment, within a match or beyond the match. Clubs provide them services during a match and 7 days a week by extra services in the form of audience engagement (Fig. 5).

A well-designed and well-performed co-marketing plan evaluates the potentials, resources and capacities of each stakeholder and the value they are seeking for.

5 Implications

Traditionally, there are convergences and divergences between clubs and federation. The biggest struggle is that clubs look for more autonomy, whilst federation and governing bodies in general aim to control the wider interests of the league and competitions, such as development of football nation-wide, investment on youth and kids football, long-term investments and so on.

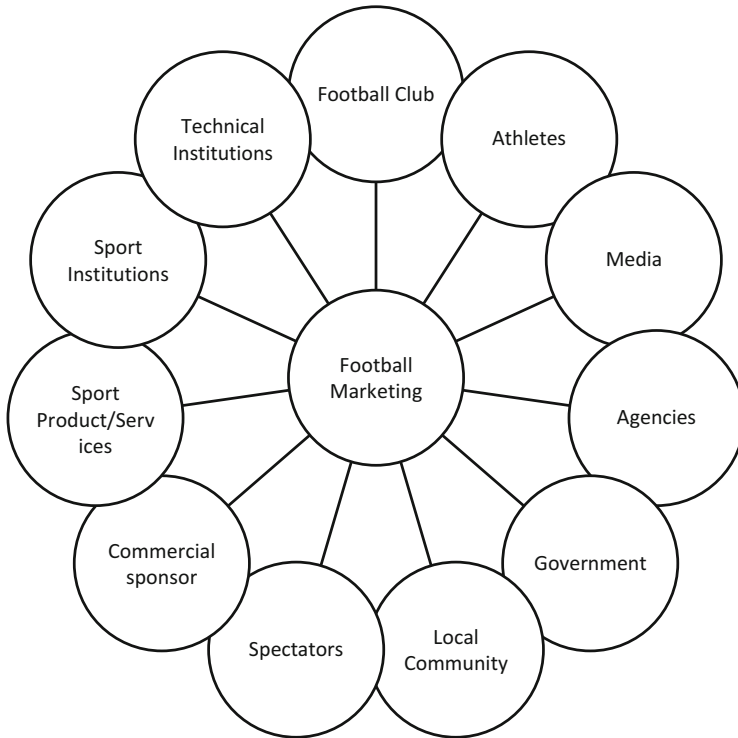


Fig. 5 Football marketing stakeholders (Source: Cherubini 2007, with minor change)

5.1 *Marketing Department*

As it said above, the cornerstone of this reconstruction is to establish an efficient and knowledgeable marketing department in clubs. Considering the established mindset of many clubs' managers, authors suggest FFIRI to require all clubs by mandatory guidelines addressing all participating clubs in premier league and first division league. These guidelines must include standards in case of staff, structure and milestones. It is worth to notice that this department might be outsourced to an external marketing agent. The point is that marketing view must be created within the clubs' organization.

5.2 *Public Relations*

Public relations is the main contact point of the federation with its stakeholders and the important section in implementation of a corporate marketing strategy. In total marketing approach, public relations play a critical role in corporate branding.

Three main functions of public relations are receiving of information (out-in), communication with external stakeholders (in-out) and managing communication inside the organization (in-in) (Khajeheian and Mirahmadi 2015).

However, public relations of the studied clubs and even FFIRI do not perform the expected functions of total corporate marketing. Considering website as the first contact point of an organizations and customers, and comparing with top level international clubs, there are many shortcomings in the design of sample clubs' websites. Also FFIRI Website still appears in a worn-out fashion with numerous broken links. Analysis of this website reveals that information are outdated and no required data are available. Sell of events' e-tickets is managed by another site (footballticket.ir) and there is no space for the sale of official kits, that can be a considerable source of income. Sponsors have no significant place in the website, and rank of website is very lower than the rank of sport websites. Considering that the website is the contact point with public, FFIRI has ignored one of the main windows of income and sources of public power.

Beyond the website design, modern public relations use audience engagement mechanism to involve fans and supporters in co-creational activities. Gamification plans are very common to encourage fans and supporters to keep visiting the website. In a comparison with the landing page of English Football Federation (thefa.com), football fantasy, sale of official kit, educational courses, have been totally ignored in clubs and federation's websites. The authors recommend the FFIRI, and clubs consider the website as an asset that must be managed carefully on a daily basis. Social media presence must be considered as a compatible activity.

In conclusion, public relations must be seen as an important section of marketing department and in addition to its intrinsic tasks, it must take responsibilities of website and social media, customer engagement programs, advertising campaigns and other marketing related activities.

5.3 *Business to Business Strategies*

In these strategies, Federation must be in commercial interaction with commercial partners. These partners are small firms either large corporations that are willing to leverage their businesses using connection with Iranian national teams. They financially support and expect to strengthen their market position. In a strategic partnership, both partners, namely Federation and commercial partner, are seeking for financial benefit and it is critical to consider success of both parts to form a win-win game. For this reason, the current approach of federation that includes searching for a corporate sponsor to pay a money and take sponsorship space on the kits and outdoor advertising places, must be evolve toward a cooperative marketing plan with mutual benefits. Also, it must consider to increase the Federation's marketing capacities for new partnerships.

Authors suggest identify advertising slots and marketing capacities of national teams to “areas of value proposition” for sponsors, advertisers and strategic partners. Areas of value propositions are activities that can be used for partners for promoting their brands against cash or delivering their services. Transfer, food, accommodation, hobby, travels, and clothes are some examples of these areas. Precise and careful identification of these areas will increase the marketing capacity of Federation to generate income from corporate partners.

5.4 Business to Customers Strategies

In these strategies, fans, supporters and individuals are targets. They are the source of a very vital asset for businesses: “attention”. Individuals as fan support both national teams and clubs in sport aspect and play as a source of direct and indirect money for Federation. Success in attraction and retention of individuals as customers is the key for creating a stream of income. The analysis shows that neither Federation nor clubs in the Iranian sport environment have been able to use their fans and supports to generate income from corporate partners. Considering fans as sources of attention that advertisers and commercial partners are looking for, authors suggest application of audience commodification as a business model. In this model, the firm sells attention of its audiences to the advertisers (Khajeheian 2016). In our case, football clubs can offer sponsors and partners, access to their fans by cooperative plans that propose the sponsors’ value as an alternative to rival products and services. The idea is pervasively used while the success lays in the detailed and precise design of this plan.

Currently, a customer plan is implemented by the partnership of Iranian telecom company, naming 3090. In this plan customers accept to pay a daily fee on their mobile subscription as their financial aid to their club. The amount of collected money was surprising, and F.C. Esteghlal CEO announced that 220 billion Iranian Rials has been raised by this club’s supporters in last season. But this plan has been criticized, firstly because of its limited capacity of money generation, and secondly because of direct money calculation that may wear the fans out and gradually decrease.

Authors suggest the Federation (and clubs in their own level) pursue a consistent, wisely-designed and customer-oriented audience engagement program to keep the football fans as an asset for sale to marketers. Football fans willingly participate in such programs, when they understand that their participation benefit their favorite clubs and also deliver them affordable value. Using of Gamification mechanism and a consistent and integrated fan management program enable Federation and clubs to benefit from a pool of audiences’ attention that is very interesting for many advertisers and commercial partners and can generate streams of revenue.

Using of Gamification mechanism, mainly, points, leaderboard, rewards and badges, provide users with a showable honor (as a virtual asset) that is enduring during time, in contrast with the current fan program in the country, 3090. It is

worth to notice that details are vital in executing these plans. A good idea can be ruined easily with a careless execution.

All in all, authors propose a total marketing plan for IRI Football Federation that is characterizes by following:

- Expansion of the area of supporters' touch (going through folk using commercial partners);
- Attracting supporters and fans to Federation (by supporters' platforms and programs);
- Creating and increasing sponsorship capacities (by value proposition to commercial partners using of football supporters as a valuable asset);
- An integrated revenue system from sustainable activities of users (by using of audience commodification).

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Part VIII
Empirical Researches

Impact of Situation in the Study of Gender Entrepreneurship and Opportunity Evaluation: An Analysis of Risk Disposition



Amir Emami and Nader Naderi

Abstract Entrepreneurial opportunities emerge from potential profit situations which are not by themselves considered opportunities in the first place. They can rather be called opportunities after they have been evaluated under conditions of risk and/or uncertainty. For this reason, the evaluation phase of opportunity is very instrumental in value offering as a driver of introducing new products and services. Part of an opportunity evaluation pertains to how a situation impacts opportunity evaluation. In this study, I apply risky framing (RF) which embodies both objective reality and the situational element to examine how entrepreneurs cope with opportunities in different risky situations. An experimental survey is used with a random sample of entrepreneurs and non-entrepreneurs (261 cases). The results of the analysis of variance revealed that an individual's judgment of entrepreneurial opportunities is affected significantly by the situation (positive vs. negative). The results have been provided for all groups (female entrepreneurs, female non-entrepreneurs, male entrepreneurs, and male non-entrepreneurs) with a full comparative analysis done between them.

1 Introduction

The question of “how entrepreneurs discover or create entrepreneurial situations, i.e. the opportunity to create new products or services, new markets, new means of production, represents a core intellectual question of entrepreneurship research (Ardichvili et al. 2003; Baron 2011; Eckhart and Shane 2003). This study is a

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response to recent calls on the importance of the situational conditions and the objective assessment of risk in the study of entrepreneurial opportunities.

The objective of this study is primarily inspired by the seminal work of McMullen and Shepherd (2006) "Entrepreneurial Action and the Role of Uncertainty in the Theory of the Entrepreneur, *Academy of Management Review*", in which they introduced the notion of the "third-person opportunity" vs. the "first-person opportunity". This view has been further elaborated by succeeding researchers (e.g. Davidsson 2015; Shepherd et al. 2017; Wood et al. 2014). According to McMullen and Shepherd (2006), opportunity enactment is contingent upon transition from the third-person opportunity to the first-person which entails opportunity evaluation under conditions of risk and uncertainty.

Although in their conceptualization the first-person and third-person opportunities are not distinct, they emphasize that each stream merely emphasizes a different aspect of the uncertainty experienced in the decision to act entrepreneurially. In addition, they describe their conceptual model as the outcome of the willingness to bear perceived risk and uncertainty. In line with this assumption, they propose a pragmatic approach rooted in the tradition of positivist psychologists, such as Simon, Tversky and Kahneman, and Giegerenzer which apply experimental methods or controlled tasks to observe individual behavior within an "objective," microcosmic reality (McMullen and Shepherd 2006). They also exemplify Tversky and Kahneman's framing experiments.

This research was later motivated further by the works of Shepherd (2015) and Yordanova and Alexandrova-Boshnakova's (2011), where they urge researchers to explore the effect of positive and negative task domains that challenge entrepreneurs' judgment, emotion, and action in entrepreneurial opportunities and how gender relates to these issues.

Following these three pivotal calls, I adopted the pragmatic experimental approach of risky framing (RF) which embodies both objective reality and contextual element (positive vs. negative). Hence, this book chapter explores how different representations of entrepreneurial opportunity can affect the risk disposition of entrepreneurs and non-entrepreneurs, and whether this differs between males and females in opportunity evaluation.

The problem of the classic framing framework (Tversky and Kahneman 1981) for the objective of this study is that this framework is not subject to multiple interpretations (McMullen and Shepherd 2006). The classic RF manipulation only has two sets of dichotomous measurements. The first set involves a choice between a certain vs. a risky action in a gain domain, whereas the second is a choice between a certain vs. a risky action in a loss domain. To resolve this problem, five opportunity scenarios were designed. The opportunity scenarios were manipulated with one certain condition (riskless) and four different risk levels, all in continuous repeated measures in a positive (vs. negative) situation. The detailed differences and risk dispositions of each of the four groups were analyzed. The new argument offered in this research serves to enrich the opportunity literature both in theory and practice.

2 Cognitive Aspect in Entrepreneurial Opportunity Evaluation

Entrepreneurial cognition (EC) has received a lot of attention in recent years from scholars due to its effective role in explaining why, when, and how entrepreneurs use different modes of behavior to evaluate and exploit entrepreneurial opportunities (Foss and Klein 2012). It also has met with considerable empirical success (Mitchell et al. 2007). Entrepreneurial cognition refers to how entrepreneurs use their schemas to connect previous unorganized information in order to build knowledge structures around entrepreneurial opportunities (Ward 2004; Kaplan 2011). For example, the knowledge structure enables entrepreneurs to make sense, imagine, identify, and design new values for themselves and others (Mitchell et al. 2002; Cornelissen and Clarke 2010; McMullen and Dimov 2013), how they evaluate the credibility of third-person opportunities (Mitchell and Shepherd 2010; Wood and Williams 2014), how they form intentions to develop and pursue these opportunities (Dimov 2007; Liñán et al. 2011; Siu and Lo 2013), or how entrepreneurs confront decision biases (Busenitz and Barney 1997).

In this study I also seek EC to examine how entrepreneurs confront decision biases at the time of opportunity evaluation. This is because entrepreneurs are not perfect rational information-processing machines in the market. They too make a lot of errors in the way they handle the information on their opportunity in the course of opportunity development.

The process of creating an opportunity starts with a subjective process of recognition (Shane and Venkataraman 2000), and then it involves further endeavors by entrepreneurs to transform it into an objective value. The creation of a strong value proposition follows a successful opportunity development process. This involves identification of an opportunity or idea (Dimov 2007), its evaluation as well as risk assessment (McMullen and Shepherd 2006), and development (Ardichvili et al. 2003). Evaluation is paramount mainly for two reasons. First, it determines whether a specific set of circumstances represents an opportunity for a particular person (McMullen and Shepherd 2006; Wood et al. 2014). Second, because entrepreneurs are likely to conduct evaluation several times at different stages of opportunity development, it has potentiality for leading to the identification of further opportunities or improvements to the original opportunity insight (Ardichvili et al. 2003).

3 Risky Framing

Based on the framing typology of Levin et al. (1998), RF is the most well-known type of frame and it contains a set of options with different negative (vs. positive) risk levels that elucidate violation of a rational choice invariance criterion when decision makers are faced with different manipulations of one single decision

problem. It is based on the Prospect Theory (Kahneman and Tversky 1979), which was introduced by Tversky and Kahneman (1981). The Prospect theory can explain why, in a gamble situation, people would prefer a certain gain of \$30 to 80% probability of earning \$45 (the same subjects were shown to prefer 20% probability of earning \$45 over 25% probability of earning \$30) (Soman 2004).

There is a tendency for people to value risk in a more negative than positive situation, which is referred to as loss aversion bias (Kahneman and Tversky 1979). Many researches have shown that framing effects can play a role in many task domains (e.g., monetary issues, time, life death, food, and idea contribution) (Emami et al. 2011; Huang and Wang 2010; Levin and Gaeth 1988; Levin et al. 1998; Soman 2004).

The Prospect theory can be extended to real life matters (Fox and Tversky 1998). The idea is that people think about decisions by analyzing them and dividing them into beliefs and values. People make decisions as if they have assigned probabilities to the beliefs (Baron 2008).

4 Gender Entrepreneurship

Most studies in the entrepreneurship area underline the role of male entrepreneurs rather than female entrepreneurs. In other words, the findings on entrepreneurship are mostly the outcomes of male-dominated researches (Baker et al. 1997; DiMaggio 1997; Dastourian et al. 2017; Ramadani et al. 2013; Ratten 2016).

However, female entrepreneurship has been received more and more attention in recent years as an important untapped source of economic growth in society. Such an increasing interest has roots in the diverse contributions of woman entrepreneurs to creating new jobs, as well as offering new solutions to managers in order to exploit entrepreneurial opportunities regarding organization and business problems (Ramadani et al. 2013). Not only is the contribution of females to opportunity recognition (at both a macro and micro level) an addition to entrepreneurial processes, but it has also been considered as a vital aspect of entrepreneurial practices (Acker 1990).

Female entrepreneurs possess stronger managerial skills than male ones in building relationships with their ecosystem. These skills enable female entrepreneurs to have a better understanding of the works, and effective negotiation abilities with market actors and stakeholders. The other prominent characteristics of female entrepreneurs are their tolerance and respect of human issues in the marketplaces. These characteristics make them more sensitive and ready to deal with problems than men (Hisrich and Brush 1986; Ramadani et al. 2013). This is a part of the common logic of entrepreneurial expertise that successful entrepreneurs use in the highly unpredictable start-up phase of a venture to create opportunities (Sarasvathy 2003).

5 Theoretical Background

In general, the evaluations of an object or event are more favorable if a key attribute is framed in a positive way rather than in a negative way (e.g., Levin and Gaeth 1988). However, other studies have revealed that gender differences and the task domain can moderate risk and framing effects.

5.1 *Gender, Task Domain, Risk and Framing Effect*

Gender has been identified as one of the most significant factors that can influence the occurrence and the patterns of framing effects (Cullis et al. 2006; Fagley and Miller 1990). It has been contended that framing studies that do not assess sex differences might not be interpretable (Fagley and Miller 1997).

Braun et al. (1997) found that females are more susceptible to a positive (vs. negative) presentation of decision problems. Harris et al. (2006) showed that women are more risk-seeking in positive domains that involved small losses with the possibility of great earnings. Their study highlighted that women are less risk-seeking when they perceive the likelihood of negative outcomes as being greater.

The task domain can moderate gender differences in framing effects and in the perception of risk. For example, when using RF in life-death and monetary task domains, Fagley and Miller (1997) found that women, but not men, make riskier choices when outcomes are framed negatively than when framed positively.

Life-death, health, money, Product, and time issues are examples of “task domains” that have been widely used in framing studies (Huang and Wang 2010; Levin et al. 1998; Soman 2004).

Weber et al. (2002) developed a specific risk propensity scale that included a financial task domain. They found that the perception of benefits and risk are related to gender. Moreover, the task domain can lead to significant differences between the sexes as far as risk dispositions are concerned.

5.2 *Consistency Between Task and Gender*

Consistency between task and gender is suggested as an important issue in the study of gender and framing effects. Eagly and Karau (2002) found that people tend to seek consistency between their gender roles and environment (positive vs. negative structure of their context), and that inconsistency could lead to a worse evaluation. Rothman et al. (1993) showed that women are more involved in performing skin cancer detection in a negative framing (vs. positive framing), while men are more likely to respond to a positive framing. They concluded that task domain (health care vs. monetary) is positively related to gender stereotypes.

Cullis et al. (2006) showed that males have a higher susceptibility to framing effects when the task domain is related to monetary issues. For instance, they found that although both males and females declare less income when taxation is framed as a loss rather than a gain, this trend is stronger in males than in females.

Huang and Wang (2010) used RF in their study. They argued that if the task is related to gender stereotypes, the situation described in a negative frame is more inconsistent with men's gender role than women's. For instance, they showed that men had stronger framing effects in the monetary domain than women (with the inclination to risk in a negative frame and being risk-averse in a positive frame). They revealed that the trends that individuals are more inclined to perceive as dangerous, take actions on, or make risky choices on in negative frames than positive frames are stronger in females than in males in feminine tasks, but are weaker in females than in males in masculine domains.

5.3 Gender, Entrepreneurship and Risk

The dominant assumption is that males are socialized to take risks and eagerly pursue their goals. They are more likely to consider a risky situation as a challenge that a call for participation. Conversely, females are socialized to be risk-averse and consider a risky situation as a threat (Širec and Mocnik 2015). They pursue their goals with more cautious strategies (McKay-Nesbitt et al. 2013, p. 2247). However, they are more realistic in a risky context, whereas male entrepreneurs are more over-optimistic (Širec and Mocnik 2015).

Sexton and Bowman-Upton (1990) argued that female entrepreneurs are less willing than male entrepreneurs to become involved in situations with uncertain outcomes. Furthermore, they show less endurance and have lower energy levels than those needed to maintain a growth-oriented business, especially when the financial gain is involved in an uncertain environment, compared to men.

Although there is contradictory evidence about the difference between female and male entrepreneurs in risk preference (e.g., Sonfield et al. 2001), the majority of studies has shown that women exhibit lower risk disposition than their male counterparts (Yordanova and Alexandrova-Boshnakova 2011, p. 276).

The research hypotheses are formulated in the following way:

If the information of entrepreneurial opportunity is framed negatively:

H1: *Male entrepreneurs will have a higher disposition for riskier opportunities than female entrepreneurs.*

H2: *Male non-entrepreneurs will have a higher disposition for riskier opportunities than female non-entrepreneurs.*

If the information of entrepreneurial opportunity is framed positively:

H3: *Male entrepreneurs will have a lower disposition for riskier opportunities than female entrepreneurs.*

H4: Male non-entrepreneurs will have a lower disposition for riskier opportunities than female non-entrepreneurs.

No specific hypotheses about the other interactions are available. For instance, if the information on the entrepreneurial opportunity is framed positively (vs. negatively), how does the risk preference/aversion vary between male entrepreneurs versus female non-entrepreneurs or between female entrepreneurs versus female non-entrepreneurs, etc.? All the possible interactions among groups will be analysed. The results of the experiment are presented in two parts, that is, *primary* and *secondary* results. The results of the primary analysis refer directly to the hypothesis of the research, whereas the results of the secondary analysis concern the general issues of gender risk measurement.

6 Method

6.1 Participants and Experiment Design

In order to increase the external validity of experimental results, it is crucial to define the key measurable feature of the experiment population.

In the literature on entrepreneurship, there is no unanimous agreement on the definition of an “Entrepreneur” (Nicolau et al. 2009). Studies have suggested criteria such as being the owner operator of firm (e.g., Sorenson 2007), self-employment (e.g., Batista and Umblijs 2014; Bitler et al. 2005), the founder of a new firm (Gartner 1988), or engaging in the firm start-up process (e.g., Reynolds et al. 2004).

The aim of this work was to collect data from Iranian entrepreneurs, and women make up only 13.8% of the country’s economy.¹ Therefore, in order to have a larger number of proxy women entrepreneurs in the experiment, rather than choose one definition over another, all of the definitions were considered equally as the key attributes of an entrepreneur to determine the entrepreneur population.

To avoid any risk of selection biases in sampling (Berk 1983) each of the subgroups assigned independently to the research experiments. Because the exposure to both positive and negative for the same subgroups raises the issue of reliability as well as confounding effects (Baron 2006) and requires risky method such as *self-selection correction* to reduce the sampling error (e.g., self-correction bias).

The sample size for both female and male entrepreneurs was estimated as one hundred and fifty using the $n = 2z^2pq/d^2$ formula ($n = n_1 = n_2$), with a confidence level of 90%. The desired accuracy level was 0.09, and the proportion of the population with the characteristics of an entrepreneur was estimated to be 0.65.

¹Based on the latest national Iranian survey, which was conducted in 2013. This figure was taken from the Iranian statistical center database: <http://www.amar.org.ir/>

The participants were individuals who had attended an MBA programme, a master of entrepreneurship programme, or applied business courses over a time interval of 7 years (2007–2014) in three universities in Tehran. Six hundred and eight participants (173 females and 435 males) had one of the aforementioned criteria. Since the total population from which the final sample was to be drawn was not large, the size of the population was also taken into account (Gregg 2008). The formula for calculating the final sample $n_f = n/1 + (n/N)$, estimated sixty-six individuals as proxy entrepreneurs for each gender. Then, 140 subjects were chosen randomly (with a different selection procedure for each gender) and were invited to fill in the experiment scenarios in four sessions at the University of Tehran. Five questionnaires were eliminated by expert invigilators as they were considered unreliable. Therefore, 135 (65 from men and 70 from women) were considered as valid questionnaires. Ages ranged from 27 to 52, with a mean age of 35.13 ($SD = 5.9$).

Basically, the non-entrepreneurs were those who demonstrated very little tendency towards venture activities. This criterion was fulfilled on the basis of data collected from staff employees (other than those in managerial positions) of ten large governmental organisations located in Tehran.

A list of randomly selected e-mail contacts of 719 subjects from the organisations was drawn up. The number of entrepreneurs was the cut-off point in the research. Hence, 65 men and 70 women were selected randomly. They were invited to fill in the experiment scenarios in ten sessions at their reference organisations. Nine responses were eliminated, for the same reasons as for the entrepreneur sample. Therefore, the overall non-entrepreneur sample comprised 126 subjects (64 women and 62 men). Ages ranged from 18 to 60, with a mean age of 34.52 ($SD = 11$).

6.2 *Material and Measure*

The classic RF method (Tversky and Kahneman 1981) has two sets of dichotomous measurements. The first set is about a choice between two certain versus risky actions in the gain domain, whereas the second is a choice between two certain versus risky actions in the loss domain. This dichotomous measurement has been used in some researches to measure risk propensity (e.g., Roszkowski and Snelbecker 1990), but considering the weak power of the scale (see Stevens 1946), in the present case, it was not considered suitable for disposition measurement.

The RF task domain in this research experiment concerns five opportunity scenarios.² The opportunity scenarios are manipulated with one certain condition (riskless) and four different risk levels, all in continuous repeated measures in a positive (vs. negative) domain. It is important to highlight that there is a negative

²For a copy of the experiment tool contact the author.

relationship between the amount of risk and the return in all the scenarios. For instance, the opportunity scenario in the risk free format provides less return than the others.

In order to capture a variety of responses to obtain a better understanding of risk disposition, Likert scales, consisting of seven items, were applied to all the opportunity states. In addition, a very clear explanation was provided for each of the scenarios in order to make the respondents feel completely free to provide their highest or lowest dispositions, thus minimizing the risk of central tendency bias (Gilbert 2008). In the introduction of the scenario, the respondents were encouraged to imagine themselves in the situation. The participants were asked to indicate their preferences regarding each opportunity.

In the framing of the opportunities, it was critical not to violate the logic of the original Prospect Theory and Framing effects. The internal validity of the tool was confirmed by a psychologist and a psychometrician, and their suggestions were introduced.

6.3 Interaction and Statistics

All the hypotheses were combined to form a three-way interaction of respondent gender (female vs. male), occupational attribute (entrepreneur vs. non-entrepreneur), and scenario representation (positive vs. negative) on opportunity evaluation. Furthermore, One-Sample T-Test and analysis of variance (One-way ANOVA and Two-way independent ANOVA) were used to extract the results from the dataset. All the analyses were performed with the Statistical Package for Social Sciences (SPSS V.18).

7 Results

Risk is defined as the degree of probability of loss, and opportunity scenarios A–D are presented in order of risk from the highest to the lowest (i.e., 67, 62, 57, and 52% risk), whereas Opportunity E is a certain situation.

The results show that framing information of opportunity leads to significant differences in risk dispositions between the entrepreneurs and non-entrepreneurs but also between the males and females.

H1: *If the information of entrepreneurial opportunity is framed negatively, male entrepreneurs will have a higher disposition for riskier opportunities than female entrepreneurs.*

When the information of opportunities was framed negatively, the male entrepreneurs showed a marked disposition for all the risky scenarios. Their risk dispositions were highly significant in scenarios A ($T_A = 9.8$ $P < 0.001$), B

($T_B = 5.17 P < 0.001$), and C ($T_C = 4.8 P < 0.001$). This result was not observed for the female entrepreneurs. Their dispositions for risk were not significant in any of the scenarios (A–D). Therefore, according to the ANOVA results, this hypothesis was confirmed for all the levels of risk, except for the 52% risk level ($F_D = 1.37 P > 0.05$). In addition, both groups reported significantly low disposition regarding riskless Opportunity E ($T_{male} = -6.9 P < 0.001$ and $T_{female} = -6.09 P < 0.001$). This means that the two groups did not have a disposition for certainty when the information on the opportunity was presented negatively. This seems normal as the male entrepreneurs were risk seekers in scenarios A–D and were reluctant about certainty. However, the female entrepreneurs did not show any interest in any level of risk, which is an unusual result.

H2: *If the information of entrepreneurial opportunity is framed negatively, male non-entrepreneurs will have a higher disposition for riskier opportunities than female non-entrepreneurs.*

The male non-entrepreneurs showed a highly significant preference for Opportunity C ($T_C = 3.6 P < 0.01$) and D ($T_D = 4 P < 0.001$), which are moderate risk scenarios, but the opposite for the high risk opportunities ($T_A = -3.6 P < 0.01$ and $T_B = -3.1 P < 0.01$). On the other hand, the female non-entrepreneurs showed a significantly low preference for all the risk levels ($T_A = -5.1 P < 0.001$ and $T_B = -6 P < 0.001$ and $T_C = -5 P < 0.001$ and $T_D = -4 P < 0.001$). Therefore, the hypothesis has been confirmed, but just for moderate risks of 57% and 52% ($F_C = 37 P < 0.001$ and $F_D = 36 P < 0.001$). In addition, both groups showed significantly low dispositions for certainty ($T_{male} = -3.6 P < 0.01$ and $T_{female} = -10 P < 0.001$), and this low preferential inclination towards certainty was even higher for the female non-entrepreneurs ($F_E = 12 P < 0.01$). It can therefore be concluded that the female non-entrepreneurs were reluctant to take any entrepreneurial opportunity risk in the negative situation.

H3: *If the information of entrepreneurial opportunity is framed positively, male entrepreneurs will have a lower preference for riskier opportunities than female entrepreneurs.*

Among all the risky scenarios, the male entrepreneurs evaluated just the highest risk level (67%) favorably, with a highly significant P -value ($T_A = 4.6 P < 0.001$). They reported a significantly low preference for the lowest risky scenario and certainty ($T_D = -4.7 P < 0.001$ and $T_E = -7 P < 0.001$).

The female entrepreneurs were not interested in Opportunity A ($T_A = 1.6 P > 0.05$), and were instead more interested in D, C, and B, respectively ($T_D = 5.4 P < 0.001$ and $T_C = 4.9 P < 0.001$ and $T_B = 2.3 P < 0.05$).

Like the males (but not to the same extent), they showed a significantly low preference for certainty ($T_E = -2.9 P < 0.01$).

This hypothesis can only be confirmed for highly significant P -values for moderate risks of 57% and 52% ($F_C = 14 P < 0.001$ and $F_D = 52 P < 0.001$).

H4: *If the information of entrepreneurial opportunity is framed positively, male non-entrepreneurs will have a lower preference for riskier opportunities than female non-entrepreneurs.*

The male non-entrepreneurs showed an almost highly significant disposition for all the risk levels, except for the highest risk 67% ($T_A = -0.23 P > 0.05$). However, it is strange that, at the same time, they showed an even higher disposition for certainty ($T_E = 10.8 P < 0.001$). This is highly inconsistent behaviour in the male non-entrepreneurs, which could put them in a critical condition if they wanted to start a business. The same inconsistency was not observed for the female non-entrepreneurs, who neither showed interest in any of the risk levels nor a slight disposition towards them, but showed a highly significant disposition for certainty ($T_E = 11 P < 0.001$). This obviously suggests that they are not interested in business opportunities that deal with risk. Therefore, this hypothesis cannot be approved for any risk level.

The full results are presented in the Table 1 so that the reader can make a comparison easily between the four groups.

On the basis of the behavioral patterns of the risk dispositions (Fig. 1) and the differences in dispositions across the four groups (Table 1), it can be concluded that, in the positive projection of the risky opportunities, although the male non-entrepreneurs clearly prefer certainty, the least significant difference in all four risky conditions is between the female entrepreneurs and the male non-entrepreneurs. Therefore, as far as risk disposition is concerned, these two groups have more in common than the others. For this reason, they could have the same risky behavior when they face entrepreneurial opportunities in positive conditions.

The 62% risk level is the only risk level in which all four groups demonstrated the same risk disposition. Furthermore, the male entrepreneurs and male non-entrepreneurs deviate more than the other paired groups in the positive condition. These results may imply how a task domain can influence risk and certainty dispositions for the same gender.

In the negative framing of the opportunities, there is a perfect discrepancy between the female entrepreneurs and the female non-entrepreneurs. The second position belongs to the male entrepreneurs and the female non-entrepreneurs. Furthermore, on the basis of the statistical results, there is no junction in which both groups have fewer than three different boxes.

Overall, in the negative formation, there are more differences between all the groups than in the positive domain (21 states vs. 16 states, see Table 1). This findings reiterate the tremendous effect of negative structures on individual cognitive frames (for a review, see Rozin and Royzman 2001). The findings also shows that not only does the task domain affect risk disposition (Huang and Wang 2010; Weber et al. 2002), but also that the effect on dispositions in all the groups was stronger in a negative situation of opportunities than in a positive one.

Although the female and male entrepreneurs are in the same occupation position, in the negative domain, the more risk and return increased, the more discrepancy

Table 1 Differences between four groups in a negative versus positive frame of opportunities A–E

	<i>Male Entrepreneur</i>	<i>Female Entrepreneur</i>	<i>Male Non-entrepreneur</i>	<i>Female Non-entrepreneur</i>
<i>Male Entrepreneur</i>	Positive	A B * C D ***	A B *** C D ***	A B *** C D **
	Negative	A B *** C D **	A B *** C D **	A B *** C D **
<i>Female Entrepreneur</i>	Positive	A B *** C D **	A B *** C D **	A B *** C D **
	Negative	A B *** C D **	A B *** C D **	A B *** C D **
<i>Male Non-entrepreneur</i>	Positive	A B * C D **	A B * C D *	A B * C D **
	Negative	A B *** C D **	A B *** C D **	A B *** C D **
<i>Female Non-entrepreneur</i>	Positive	A B * C D **	A B * C D **	A B * C D **
	Negative	A B *** C D **	A B *** C D **	A B *** C D **

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

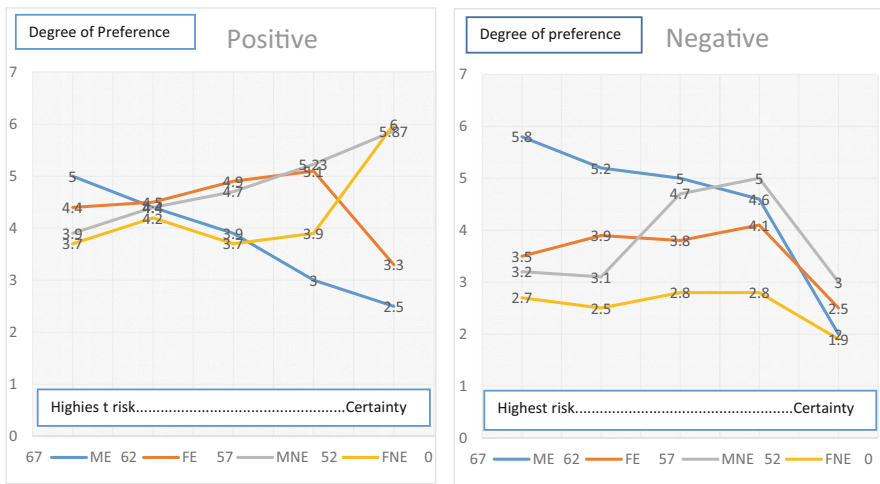


Fig. 1 Behavioural pattern of risk dispositions between four groups in negative and positive frames based on the disposition means (*ME* male entrepreneur, *FE* female entrepreneur, *MNE* male non-entrepreneur, *FNE* female non-entrepreneur)

occurred in their dispositions (see Table 1 and Fig. 1). This means that the male entrepreneurs tended towards high risk dispositions, while the female entrepreneurs tended towards low disposition in the negative opportunities. This can be considered from different points of view.

This result may be related to some other causes, such as institutional features of the context where the data were collected. For example, Dana (1995) found that response to opportunity is culture-based, because the cultural perception of opportunity plays a major role in opportunity identification (p. 67).

8 Discussion

In a male-dominated society, Iranian women can run their own businesses and pursue their careers. However, due to strong family control, less accessibility to resources (in comparison to men) and high internal family responsibility, the level of risk of entrepreneurial action is lower than for men in Iran (Estiri et al. 2017; Javidan and Dastmalchian 2003). Therefore, the level of power perception tends to be low among woman entrepreneurs in the country, in comparison to male entrepreneurs. People with less power perception tend to be less risk-seeking because they perceive their chances of success as being lower (Anderson and Galinsky 2006). This puts Iranian women at a disadvantage regarding entrepreneurial endeavors.

It is encouraging to study power and loss aversion literature in order to justify this result. For example, Inesi (2010) indicated that individuals in a position of power are less loss-averse than others in a negative frame, because they are less concerned about avoiding losses. In another study, Polman (2012) confirmed Inesi's result and contended that when people are in a position to decide for others, they show less loss aversion than people who choose for themselves. However, these researches did not go further by combining their results with risk-seeking behavior or gender differences. If their results were combined with the loss aversion bias featured in RF (the tendency for people to value risk in a more negative than positive way), it could emerge that people in a stronger position of power tend to have less risky dispositions in framing. However, this analogy is in contradiction with the male entrepreneurs' risk disposition that emerged in the present study, unless task domain dependency is considered as the missing link in the relationship between framing and power.

8.1 *Implications for Future Research*

An important direction for the future research pertains to the tremendous impact of the situation in entrepreneurial ecosystem. We are living in the world biases and these biases impact our perception, alertness and subsequent decisions. Entrepreneurs are among those social classes that are more deal (if not more than all) with risk and uncertainty than others. In fact, because of this they become expert in taking judgmental decision about the coordination of scares resources (Casson 1982, p. 23). This study shows that negative and positive situation can causes

significant biases in entrepreneurs' decision making. As it further point out, this situation influences are also generalizable to environmental condition in the real world such as the influence of intellectual property rights, subjective political orientations over special industry, high interest rates, high rate of market failures, etc. We little know how this important situational factors impact our action-related emotion and then intention. For example, if the degree of innovation influences the way opportunity confidence impact intention (Emami and Dimov 2017), we do not know for example, how an innovation that has developed in the mind of entrepreneurs in a specific situation, influence intention. In addition, how the atmosphere of the context [e.g., that increase/increase doubt, fear, and risk aversion (Van Gelderen et al. 2015)] impact the eagerness of individuals for gaining the practical knowledge in value proposition design phase. As such, each atmosphere might have different impact on value proposition design (McMullen 2015) and entrepreneurial intention (Iakovleva et al. 2011).

The study of all of these complex situational relationships are undoubtedly paramount and can contribute significantly to our current knowledge concerning opportunity evaluation (Emami 2017).

8.2 Highlights

Risk evaluation is a paramount stage of venture creation. Consistent with the third-person and first-person opportunity insights, individuals also need to deal with a third person and first-person risks. While the former pertains to an outward characteristic of risk-taking when an entrepreneur has an initial encounter with a risky or uncertain situation, the latter pertains to a more in-depth understanding of the risky or uncertain situation. In fact, this is the main difference between adventures vs. calculated risks in a business. At the first contact with a risky situation, the entrepreneur gains an initial impression about the framing of the situation (the impression is similar to a third person observer who is witnessing the entrepreneur), say a 60% perceived risk. However, entrepreneurship is about acting in the face of risky or uncertain entrepreneurial situations (Dimov 2007; Foss and Klein 2012). This acting (e.g. the process of business model design) provides many useful insights for the entrepreneur to have a more realistic understanding concerning the risk and uncertainty of the situation—still the third person observer has almost similar perceived risk as he or she had in the first place. The more entrepreneur passes through this discovery road, the more she shifts from the third person risk to the first person risk. In addition, she does not necessarily become more willing to establish the business, but maybe after this diagnostic stage she would perceive more risk (say 90%) or less (say 40%)—depending on her learnings and the complexity of the framing of the situation. In the first condition (the higher perceived risk), she most probably gives up this opportunity and in the second condition (the lower perceived risk) she is more likely to become more eager to

pursue this opportunity. Whatever the size of the risk in the first person situation is, that has sizable effects on her decision to exploit or give up the opportunity.

9 Conclusion

Considering risk aversion and risk taking as the proxy for the behavioral inclination of individuals toward action, findings demonstrate that a person's judgment of entrepreneurial opportunity is affected by the framing of the opportunity. Furthermore, this can sketch a significant difference between individuals (entrepreneurs vs. non-entrepreneurs and males vs. females). This study showed that male entrepreneurs have more propensity toward new value propositions than their female counterparts when those value propositions are framed negatively because they tend to choose riskier opportunities. In addition, the comparative analysis has shown that, in the negative domains, there is a perfect discrepancy between the female entrepreneurs and the female non-entrepreneurs, whereas in the positive domain, the discrepancy is the highest between the male entrepreneurs and the male non-entrepreneurs. In addition, in the positive domain, the female entrepreneurs and male non-entrepreneurs did not show any significant difference in any of the risky conditions. On the whole, the differences between all the groups (in all five opportunities) in the negative situation are greater than in the positive one. This result reiterates the tremendous effect of negative structures on our cognitive frames. The study of entrepreneurial risk, without considering the task domain or the structure of a decision problem, has also been dealt with, and it has emerged that this kind of study may not make a realistic contribution to entrepreneurship. Moreover, apart from structural issues regarding the opportunity itself, it is still necessary to mull over the effect of institutional arrangements and contextual issues on the risky behavior of entrepreneurs in order to have a better risk measurement model for the study of gender and entrepreneurship.

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Impact of Organizational Innovation, Learning Orientation and Entrepreneurship on SME Performance: The Moderating Role of Market Turbulence and ICT



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Abstract The purpose of this study was to determine the effect of organizational innovation (OI), learning orientation (LO) and entrepreneurship on small and medium-sized enterprise (SME) performance considering the moderating role of market turbulence and ICT. The statistical population was all active SMEs in Rasht industrial park (193 companies). SPSS Sample Power software was used to calculate the optimum sample size and the lowest optimum sample size was 85. Simple random sampling was carried out using SPSS 22. Field data was collected by questionnaire. A five-point Likert scale was used for the responses to the questionnaire. The reliability and validity was confirmed. Before testing the hypotheses, outlier data and FIMIX were analyzed to ensure the homogeneity of community-level variance. To assess the measurement and structural models and test the hypothesis, PLS-SEM in SmartPLS3 was used. The results show that both OI and LO have a positive effect on entrepreneurship, but have no effect on SME performance considering the mediating role of entrepreneurship. The findings illustrate that an increase in market turbulence decreased the impact of innovation, LO and entrepreneurship on SME performance. On the other hand, an increase in ICT was found to increase the effect of innovation, LO and entrepreneurship on SME performance.

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1 Introduction

Recent research on the essential role of small and medium-sized enterprises (SMEs) in industry and their impact on the overall function of the economy has shown measurable growth (Rodriguez-Gutierrez et al. 2015). Nowadays, SME is considered as a major factor in the growth of industrial structure of many countries, especially developing countries. Competitiveness is also a key issue, which is considered as a tool for achieving desirable economic growth and sustainable development (Sami Sultan 2014). In the current economic situation of the world in which one of the concerns of developing countries such as Iran is joining the World Trade Organization, competitiveness is the ability to achieve a suitable position and stability in world markets without the turbulences. Nowadays, with the expansion of markets and the importance of competitiveness in international trade, countries need to have an accurate understanding of their relative position in comparison with other countries, through which they can adopt their economic and, in particular, industrial policies according to their relative position and based on new approaches of the global economy. Understanding this will help them promote their abilities to improve their performance. The rapid development of the global economy and the industrial sector of countries increase the need to identify the new situations of countries in international competitiveness (Guzman et al. 2012).

Government policy in Iran is concentrated on SMEs because these units promote innovation, flexibility and entrepreneurship (Talebi and Tajeddin 2011; Jalali et al. 2014; Salamzadeh and Kawamorita Kesim 2017). This subject is the motive for the current experimental case study in the Rasht industrial park. Currently, the problem of SME in Iran is the shortage of production, not the non-competitive production. When the market is saved from recession and enterprises achieve to normal stage in terms of production, policies can be considered for them leading to their increased competitiveness. Evidence also shows that one of the major reasons for the failure of Iranian manufacturing and service companies in international markets is their lack of competitiveness in global target markets (Valaei 2017). Some previous studies have shown that countries that pursue competitive policies at SME level seriously gain higher competitiveness compared to competitors (Cerrato and Depperu 2011; Ille and Chailan 2011; Khajeheian 2014; Parnell et al. 2015). Previous studies have also shown increased economic stability in uncertainty and turbulence conditions under light of competitiveness (El-Gohary et al. 2013; Todd et al. 2014).

Studies have investigated innovation by SMEs (Xie et al. 2010; Mazzarol et al. 2014; Antonioli and Della Torre 2015; Roach et al. 2016; Pacheco et al. 2017). Some emphasized the significance of innovation and competitive structure of SMEs (Emami and Dimov 2016; Salavou et al. 2004). In the international business

environment, entrepreneurship can be effective for the growth of stable business and economic growth (O'Connor 2013). Much research has been carried out on the influence of entrepreneurship on SME performance (Avlonitis and Salavou 2007; Keh et al. 2007; Hashi and Krasniqi 2011; Ndubisi and Iftikhar 2012; Sulistyono and Siyamtinah 2016). Companies that have a higher level of entrepreneurship are always looking for new chances to create competitive advantages (Covin and Miles 1999). The current study examines this effect on SMEs in an experimental study framework. It investigates whether entrepreneurship has been influential on SME performance and whether SMEs have achieved their functional purposes by creating innovation and entrepreneurship. A competitive advantage for companies can be enhanced through learning orientation (LO) (McGill and Slocum 1993). Although the relationship between LO and innovation with SME performance has been determined and research has shown that LO as an important factor in the business function of SMEs (Aziz and Omar 2013), little experimental evidence exists to support this relationship (Gomes and Wojahn 2016). Some experimental findings have shown the positive influence of LO on creation of entrepreneurial opportunities and SME growth (Wolff et al. 2015). The current study examined the role of LO in SMEs and its impact on function.

This paper also studied the moderating role of information and communication technologies (ICT) and market turbulence in SMEs. Research has shown that SMEs play a key role in the acceptance of new technologies (Gudmundson et al. 2003). In fact, ICT can affect company functioning (Arendt 2008; Tan et al. 2009; Bayo-Moriones et al. 2013; Azam 2015). An important aspect of ICT is that it brings about great changes in consumer needs, daily increase in competition, quick changes in service and SME product innovation (Madrid-Guijarro et al. 2009) and in market conditions (Teece et al. 2007). Lack of experimental evidence to enhance competitiveness can be felt in the role of ICT in small companies (Boothy et al. 2010; Parida et al. 2016). Another factor affecting the lack of SME support of entrepreneurship is market turbulence. Despite research about the impact of market turbulence on SMEs (Bakar et al. 2012), few have examined the effect of market turbulence on managerial support of entrepreneurship in SMEs. Studies have shown that market turbulence and technology-related turbulence influence SME performance (Arora et al. 2016).

The current study presents a comprehensive assessment of the effects of innovation, learning and entrepreneurship in the face of market turbulence and the effect of ICT on SME performance. Structural equation modeling using the PLS-SEM approach was used to determine the relationship between variables. The study basically investigates the level of influence of OI, LO and entrepreneurship on SME performance considering the moderating role of market turbulence and ICT.

1.1 The Position of SME in the World and Iran

More than ninety percent of the world's economic enterprises are SMEs. SMEs account for between 55 and 90% of the country's gross domestic product (GDP) around the world. Over 50% of the workforce in the world has been recruited by the SME. In Europe, there are more than 16 million companies, which less than 1% of them are large companies, and the rest are SMEs. In addition, two thirds of all employees in this region belong to SME. SME is the backbone of the Asia-Pacific region economy and in 90% of the companies, 32–48% of employment and 60–80% of the GDP of countries in this region belong to SEM. The performance of the US economy in recent years is largely owed to the creation of SME, which accounts for 43% of the employment index (Bala Subrahmanya 2014).

Iranian Ministry of Industry, Mining and Trade calculated the number of workshops in 2014 having less than 50 employees with an industrial operating licenses as 82.8 thousand, which comprised 91.5% of all units. Their share in the capital and full-time employment of industrial units were 24.4% and 41.2%, respectively. By contrast, workshops with 50 or more employees, despite their relatively low share of operating licenses comprise 75.6% of capital and 58.8% of full-time employment of industrial units. This is greater than for workshops with fewer 50 employees (Ebrahimi and Mirbargkar 2017). Based on the newest definitions of the organization of small industry and industrial towns in Iran, SMEs are industries with 5–50 employees and large industries those with more than 50 employees (ISIPO 2014).

2 Literature Review and Research Hypothesis

2.1 OI, Entrepreneurship and SME Performance

Innovation determines the level of success in companies and industries and their longevity (Emami and Dimov 2016; Zahra and Covin 1994). Organizational innovations are effective changes in business proceedings, location and external relations (Merono-Cerdan and Lopez-Nicolas 2013). Some studies have examined the impact of OI on function (Augusto et al. 2014; Cozzarin et al. 2016). Rosenbusch et al. (2011) found a positive effect for innovation on SME performance. Xie et al. (2010) studied 188 SMEs in China and showed that innovation was key to sustainable competitive advantage in SMEs. Most studies highlighted service innovation, administrative innovation and process innovation (Zahra 1996; Hurley and Hult 1998; Song and Xie 2000; Ndubisi and Iftikhar 2012). Service innovation consists of introducing new products for current services and searching for new services. Administrative innovation concentrates on new business management practices and process innovation focuses on job techniques and operational systems to increase efficiency and operation (Ndubisi and Iftikhar 2012). Positive innovation can

enhance SME business circumstances and improve business function (Emami and Dimov 2016). The negative consequences of innovation for SMEs relate to management and operational issues, financial risks, loss of company image and recognition in the eyes of consumers and employees and negative environmental effects (Laforet 2011). Among the most important innovation performance barriers in SMEs are loss of technical information, financial capital and efficiency, a lack of technical experts, high risks, high expense of innovation, loss of adequate business strategies, external innovation, marketing channels and an efficient management system, weak awareness ratio and government limits (Xie et al. 2010).

There appears to be a close relationship between innovation and entrepreneurship and studies have examined this relationship (Avlonitis and Salavou 2007; Crumpton 2012; Ndubisi and Iftikhar 2012; Galindo and Mendez-Picazo 2013; Lee et al. 2016). Innovation plays a major role in economic growth and entrepreneurs enhance company activities and increase profits by introducing new technologies (Galindo and Mendez-Picazo 2013). Innovation mainly involves entrepreneurship (Hebert and Link 2006) and entrepreneurship can directly affect strategy and business functioning (Hallak et al. 2011), especially in SMEs (Wu 2013; Wu and Huarng 2015).

There is no general consensus about the features of entrepreneurship (Lumpkin and Dess 1996). Researchers tend to use risk-taking, innovativeness and proactiveness to measure entrepreneurial behavior (Lumpkin and Dess 1996; Lumpkin et al. 2009; Li et al. 2008; Casillas et al. 2010; Soinenen et al. 2012; Wales et al. 2013; Khajeheian 2017; Chavez et al. 2017). Risk-taking means investment in unpredictable circumstances where there a possibility of failure (Rauch et al. 2009). Innovation relates to creative, experimental and supportive aspects of new ideas (Emami et al. 2011; Kyrgidou and Spyropoulou 2013). Proactiveness is the ability to participate and benefit from opportunities. A company supervises market changes continuously and increases its ability to analyze and identify future market processes (Dess and Lumpkin 2005). Capel (2014) proved that innovation affects entrepreneurship in a study concentrating on indigenous knowledge.

Entrepreneurship and innovation can influence qualitative functioning of SMEs (Khajeheian 2013; Khajeheian and Tadayoni 2016; Ndubisi and Agarwal 2014). Schumpeter (1934) found that entrepreneurs continuously try to enhance economic circumstances and innovative behavior (Bouncken et al. 2014). Despite the growing importance of SMEs in all transition state economies, they encounter barriers to entrepreneurship (Hashi and Krasniqi 2011). The most important organizational barriers are formal barriers (e.g. high taxes, changes in financial policies, ambiguity in financial policies and business principles), informal barriers (e.g. implementation of business principles, government corruption, wasting time in offices), environmental barriers (e.g. low purchasing power, loss of capital for investment, competition from illegal businesses, loss of adequate information) and skill barriers (e.g. prevention of growth in new markets and management problems) (Aidis 2005). The results of the studies have produced the following hypotheses:

Hypothesis 1 OI affects entrepreneurship.

Hypothesis 2 OI affects SME performance.

Hypothesis 3 OI affects SME performance considering the mediating role of entrepreneurship.

Hypothesis 4 Entrepreneurship affects SME performance.

2.2 LO, Entrepreneurship and SME Performance

LO directly increases production and information publication (Sinkula et al. 1997). LO is reflective of a series of values relating to knowledge that has a direct impact on increasing learning (Nasution et al. 2011). LO is a process of information acquisition and dissemination and shared interpretation which increases both individual and organizational efficiency through a direct influence on results (Kaya and Patton 2011). Most LO studies have examined commitment to learning, shared vision, open-mindedness and intra-organizational knowledge sharing (Hurley and Hult 1998; Calantone et al. 2002; Jyoti and Dev 2015). Despite the importance of learning to microeconomics and macroeconomics, most studies about learning processes analyze large companies (Franco and Haase 2009). It appears that entrepreneurship is a crevice in studies of organizational learning (Rae and Carswell 2001).

Studies have determined the effect of LO on entrepreneurship. Kakapour et al. (2016) in Iran studied 130 SMEs and presented a model that predicted that LO and market orientation have positive effects on identifying opportunities and entrepreneurship of a company. Some studies have also determined the effect of LO on SME performance (Keskin 2006; Aziz and Omar 2013; Hooi and Ngui 2014; Wolff et al. 2015; Gomes and Wojahn 2016). Wolff et al. (2015) have shown that there is no significant relationship between LO and SME growth, while there was a positive relationship between entrepreneurship and SME growth. They have also shown that entrepreneurship plays the role of complete mediation in the relationship between LO and SME growth performance, while the role of partial mediation was rejected. The disparity of research results about the impact of LO on function can be seen. Goh (2001) found that there was no relationship between LO and financial operation, while other researches have reported an effect for LO on financial and non-financial learning. This impact was found to be stronger for non-financial operations (Yang et al. 2004; Goh et al. 2012; Hooi and Ngui 2014). The results of the studies have produced the following hypotheses:

Hypothesis 5 LO affects entrepreneurship.

Hypothesis 6 LO affects SME performance.

Hypothesis 7 LO affects SME performance considering the mediating role of entrepreneurship.

2.3 Moderating Role of Market Turbulence

Market turbulence is indicative of a degree of change in consumer preferences for products and services (Jaworski and Kohli 1993; Arora et al. 2016). Market turbulence indicates the amount of change in a market or technology. Because companies should benefit from consumer preferences to create a competitive advantage, they should have a clear understanding of their consumers by monitoring and analysis of surrounding industries (Grant 2010). When a high degree of market turbulence is encountered, companies require more innovative activities and correct performance of innovative strategies (Hult et al. 2004). Some research has examined the impact of market turbulence on SMEs (Bakar et al. 2012; Sainidis and Robson 2016). Bakar et al. (2012) evaluated the impact of market turbulence on SMEs in biotechnology in Malaysia. A sample of 103 companies was evaluated and the results showed that under market turbulence, factors like a strategic relationship with other private companies, enforcement of innovations and mergers can be effective. When market turbulence is more than usual, such innovations can be effective (Tsai and Yang 2013). Entrepreneurship also can be effective for adapting companies to consumer preferences (Devezer et al. 2014). On the other hand, environmental disturbance may have a negative impact on company operation, especially for SMEs. Pratono and Mahmood (2014) evaluated the moderating role of market turbulence on SME performance. The results showed that an increase in environmental turbulence increases SME performance. During severe environmental turbulence, companies assign more resources and adopt new strategies (Li et al. 2008).

Research has evaluated the moderating role of market turbulence in the relationship between LO variables and function. Hanvanich et al. (2006) studied 200 managers and collected data by survey. They showed to what extent learning and function are related to environmental turbulence. It appears that under low environmental turbulence, LO and organizational memory relates to function and innovation, while under high environmental turbulence, only LO is a useful predictor. Cambra-Fierro et al. (2012) in a longitudinal study evaluated the relationship between market orientation and LO under market turbulence. Their results found that dynamic companies are more prepared in times of turbulence. The results of the studies have produced the following hypotheses:

Hypothesis 8 Market turbulence moderates the effect intensity of OI on SME performance.

Hypothesis 9 Market turbulence moderates the effect intensity of entrepreneurship on SME performance.

Hypothesis 10 Market turbulence moderates the effect intensity of LO on SME performance.

2.4 Moderating Role of ICT

ICT provides opportunities for individuals, businesses and the community and ICT function is equally important to economic and non-economic activities (Azam 2015). ICT provides effective communications for consumers at low expense (Tan et al. 2009). Researchers have concentrated on acceptance and use of ICT on SMEs (Salamzadeh et al. 2017). Research has shown the advantages of ICT acceptance on OI (Higon 2011; Bayo-Moriones et al. 2013; Gerguri-Rashiti et al. 2015) and SME performance (Shiels et al. 2003; Eze et al. 2014). Although some research has found a negative or neutral effect of ICT on business function (Warner 1987; Venkatraman and Zaheer 1990), others have confirmed the positive effect of ICT on business function (Powell and Dent-Micallef 1997; Tippins and Sohi 2003). Wainwright et al. (2005) showed that ICT merit and ability is an adequate way to evaluate the operation of small companies. Consoli (2012) proved that performance, efficiency, competitiveness, innovative function and impalpable advantages are effects of ICT on SME performance. In general, ICT and innovation are strategic resources of a company and ICT ability, innovation and entrepreneurial behavior can make a difference in organizational function (Yunis et al. 2017). Higon (2011) proved that ICT can give a competitive advantage through production innovation. Little research has been done on the relationship between ICT and learning. Gijbels et al. (2012) studied the effect of learning-related work between employees of the ICT section. A sample of men and women aged 20–51 years was evaluated. Regression analysis showed that job desires and control in employees of the ICT section are positive and have a considerable moderating effect on learning-related jobs. The LO of employees has a strong effect on learning related jobs. Figure 1 shows the proposed model. The results of the studies have produced the following hypotheses:

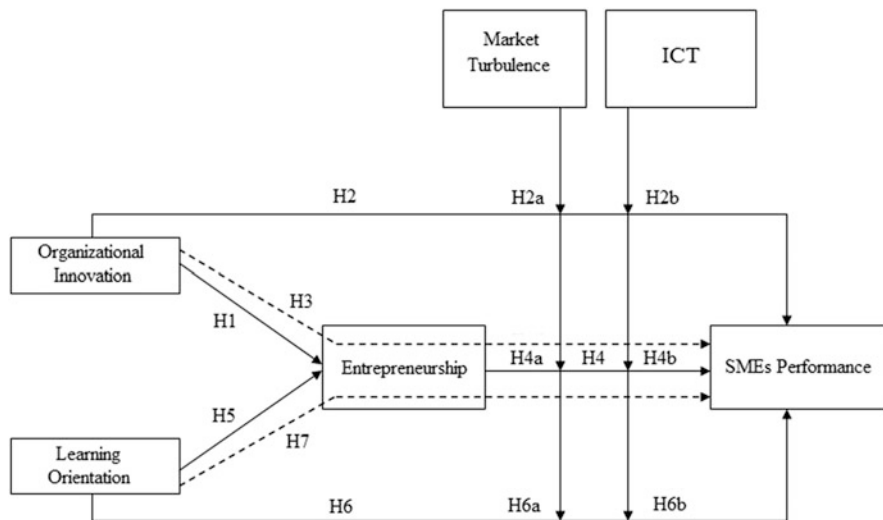


Fig. 1 Conceptual model

Hypothesis 11 ICT moderates the effect intensity of OI on SME performance.

Hypothesis 12 ICT moderates the effect intensity of entrepreneurship on SME performance.

Hypothesis 13 ICT moderates the effect intensity of LO on SME performance.

3 Methodology

The present study was applied research. Data collection was descriptive-survey research. The method of collecting data was empirical. Because this research evaluated the data within a specific period of time, it was a cross-sectional study.

3.1 *Sample Size and Data Collection*

The statistical population consisted of all active SMEs in Rasht industrial park. Based on the data provided by the industrial park organization of Gilan province, the population size was 193 samples. SPSS Sample Power 3 software was used to calculate the optimum sample size. Multivariate regression having the highest number of independent variables was selected to determine how many variables can be analyzed simultaneously. Entrepreneurship, with four variables, was the largest. The maximum number of predictor variables in the entrepreneurship multiple regression model was 3. At a confidence level of 0.95, test power of 90% and R^2 of 0.15, the minimum optimal sample size was 85 and was the number used in the calculations. Simple random sampling was done with SPSS 22. Questionnaires were distributed to managers of active companies in Rasht industrial park. The theoretical foundations were obtained using library procedure and to the field method was used to collect data with questionnaires.

3.2 *Variables Measurement, Reliability and Validity*

The questionnaire contained general information such as demographics and 41 closed questions scored with a five-point Likert scale (1: very high, 2: high, 3: no idea, 4: low, 5: very low) to assess the variables of the research model. The OI variables comprised 15 items used in previous research (Hurley and Hult 1998; Ndubisi and Iftikhar 2012; Song and Xie 2000; Zahra 1996). It assessed service innovation, administrative innovation and process innovation (five items apiece). Entrepreneurship variables comprised 13 items used in previous research, (Nasution and Mavondo 2008; Nasution et al. 2011; Ndubisi and Iftikhar 2012). It assessed risk-taking and proactiveness (five items apiece) and autonomy (three items apiece).

SME performance variables comprised three items used in previous research (Morgan et al. 2009; Sok et al. 2013). LO variables comprised four items used in previous research (Denison 2000; Hult and Ferrell 1997; Sinkula et al. 1997; Jyoti and Dev 2015). To evaluate the moderating role of market turbulence, three items were included (Jaworski and Kohli 1993; Wang et al. 2015). Three items were included on the moderating role of ICT (Crema et al. 2014).

The items were gathered after consulting with experts in the field. The validity of the items were affirmed in terms of content and expert opinion and the value of the ICC coefficient was confirmed for consistency and absolute agreement. To ascertain the sufficiency of the questionnaire, the indicators were evaluated using Kaiser's rule (Kaiser 1960) and scree plots. The results showed the number of factors was desirable (Appendix 1). The measurement models were assessed using SmartPLS version 3 (Hair et al. 2016). The convergent validity for measurement of the models was based on average variance extracted (AVE) and at the item level assessed outer loadings (Henseler et al. 2015).

The discriminant validity on the factor and indicator levels was meticulously assessed. To evaluate the convergent validity according to the reflective measurement model, AVE was evaluated and values greater than 0.5 (Hulland 1999) were indicative of convergent validity of the measurement models (Table 1). The reflectiveness of the measurement models was confirmed by confirmatory tetrad analysis (CTA) ($p > 0.05$). The convergent validity on the item level (outer loadings) was higher than 0.4 (Hair et al. 2006), suggesting convergent validity at this level (Table 1). According to Stevens' table (Stevens 2002), the outer loadings of this research were confirmed as well. The Fornell and Larcker criterion was used to assess discriminant validity at the factor level (Fornell and Larcker 1981). The square root of the AVE hidden variables in the main diagonal of the matrix was greater than the convergence with those underneath and to the left of the main diagonal (Table 2). This indicates appropriate fitting of the measurement models in terms of discriminant validity at the factor level. To assess the discriminant validity on the indicator level, two methods were used. The cross-loadings were first assessed. The values from the software output determine the discriminant validity at the indicator level. The HTMT indicator was also assessed to determine the discriminant validity at the indicator level. Values of <0.9 were determined as evidence for this indicator (Henseler et al. 2015). This ratio was determined to be <0.09 for the current research and the convergent factors of similar characteristics were higher than the convergent factors for different characteristics (Table 3). Convergent validity at the indicator level was confirmed. The validity of the questionnaire was assessed by CR and Cronbach's alpha (Table 1). Research has shown that 0.8 is the cut point for CR and 0.7 is the cut point for Cronbach's alpha (Hulland 1999). Because these values for all variables were higher than 0.7, the research tools were determined to be of adequate stability (Cronbach's alpha was also confirmed). All 85 distributed questionnaires were completed and analysis was based on them. For the evaluation segment of the measurement models, VIF and tolerance between independent variables were used to assess multicollinearity (Table 1).

Table 1 Convergent validity, reliability, linearity indicators

Variables, dimensions and indicators	Outer loadings	Model type
OI (AVE = 0.54, Alpha = 0.75, CR = 0.80, VIF = 1.83, Tolerance = 0.55)		Reflective
<i>Service innovation</i> (AVE = 0.56, Alpha = 0.71, CR = 0.81)	0.78	Reflective
Introducing new services to market	0.79	
Reform of present services	0.77	
Searching to find new services	0.66	
Introducing new services compared to competitors	0.86	
Changes in industries according to our new services	0.65	
<i>Administrative innovation</i> (AVE = 0.50, Alpha = 0.72, CR = 0.79)	0.72	Reflective
Introducing new procedures in business	0.78	
Investment in updating administrative procedures	0.68	
New procedures aligned with enhancement of administrative systems	0.69	
Give authority to employees in order to nurture creativity	0.63	
Observation and assessment of testing administrative procedures by competitors	0.74	
<i>Process Innovation</i> (AVE = 0.55, Alpha = 0.75, CR = 0.80)	0.71	Reflective
Testing operational systems based on international standards	0.69	
Updating job techniques aligned with efficiency increase	0.78	
Increase technology service quality	0.66	
High investment in operational systems development	0.80	
Innovative instruction of human resources aligned with emerging industry	0.79	
Entrepreneurship (AVE = 0.52, Alpha = 0.81, CR = 0.85, VIF = 1.58, Tolerance = 0.63)		Reflective
<i>Risk-taking</i> (AVE = 0.53, Alpha = 0.78, CR = 0.83)	0.74	Reflective
Considering uncertainty as a challenge	0.65	
Encouraging employees to be active in new areas (with risk)	0.61	
Acceptance of failure risk of new plan by management	0.84	
More emphasis on opportunities with higher chances of success	0.83	
Considering failure as a learning experience	0.68	
<i>Proactiveness</i> (AVE = 0.52, Alpha = 0.76, CR = 0.81)	0.71	Reflective
Searching for new opportunities related to daily needs	0.69	
Pioneering new services	0.72	
Precise look at adventitious business	0.61	
Searching for enhancement of business performance	0.89	
Overtaking competitors to respond to market challenges	0.67	
<i>Autonomy</i> (AVE = 0.53, Alpha = 0.73, CR = 0.77)	0.71	Reflective
Encouraging employees to take responsibility	0.76	
Minimal surveillance of employee work	0.73	
Encouraging employees to prioritize jobs	0.69	

(continued)

Table 1 (continued)

Variables, dimensions and indicators	Outer loadings	Model type
LO (AVE = 0.59, Alpha = 0.75, CR = 0.84, VIF = 1.21, Tolerance = 0.82)		Reflective
Ability to participate in learning, the key to competitive advantage	0.81	
Instructing employees is investment, not expense	0.86	
Learning is a key to improvement	0.55	
Management emphasis on sharing knowledge	0.81	
SME performance (AVE = 0.58, Alpha = 0.73, CR = 0.80)		Reflective
Adequate profitability level of company	0.83	
Desirability of investment return	0.86	
Desirability of realization of financial purpose of company	0.56	
Market turbulence (AVE = 0.56, Alpha = 0.70, CR = 0.79)		Reflective
Unpredictable change in taste and preferences of consumers	0.81	
Continuously compete in product market	0.80	
Fast change of technology in industry	0.61	
ICT (AVE = 0.62, Alpha = 0.81, CR = 0.88)		Reflective
Facilitating cooperation through Internet systems	0.80	
Facilitating finding business partners through Internet systems	0.82	
Desirability of virtual techniques to cooperate in production of new products	0.75	

CR composite reliability, AVE average variance extracted, Alpha Cronbach’s alpha, VIF variance inflation factor

Table 2 Assessment of discriminant validity at factor level (Fornell & Larcker criterion)

Factors	ICT	SME performance	Market turbulence	OI	Entrepreneurship	LO
ICT	0.787					
SME performance	0.598	0.762				
Market turbulence	0.498	0.487	0.748			
OI	0.481	0.462	0.464	0.735		
Entrepreneurship	0.437	0.357	0.427	0.631	0.762	
LO	0.350	0.326	0.432	0.515	0.664	0.768

Table 3 Assessment of discriminant validity (HTMT criterion)

Factors	ICT	SME performance	Market turbulence	OI	Entrepreneurship	LO
ICT	–					
SME performance	0.774	–				
Market turbulence	0.698	0.723	–			
OI	0.625	0.711	0.689	–		
Entrepreneurship	0.547	0.589	0.641	0.830	–	
LO	0.486	0.512	0.709	0.681	0.806	–

Note 1: The indicators level requires a 40*40 table containing only factors mentioned in the table

Note 2: The table is 5*5 and calculates the whole HTMT criterion based on division of the ninth root of the middle square on the sixth root of the upper and lower triangles (which is less than 1) and determines discriminant validity

Values for the VIF indicator in Table 1 of <2.5 were adequate for this indicator (Hair et al. 2016). There was no accumulation of variance in Table 1. The cut point of the tolerance indicator was 0.4 and there was no multicollinearity detected between the independent variables. This means that at the data analysis level and for hypothesis testing the regression factors and R^2 are reliable.

4 Data Analysis and Findings

Table 4 lists the demographics of the respondents. This table indicates that a large majority of respondents had bachelor degrees (49.4%). The population pyramid (Appendix 2) indicated that about 43.5% of respondents were male and had at least 16 years of management experience. This means that they were familiar with the policies, implication and practical procedures of the SMEs. Descriptive analysis of the convergence between research variables (Spearman convergent) is presented in Table 5. This matrix can be used to assess multicollinearity between variables. Because one hypothesis of causal relations was used, there was a lack of multicollinearity between variables. Convergence between variables was determined before causal analysis to assess the lack of linearity. It showed that all convergence values were <0.8 , so the presence of multicollinearity between variables was rejected (Tabachnick and Fidell 1996). While convergence of independent variables should be random to confirm the calculation of variance inflation and tolerance factors. The average OI components, entrepreneurship, LO, SME performance, market turbulence and ICT was above average ($p < 0.05$; average $\Rightarrow 3.0$). Appendix 3 shows the convergence of research variables in a scatter plot overlay.

In the second step, structural equation modeling was used based on the partial least squares in SmartPLS 3 to evaluate structural model and test the hypotheses.

Table 4 Demographics of respondents

Features	Levels	Frequency	Percentage	Mean	SD
Sex	Male	66	77.6	1.22	0.62
	Female	19	22.4		
Education	No high school diploma	1	1.2	4.09	0.78
	High school diploma	5	5.9		
	Associate degree	8	9.4		
	Bachelor's degree	42	49.4		
	Masters or PhD	29	34.1		
Management history	1–5 years	5	5.9	3.12	0.73
	6–10 years	17	20.0		
	11–15 years	26	30.6		
	16 years or more	37	43.5		

This software was used because the focus was on predicting the relationship between independent variables and the dependent variable and because the model was created by studying previous research (researcher and exploration orientation). The low data size and non-parametric nature of the study and the use of bootstrapping instead of normalization are the most important reasons for the use of the PLS-SEM. To achieve better and more precise results before hypothesis testing, outlier data was assessed and the data was eliminated from analysis (Fig. 2). FIMIX was used to evaluate the hypothesis of statistical population homogeneity, the normed entropy statistic showed that $EN = 0.85$. The least acceptable amount for this indicator is 0.7 (Ramaswami et al. 1993); thus, the hypothesis of population homogeneity was confirmed and the results of hypothesis testing was confirmed with greater certainty. The accuracy of the scatter plot in Fig. 2 is demonstrated as a rectangular pattern of homoscedasticity.

The software output was calculated after testing the conceptual model for possible factors and for t -statistics (Appendix 4). Criteria relating to the structural equation modeling were evaluated. R^2 shows what percentage of variance of the dependent variable is caused by the independent variable. R^2 adjusted relates to the percentage of the statistical population (Table 6). The Cohen size effect (f^2) values of 0.02, 0.15 and 0.35 denote small, average and big effects, respectively (Cohen 1988). This indicator is used to assess the model (Table 7). The learning-entrepreneurship effect was large at 0.776 and the entrepreneurship effect and LO on SME performance were smallest at 0.004. The Stone-Geisser index was used (Q^2) to predict the power of the model and consists of the construct of cross-validated redundancy (CC-Red) and cross-validated communality (CC-Com). A value that approaches 1 denotes the most favorable response (Stone 1974; Geisser 1974). The Stone- Geisser values (0–1) and the relevance of the predictive model for the reflective dependent variables are presented in Table 6.

The SRMR indicator is used to evaluate the structural inner model and measurement outer models as a whole and a value of <0.08 is considered favorable (Hair et al. 2016). The value for SRMR in output was 0.076, which is indicative of

Table 5 Spearman correlation matrix of original variables under study

Variable	Mean	SD	OI	Entrepreneurship	LO	SME performance	Market turbulence	ICT
OI	3.08	0.382	1					
Entrepreneurship	3.71	0.426	0.554 ^{***}	1				
LO	3.28	0.722	0.356 [*]	0.558 ^{***}	1			
SME performance	3.80	0.573	0.339 ^{***}	0.308 ^{***}	0.238 [*]	1		
Market turbulence	3.88	0.509	0.218 [*]	0.337 ^{***}	0.410 [*]	0.353 ^{***}	1	
ICT	3.08	0.447	0.257 [*]	0.273 [*]	0.288 [*]	0.501 ^{***}	0.392 ^{***}	1

Note: ^{*} $p < 0.05$; ^{**} $p < 0.01$; two-tailed test

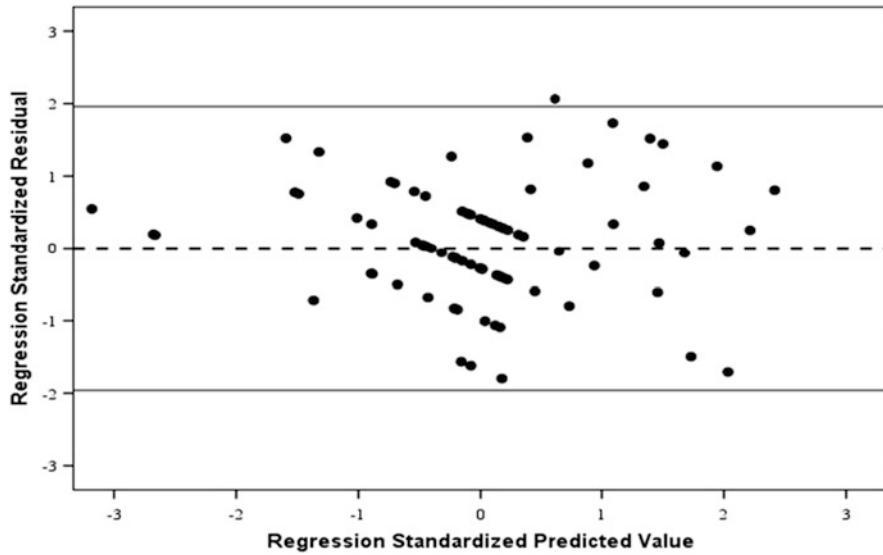


Fig. 2 Scatter plot of outlier data and homoscedasticity

Table 6 Assessment of structural model indicators

Variable	R ²	R ² adjusted	CC-Red	CC-Com
OI				
Entrepreneurship	66.1%	65.2%	0.387	0.401
LO				
SME performance	56.5%	50%	0.352	0.409
Market turbulence				
ICT				

Table 7 Cohen indicator effect size (f^2)

Variable	OI	Entrepreneurship	LO	SME performance	Market turbulence	ICT
OI		0.225		0.057		
Entrepreneurship				0.004		
LO		0.776		0.004		
SME performance						
Market turbulence				0.025		
ICT				0.060		

Table 8 Results of research hypotheses

Hypotheses	β	SD	<i>t</i> -statistics	<i>p</i> -value	Decision	Mediation	Moderation
H1	0.322	0.096	3.341**	0.000	Supported		
H2	0.241	0.154	1.560	0.151	Not supported		
H3	0.024	0.017	1.413	0.682	Not supported	No	
H4	0.073	0.173	0.423	0.703	Not supported		
H5	0.598	0.093	6.418**	0.000	Supported		
H6	0.076	0.165	0.461	0.672	Not supported		
H7	0.043	0.116	0.373	0.709	Not supported	No	
H8	-0.305	0.082	3.738*	0.030	Supported		Yes
H9	-0.319	0.090	3.529**	0.004	Supported		Yes
H10	-0.323	0.086	3.755*	0.012	Supported		Yes
H11	0.262	0.115	2.283*	0.028	Supported		Yes
H12	0.340	0.097	3.522**	0.006	Supported		Yes
H13	0.355	0.096	3.708	0.019	Supported		Yes

Note: * $p < 0.05$; ** $p < 0.01$; two-tailed test, for the indirect of H3, H7 mentioned in this table

coordination of the experimental model with the theoretical model. Table 6 shows that 66.1% of the variance in SME performance can be explained by entrepreneurship variables, OI, LO, market turbulence and ICT and 56.5% is from variance of entrepreneurship, OI and LO variables.

The path coefficients, *t*-statistics and level of significance (*p*-value) were used to test the hypotheses. The direct effects of hypotheses 1 and 5 were assessed. Table 8 shows that the results of H1 ($\beta = 0.322$, $t = 3.341$, $p = 0.000$) and H5 ($\beta = 0.598$, $t = 6.418$, $p = 0.000$) showed that at a confidence level of 95%, the confidence interval was significant at 0.00 and these two proportions were confirmed by the *t* proportions. For hypotheses 2 ($\beta = 0.241$, $t = 1.560$, $p = 0.151$), H4 ($\beta = 0.073$, $t = 0.423$, $p = 0.703$) and H6 ($\beta = 0.076$, $t = 0.461$, $p = 0.672$), the results showed lack of support for the hypotheses. At a confidence level of 95%, the *p*-value shows a lack of significance at 0.00. This lack of significance in confidence intervals can also be observed. For hypothesis 4 ($p = 0.703$), which was rejected, the confidence interval was -0.446 and 0.288 which is not significant.

For hypotheses 3 and 7, the mediating effect of the entrepreneurship variable was assessed. For hypothesis 3, the direct effect of OI on entrepreneurship was significant, but the direct effect of entrepreneurship on SME performance was not significant. The indirect effect of OI on SME performance ($\beta = 0.024$, $t = 1.413$, $p = 0.682$) was not significant. The direct effect of OI on SME performance ($\beta = 0.241$, $t = 1.560$, $p = 0.151$) is not significant. So this hypothesis is not

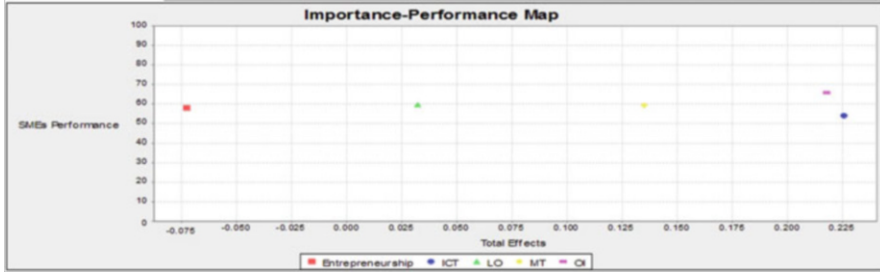


Fig. 3 IPMA matrix histogram of research variables setting SME performance as purpose

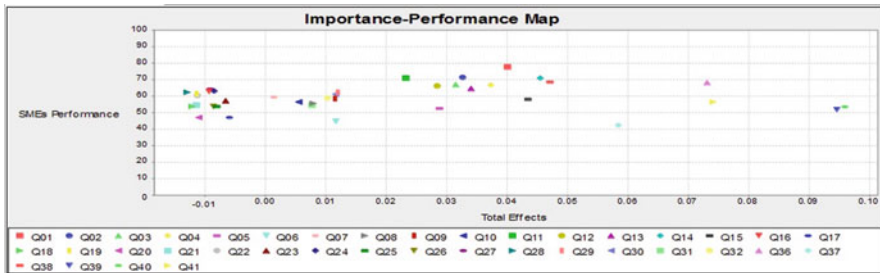


Fig. 4 IPMA matrix histogram of research questions setting SMEs performance as purpose

supported and should be rejected. For hypothesis 7, the indirect effect of LO on SME performance ($\beta = 0.043, t = 0.373, p = 0.709$) was not significant; thus, this hypothesis is not supported and should be rejected as well.

Hypotheses 8 and 11 evaluate the moderating role of market turbulence and ICT. The product indicator approach in SmartPLS3 was used to assess these effects. If this effect or proportion is significantly different from zero, it will confirm the moderating effect. The results for hypothesis 8 ($\beta = -0.305, SD = 0.082, t = 3.738, p = 0.030$) for the interactive effect was significant for the moderating role of OI on SME performance. The negative value for β indicates that an increase in market turbulence decreased the effect intensity of innovation on SME performance. The results for hypothesis 11 ($\beta = 0.262, SD = 0.115, t = 2.283, p = 0.028$) for the interactive effect was significant, indicating that ICT was a moderator of the effect of OI on SME performance. The positive value for β indicates that an increase in ICT with increased the effect intensity of OI on SME performance. Hypotheses 9, 10, 12 and 13 were assessed and Table 8 shows the rejection of these hypotheses.

The IPMA matrix is shown in Fig. 3 and indicates that ICT had the highest importance, but the lowest performance. This analysis was done with a concentration on research questions (Fig. 4). Questions relating to ICT about simplification indicators of cooperation through the Internet and in finding business partners through the Internet were more favorable and of great importance.

5 Discussion and Conclusion

A research model was developed to assess the effect of the research variables. The results of hypotheses H1 and H5 showed that innovation and LO affect entrepreneurship. The effect of innovation on entrepreneurship has been confirmed by previous studies and this hypothesis aligns with previous research (Avlonitis and Salavou 2007; Crumpton 2012; Ndubisi and Iftikhar 2012; Galindo and Mendez-Picazo 2013; Capel 2014; Lee et al. 2016). Innovation is a key to entrepreneurial ideas and is necessary to the business world (Kim and Huarng 2011). Innovation and entrepreneurship together produce efficiency (Emami et al. 2011; Laforet 2008).

The effect of LO on entrepreneurship was shown by Kakapour et al. (2016) to align with hypothesis H5. Sinkula et al. (1997) found LO can increase information about the market and effect entrepreneurship of SMEs. The results of the current research highlight the considerable importance of learning and innovation in SME entrepreneurship. SME managers should seriously undertake innovation in service, executive innovation and innovation processes to benefit from its advantages. LO for structures such as employee instruction, knowledge sharing and consideration of learning as a competitive advantage is of significance aligned with entrepreneurship. The results of this research indicate a lack of and effect of OI and LO on SME performance in the statistical population in line with H2 and H6.

The reason for the lack of an effect for innovation on SMEs included factors such as operational issues and financial risks as mentioned by Laforet (2011) and considering innovation barriers such as loss of technical information and financial capital as mentioned by Xie et al. (2010). The current study showed that SME managers considered inefficient structures and state policies to decrease efficiency in innovation and LO. The important point about structural interviews was the amount of financial effect and high turbulence in the Iranian economic market and lack of continuous support for SMEs under crisis conditions. This is one of the most important barriers to innovation and learning on SMEs in the region observed. Lack of the effect of LO on performance and growth of SMEs by Wolff et al. (2015) aligned with the H6 hypothesis.

The results of study also showed a lack of significant influence of entrepreneurship on active SME performance ($\beta = 0.073, t = 0.423, p = 0.703$) in Rasht industrial park. Some reasons for this lack of influence relate to the findings of Aidis (2005) said legal, informal, environmental and skill barriers are the most important. The lack of effect of entrepreneurship on the mediating role of SME performance in H3 and H7 was also not confirmed. The results of this study showed that market turbulence and ICT were moderators of the effects intensity of OI, LO and entrepreneurship on SME performance. An increase in market turbulence will decrease this effect on SME performance. The results of this study align with research about market turbulence by Pratono and Mahmood (2014). An increase in ICT will increase this effect on SME performance, which aligns with previous research on the effect of ICT on business performance (Powell and Dent-Micallef 1997; Tippins and Sohi 2003).

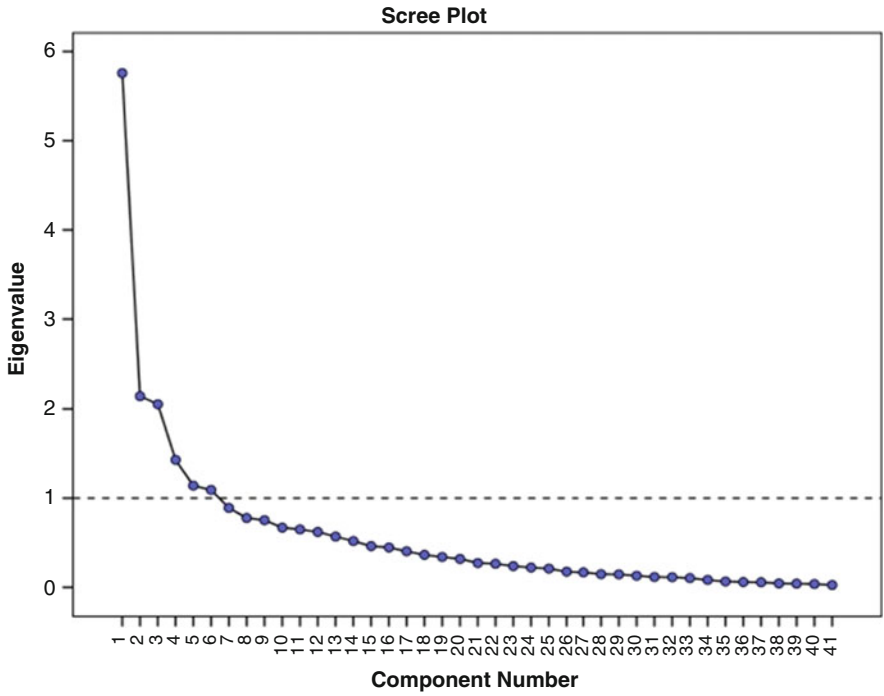
5.1 Managerial Implications

The managerial implications of this study are the importance of the effects of OI, LO and entrepreneurship on performance and growth of SMEs. SME managers do not consider these factors as much effecting SME performance in the presence of market and economic turbulence. Lack of necessary technical and scientific efficiency suitable for the current turbulent environment is a weakness of some SMEs. Lack of strategic and structural plans to confront environmental turbulence considering daily technologies, lack of attention to new ideas and common cooperation, lack of continuous scientific assessment of the market and state barriers to entrepreneurial ideas are the most important reasons for the lack of efficiency. SME managers should step forward to solve these problems. Serious attention should be devoted to state regulations and the general policy of the country for logical and continuous support of private investors so that SMEs can flourish. It seems that SMEs need serious attention by government officials to encourage investors and provide suitable conditions for investment and reconstruction. Barriers to innovation and entrepreneurship should be removed.

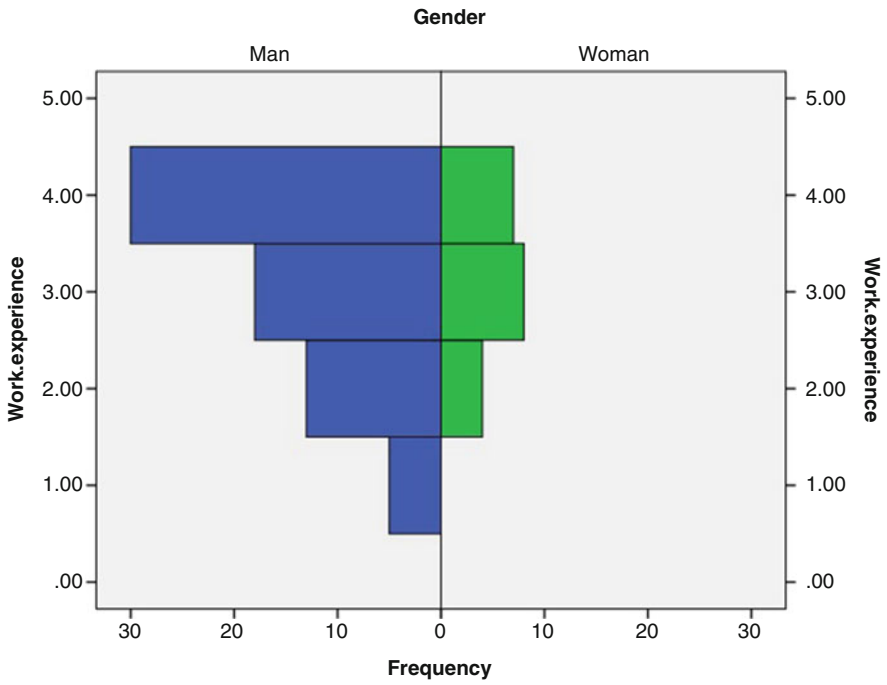
5.2 Limitations and Suggestions

The results of this study suggest some limitations should be considered. This study concentrated on active SMEs in Rasht industrial park in Gilan province in Iran, so the results may differ from other areas because it is a distinct and rather small sample of SMEs. Another limitation is the data collection over a period of time, which indicates that research findings may not be extendable. It is recommended that future research undertake a longitudinal study instead of a cross-sectional approach because longitudinal research can better determine the dynamic and interactive nature of many of these variables and describe their causal relationship. Despite of presenting rich literature about entrepreneurship, innovation, LO and SME performance, the data can be assessed with new models and by the addition of influential variables, which is recommended to future researchers of this subject.

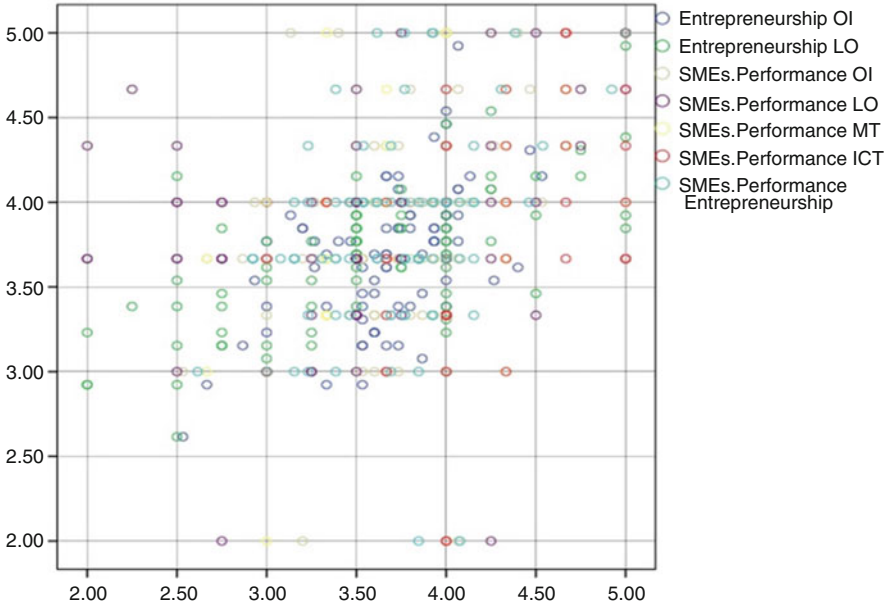
Appendix 1. Scree Plot



Appendix 2. Age-Sex Pyramid of Respondents (Value 4 in Work.Experience = 16 Years or More)



Appendix 3. Scatter Plot for Evaluating Correlation Between Research Variables Which Shows Good Correlation in Some Variables (Independent Versus Dependent Variables)



Appendix 4. Output of SmartPLS 3 for Model of Path Coefficient and *t*-statistics of Model

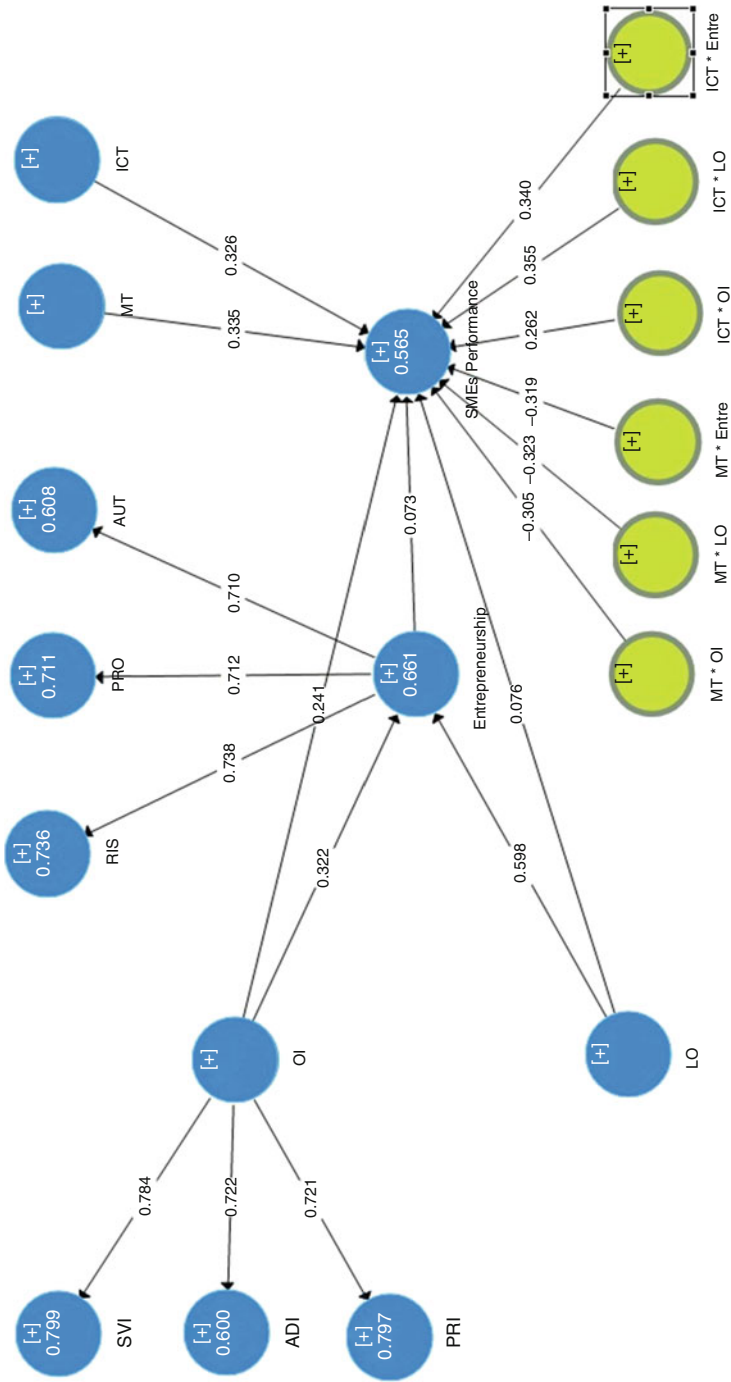


Fig. 5 Path coefficients of structural model. Note: The SMEs performance and entrepreneurship are endogenous variables and LO, OI, market turbulence and ICT are exogenous

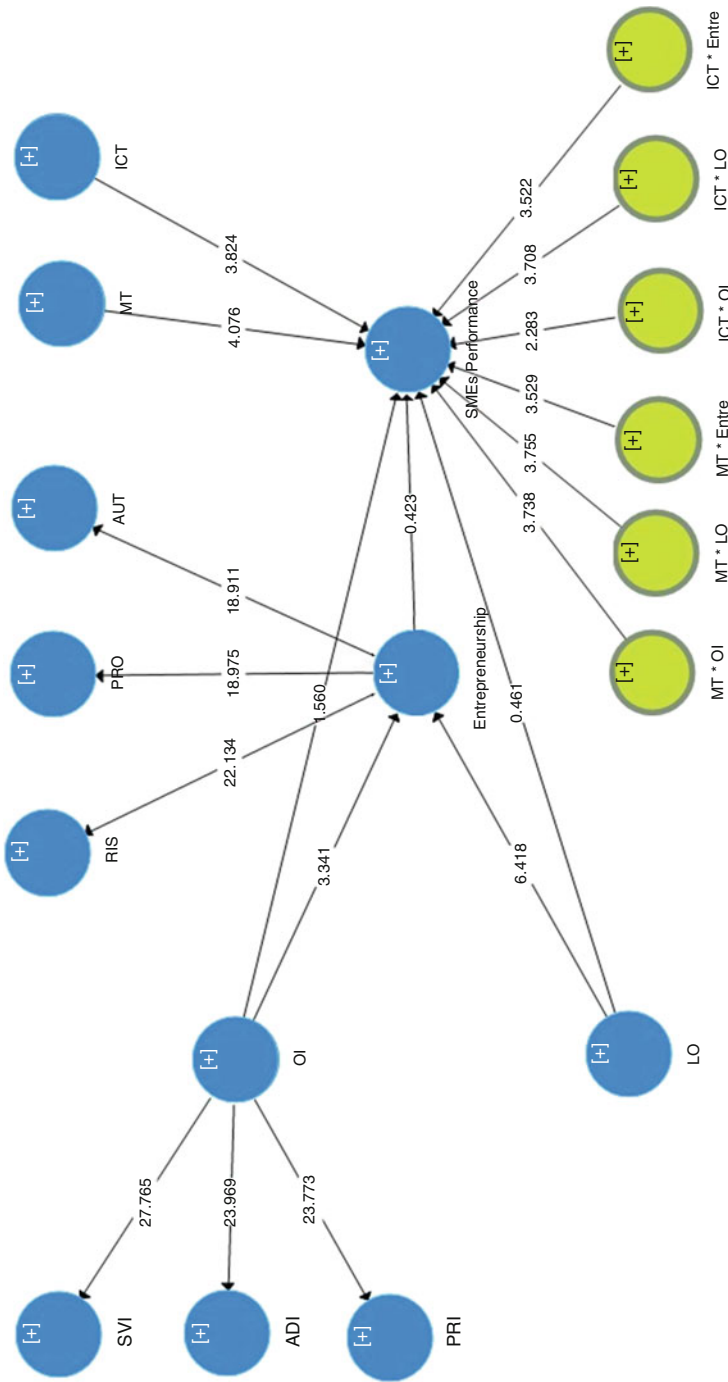


Fig. 6 t-statistics of structural model

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Entrepreneurship and SMEs Performance: Studying the Mediating Role of Innovation and the Moderating Role of Firm Size



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Abstract The aim of this study is to investigate the relationship between entrepreneurship and SMEs performance through innovation and firm size. In this regard the study questionnaire is distributed among SMEs managers. The questionnaire reliability is calculated using Cronbach's alpha and structural credit of constructions is validated based on factor analysis. Finally, based on research hypotheses and using structural equation modeling the relationships between variables are examined. Results show that there is a direct and significant relationship between entrepreneurship, innovation and quality performance. Moreover, data analysis shows that each dimension of entrepreneurship has a significant relationship with SMEs innovation and quality performance. It can be stated that SMEs innovation directly enhances their quality performance. Entrepreneurship relationship with quality performance is not different in SMEs; therefore, firm size is not an important and influential factor.

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1 Introduction

Nowadays, in most countries of the world, small and medium-sized enterprises (SMEs) are playing role from various social, industrial production, and service offering aspects and in many countries, these units are the main suppliers of new employment, the center of change and innovation and pioneer in inventing new technologies. Moreover, these enterprises play effective role in the economic development of countries by considerable exports, in a way that nowadays almost all countries try to develop these enterprises in their industrial structure. The existence of environmental challenges and the change in managerial processes have also made the role of SMEs more highlighted, and downsizing policies, outsourcing activities, restructuring, reengineering, and particularly encouraging entrepreneurship in the globalization era, have institutionalized accelerating the creation of small and medium entrepreneurial institutions (Svetličič et al. 2007).

In a research Rauch et al. (2009) performed a meta-analysis on the relationship between entrepreneurship and businesses performance. Their study includes 51 articles and showed a positive and significant relationship between entrepreneurship and businesses performance. It was specified that the control variable related to cultural differences between continents considered by authors is not statistically significant, meaning that the intensity of relationship between tendency to entrepreneurship and businesses performance “is similar in various cultural environments” (Rauch et al. 2009, p. 779). In general, entrepreneurship should be related to the business performance improvement of enterprise (e.g., Lumpkin and Dess 1996; Rauch et al. 2009). Actually, it is expected that with the passage of time, an enterprise using entrepreneurial orientations creates a set of skills (such as the ability of uncertainty management; the ability of innovation to deal with new emerging opportunities and threats; the ability to predict the direction and nature of market change; and the ability to tolerating risk), that form the entrepreneurship capability of an enterprise to increase business performance more.

Many studies have examined the relationship between entrepreneurship and the performance of SMEs (e.g., Ndubisi and Iftikhar 2012; Rodriguez-Gutierrez et al. 2015; Theriou and Chatzoudes 2015; Amin et al. 2016; Ebrahimi and Mirbargkar 2017). Results of research conducted by Theriou and Chatzoudes (2015) in the 750 SMEs in Greek country selected by clustering method for the research process showed that financial capital and environmental factors moderated the relationship between entrepreneurship and the performance of SMEs. In addition, through the role of entrepreneurial management, there is a positive relationship between entrepreneurship and performance of SMEs. In another study, Ebrahimi and Mirbargkar (2017) showed that SMEs can increase their performance by taking into account environmental issues and paying attention to green innovation and green entrepreneurship. Previous evidence also suggests that along with the concept of innovation and competitive advantage, the concept of entrepreneurship is proposed that can be effective in sustaining business growth and qualitative performance (O'Connor 2013). Innovation in many studies has been referred as factor affecting SMEs'

performance and entrepreneurship. Researchers believe that SMEs are more creative than big companies in terms of innovation (Khajeheian and Tadayoni 2016). Their relative advantages compared to large companies are innovation, flexibility, and response speed (Khajeheian 2017). As a result, these companies often play a valuable economic and social role due to their innovative capabilities (Krishnaswamy et al. 2014). SMEs can distance themselves from the traditional focus on the product and take steps to take advantage of new technology in the development of product innovation. In general, companies operating in high competitive environments tend to be more innovative in their products (Braun and Hadwiger 2011). The tendency towards product innovations depends on the company's competitive structure. Accordingly, policies that focus on reducing focus and removing constraints will lead to value added considering the performance and innovation in SMEs. Apart from the market-orientation strategy and competitive structures, the characteristics of the company also play an important role in the application of innovation. In general, size, age, market share and amount of production are among the most important factors affecting the organizational innovation. Younger and smaller innovative companies tend to be more innovative in adopting innovative product creativity (Collins and Troilo 2015).

This research has considered the mediating role of innovation and the moderating role of firm size, and for this purpose and to realize research goals the conceptual model of Ndubisi and Iftikhar (2012) has been used, that in the following and in the section of theoretical framework, the relationship of model components is explained. In the third part, research methodology is stated, in the fourth part, the results of statistical analysis are explained in detail, and finally discussion and conclusion is presented.

1.1 SMEs Policies in Iran

SMEs are key factors in economic growth, competitiveness and innovation promotion (Khajeheian 2013; Ebrahimi and Mirbargkar 2017). In most developed world countries, adopting policies to support SMEs in order to increase growth, generate income and employment, and even reduce poverty, are considered among the most important socio-economic priorities of governments (Khajeheian 2014; Salamzadeh et al. 2017). Governments, regardless of achieving to national determination to develop and confront with the process of globalization, have initially introduced a conventional definition of SMEs, which this definition focuses often on the number of employees in the enterprise. The Central Bureau of Statistics of Iran in the classification of industrial units has stated units with less than ten employees are called "micro", units with 10–49 employees are called "small", units with 50–99 employees are called "medium" and units with more than 100 employees are called as "large" units (Central Bank of Iran 2014). The next step, in fact, should be sought at the organizational level. This means that governments typically, with belief in free-market system, put a government organization responsible for policy making

and implementation of SME-related issues. These policies pursue a clear goal, namely the strengthening and expansion of these enterprises and the culture of entrepreneurship in the country (Berger and Udell 2006).

Quick-impact small enterprises now run many countries in the world and are welcomed by economic activists. Experts of this field believe that small industries with the high power of competitiveness and high productivity and the possibility of easy initiation can run the world's economies (World Bank 2014). The entrepreneurs create ideas in this section and reduce their cost. Small industries in Iran may be somewhat equal with other countries in terms of numbers, but in terms of productivity, they are far from developing countries. This demands proper attention and investment in order to increase non-oil exports of the country.

Iran's economy is also in a situation where, on the one hand, it is under international pressure to liberalize trade, and on the other hand, in order to achieve sustainable development, it has no way just to develop non-oil exports and increase its share of total exports. Despite many resources and capacities, SMEs in Iran seem to be able to achieve a satisfactory level of competitiveness in the world market due to their proper support, guidance and management, and have a significant impact on improving the Iran's economic conditions. Given the fact that one of the characteristics of successful enterprises is the ability to compete, the obvious feature of unsuccessful enterprises is the lack of this power (Salamzadeh and Kawamorita Kesim 2017). One of the major reasons for the failure of Iranian manufacturing and service companies in international markets is their lack of competitiveness in global target markets (Valaei 2017). If we can identify the roots of lack of competitiveness and the factors affecting the competitiveness and quality of these companies, solutions can be proposed to increase entrepreneurship and improve the performance of companies operating in the business environment.

2 Research Theoretical Framework and Hypotheses

Entrepreneurial orientation is named as one of the prerequisites of growth, competitive advantage and better performance, and the previous experimental researches have often shown that there is a positive relationship between entrepreneurship and performance (Kraus et al. 2012). The best definition that can be offered for entrepreneurship is that entrepreneurship is the process of innovation and exploiting opportunities by high effort and diligence along with accepting financial, mental, and social risks that is of course performed with the incentive of acquiring financial profit, achievement, self-fulfillment and independence (Hisrich and Peters 2002).

Entrepreneurship includes three dimensions of risk-taking, innovativeness and pro-activeness that have been widely used for measuring entrepreneurial behavior (Covin and Wales 2012; Emami 2017; Wales et al. 2013). Pro-activeness refers to the ability of firm in exploiting opportunities. The firm watches the market changes and increases its ability for identifying the future processes of market

(Dess and Lumpkin 2005). Proactive firms eliminate operations and products that their lifecycles have ended (Lumpkin and Dess 1996). On the other hand, innovativeness is related to ethical and experimental virtues and protecting new ideas (Kyrgidou and Spyropoulou 2013). This means being away from existing solutions and methods (Hong et al. 2013). Finally, risk-taking accompanies with test and innately has failure probability in itself (Anderson et al. 2009; Emami et al. 2017).

Entrepreneurship is an activity including discovering, evaluating, exploiting opportunities, introducing new products and services, organizing methods, markets, processes, and primary principles through organizing efforts that have not existed before (Shane 2012). With regard to various ideas, entrepreneurship can be investigated from various directions (Nissan et al. 2011). One of these ideas is the relationship between entrepreneurship and innovation. An innovator, as he/she creates new industries, can cause structural changes in the economy (Galindo et al. 2012). In the previous studies such results were also obtained that according to some researchers like Drucker (1998), innovation is located at the hearth of entrepreneurship activities, and it is with regard to the innovation that many entrepreneurs perform their activities. From this point of view, innovation grows its activity with regard to the feedbacks it creates, that these feedbacks are innovative entrepreneurship and these innovations also encourage other entrepreneurs and stimulate to further their goals about entrepreneurship (Cáceres et al. 2011; De Cleyn and Braet 2012; Zortea-Johnston et al. 2012).

Innovation can be defined as innovation of production or taking, attracting, and exploiting a new emerging added value in economic and social domains of renewing and developing products, services and markets, expanding new methods of production, and the establishment of new managerial systems (Crossan and Apaydin 2010). Technology development increase and market changes, whether local or global, have resulted in the creation of the need of innovation increase in the competition enhancement among SMEs performance (McAdam et al. 2010). Based on previous researches, it has been stated that connection networks, regional support, planning in business, strategies and optimization of organizational structure in innovative performance and innovation management play important role in SMEs (Laforet 2008).

The concept of entrepreneurship and ownership of a SME have close relationship with each other (Emami et al. 2017). In literature, they have even been used interchangeably in many cases too. It has been stated that an entrepreneur is like the owner of a small and medium business (Gilmore 2011). Increasingly, differentiation between types of entrepreneurship in decision-makings about policymakings of SMEs with the aim of entrepreneurship promotion and growth in them is very important (Hashi and Krasniqi 2011). Entrepreneurship and innovation are the capabilities of a firm to achieve better performance (Nasution et al. 2011). Ndubisi and Iftikhar (2012) have also stated that entrepreneurship capabilities in SMEs will result in innovation capabilities in them, and in respect of superior quality of their performance (see Fig. 1). In this regard, the role of the size of the company is a concept which has been considered in some studies. In a study by Ha-Brookshire (2009) in the

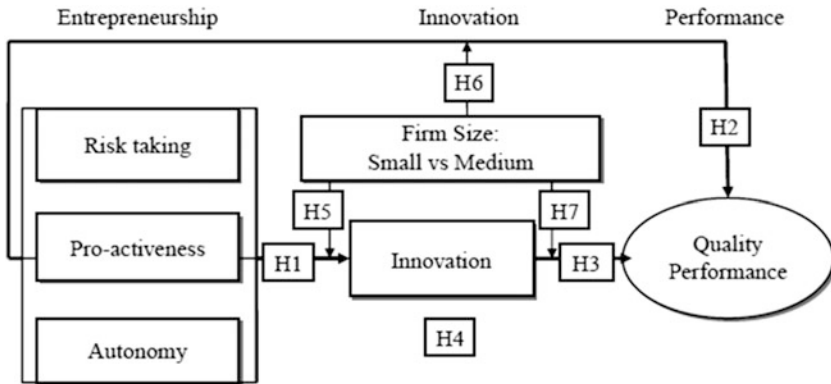


Fig. 1 Research conceptual model (Ndubisi and Iftikhar 2012)

United States, he examined whether the size of the company had an impact on the relationship between entrepreneurship and the performance of SMEs. While the results of this study showed that the size of the company could be effective especially in the long run in relation to entrepreneurship and performance, there was no statistically significant effect on the relationship between entrepreneurship and the distribution of creativity in SMEs and more profitable performance. On the other hand, in a study by Shehu et al. (2013), they examined 198 Nigerian SMEs and the results showed that the size of the company has no significant effect on the relationship between entrepreneurship and the performance of SMEs. However, given the different results of previous research, further research is needed in this regard.

With regard to the model, the following hypotheses are presented:

Hypothesis 1 There is a significant relationship between dimensions of entrepreneurship and innovation.

Hypothesis 2 There is a significant relationship between dimensions of entrepreneurship and SMEs performance.

Hypothesis 3 There is a significant relationship between innovation and SMEs performance.

Hypothesis 4a Innovation mediates the relationship between pro-activeness dimension and SMEs performance.

Hypothesis 4b Innovation mediates the relationship between risk-taking dimension and SMEs performance.

Hypothesis 4c Innovation mediates the relationship between autonomy dimension and SMEs performance.

Hypothesis 5 There is not a significant difference between entrepreneurship and innovation in two groups of small industries and medium industries.

Hypothesis 6 There is not a significant difference between entrepreneurship and SMEs performance in two groups of small industries and medium industries.

Hypothesis 7 There is not a significant difference between SMEs performance and innovation in two groups of small industries and medium industries.

3 Methods

3.1 *Sample Size and Data Collection*

Small and medium enterprises active in the Rasht industrial city compose the statistical population of this research. The basis of this research is the definition of Industries and Mines Organization and the Industrial Towns about SMEs. Based on data obtained from Industries and Mines Organization and the Industrial Towns Organization of Gilan Province, the number of SMEs active in the Rasht industrial city is 150 firms. For sampling the research statistical population, having the list of SMEs active in the Rasht industrial city, simple random sampling method has been used. According to Satorra and Saris (1985) method, the sample size with regard to the number of statistical population size was estimated 108 people. For this purpose, 125 questionnaires were distributed among the members of research statistical population (senior managers of firms), and finally data analysis was performed on 114 analyzable questionnaires.

3.2 *Variable Measurement*

Measurement items of this research have been driven from previous studies. For measuring entrepreneurship variable the items offered by Nasution and Mavondo (2008), and re-credited by Nasution et al. (2011) and Ndubisi and Iftikhar (2012) have been used that risk-taking and pro-activeness of each one with five items and autonomy with three items have been assessed. For measuring innovation variable 15 items (Ndubisi and Iftikhar 2012) have been used. The variable of performance with six items offered by Nasution and Mavondo (2008) is also assessed. The Likert's five options scale from "(1) I strongly disagree", to "(5) I strongly agree", has been used.

Table 1 Fit indicators of research measurement models

Indicators	<i>P</i>	CMIN/DF	RMR	GFI	IFI	TLI	CFI	RMSEA
Acceptable level	>0.05	<5	<0.05	>0.90	>0.90	>0.90	>0.90	<0.1
Entrepreneurship	0.002	1.601	0.043	0.90	0.93	0.91	0.93	0.073
Innovation	0.002	1.986	0.041	0.90	0.91	0.88	0.91	0.093
SMEs performance	0.044	1.921	0.032	0.95	0.97	0.95	0.97	0.090

4 Results

In data analysis, the inferential statistic topics such as SEM that itself includes CFA, and Path Analysis, has been used. The software used for data analysis are SPSS and Amos. For validation, the content value of each one of the indicators in measuring concepts and proposed structures in this section, the credit of designed model is analyzed by SEM. With regard to the reported values for Measurement Models, most of the fit indicators have acceptable or close to desirable limit values (Table 1).

For Convergent Validity, we consider three criteria: (1) Standard factor loads should be higher than 0.5, (2) AVE should be higher than 0.5, and (3) CR should be higher than 0.6, so that the convergent validity of model is confirmed (Fornell and Larcker 1981). As it has been presented in Table 2, considering that the factor load related to all items is higher than 0.5, and the composite reliability of all variables is higher than 0.6, the model has convergent validity. For investigating the reliability of questionnaire, Cronbach's alpha coefficient has also been used (Table 2), and after collecting initial data, by using SPSS software, the Cronbach's alpha of variables reliability was calculated. It is worth mentioning that Cronbach's alpha is used to evaluate internal consistency of measure, and approximately its value being higher than 0.8, is regarded completely appropriate, although in many researches the alpha higher than 0.7 is accepted too (Harris and Harris 2007).

Figure 2 is a confirmatory factor model for entrepreneurship variable, that the significance of regression weights at 99% confidence level denotes the convergent validity of this model. About Fig. 3, the outcome of fit indicators confirmed the model of SMEs performance variable at 1% error level. About Fig. 4, the questions 14 and 15 of confirmatory factor analysis model of the innovation variable of research were omitted, and the confirmatory factor analysis was performed again.

For investigating Discriminant Validity, the method offered by Anderson and Gerbing (1988) has been used. Based on this method, for determining discriminant validity, the lowness of correlation between structures can be mentioned, that this correlation between structures should be lower than 0.85, so that the discriminant validity is confirmed, otherwise it shows that two structures measure one similar concept. Since all correlations, had values less than 0.85, the discriminant validity is confirmed. The existence of multiple common linear relationship between variables, considering that the values of correlations are lower than 0.80, is rejected (Table 3) (Tabachnick and Fidell 1996).

Table 2 Results related to significance, standard factor loads, convergent validity, and reliability

Variable	Items	T-value	Factor loading	Cronbach’s alpha	CR	AVE
Entrepreneurship	Q1	–	0.65	0.71	0.72	0.51
	Q2	5.25	0.68			
	Q3	4.96	0.61			
	Q4	5.55	0.60			
<i>Risk-taking (Q1–Q5)</i>	Q5	5.67	0.52			
	Q6	–	0.51	0.87	0.86	0.52
	Q7	3.82	0.71			
	Q8	2.96	0.51			
	Q9	3.16	0.50			
<i>Pro-act (Q6–Q10)</i>	Q10	3.62	0.65			
	Q11	2.92	0.60	0.72	0.73	0.55
	Q12	3.66	0.99			
<i>Autonomy (Q11–Q13)</i>	Q13	2.04	0.58			
Innovation	Q16	–	0.55	0.88	0.89	0.55
	Q17	4.90	0.53			
	Q18	2.97	0.50			
	Q19	4.45	0.52			
	Q20	3.92	0.52			
	Q21	5.40	0.69			
	Q22	5.57	0.72			
	Q23	5.65	0.76			
	Q24	5.33	0.66			
	Q25	5.8	0.77			
	Q26	5.11	0.64			
	Q27	5.29	0.67			
	Q28	7.77	0.57			
SMEs performance	Q29	–	0.62	0.86	0.87	0.61
	Q30	6.39	0.74			
	Q31	6.80	0.82			
	Q32	6.71	0.82			
	Q33	6.10	0.73			
	Q34	5.68	0.65			

In order to investigate the compliance or non-compliance of the distribution of collected data with normal distribution, we use K–S test. With regard to the obtained values (Table 4) the results showed that the assumption of normality for all variables is confirmed, because in quantitative variables for determining the distribution normality of a variable, it is necessary to investigate the skewness and kurtosis of the measures of these variables. If these skewness and kurtosis are located at +2 and –2 range, we assume them acceptable for our current goals.

Having investigated and confirmed measurement models in the first step, the structural equations have been used to test hypotheses in the second step. To test

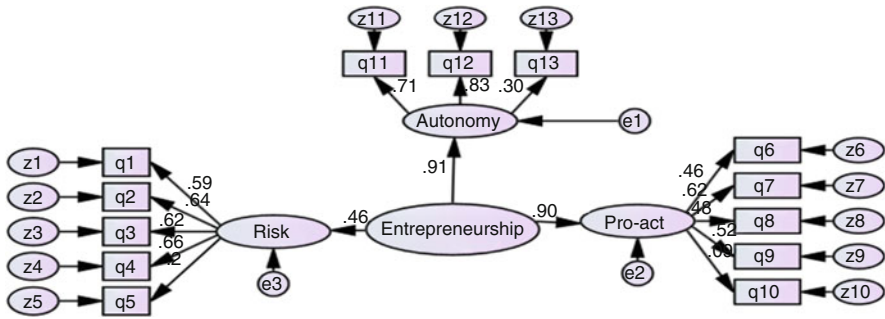


Fig. 2 Entrepreneurship measurement model

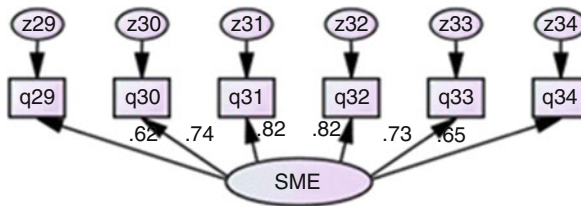


Fig. 3 Performance measurement model

the significance of hypotheses, the indicators of *t*-value and Sig. have been used. The *t*-value is the value that is obtained as a result of dividing regression weight estimate to standard error. Based on Sig = 0.05, the *t*-value should be higher than 1.96 or lower than -1.96, and less than this value, the parameter related to the model is not regarded important. The values lower than 0.05 for Sig. value indicate that the significant difference calculated for regression weights with zero value has 0.99 confidence level.

About H1, the *P*-value between risk-taking and innovation is 0.000, between pro-activeness and innovation is 0.026, and between autonomy and innovation is 0.027, that is a value lower than 0.05. The *t*-value between pro-activeness and innovation is 2.418, between autonomy and innovation is 2.205, that are higher than 1.96 value. Thus, it can be concluded that the hypothesis is confirmed at 99% confidence level.

About H2, the *P*-value between risk-taking and SMEs performance is 0.026, between pro-activeness and SMEs performance is 0.000, and between autonomy and SMEs performance is 0.040, that is a value lower than 0.05. The *t*-value between pro-activeness and SMEs performance is 2.476, between autonomy and SMEs performance is 2.35, that are higher than 1.96 value. Thus, it can be concluded that the hypothesis is confirmed at 99% confidence level. In other word, it can be said with 99% confidence that there is a significant relationship between entrepreneurship dimensions and SMEs performance.

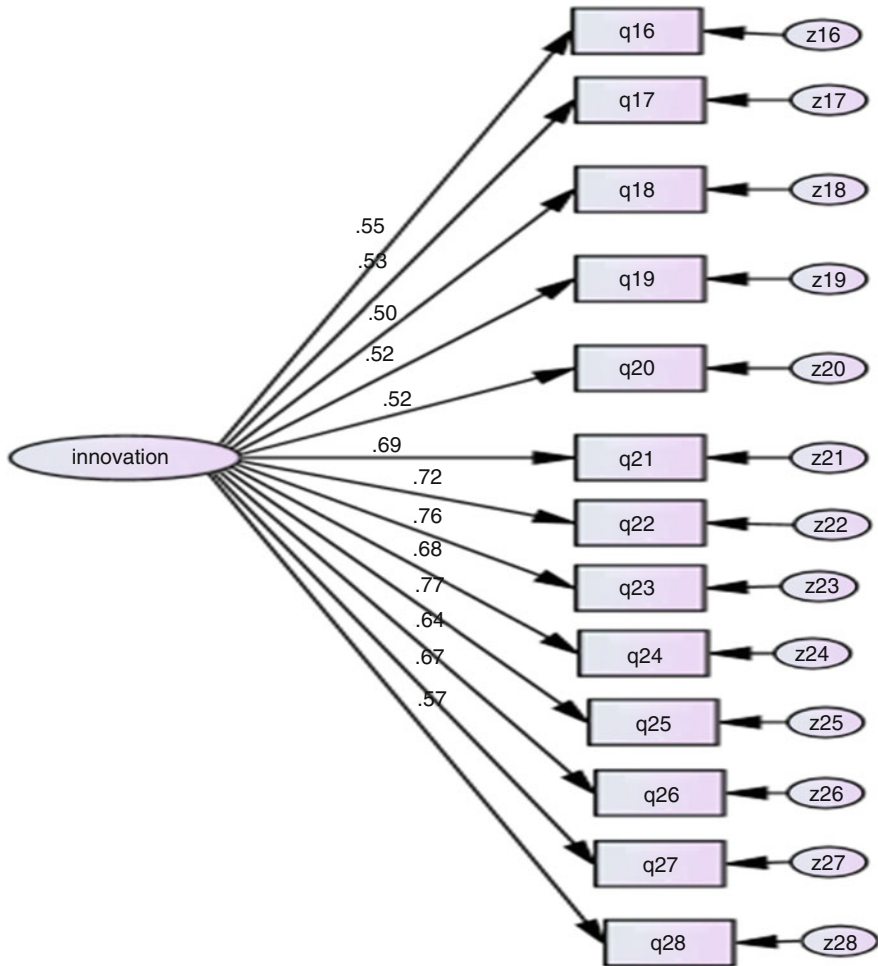


Fig. 4 Organizational innovation measurement model

Table 3 Correlation between variables under study

	SD	1	2	3
Entrepreneurship	0.45	1.000		
Innovation	0.51	0.632	1.000	
SMEs performance	0.69	0.477	0.726	1.000

Table 4 Test results of skewness and kurtosis for investigating data normality

Variables	Sample size	Skewness coefficient	Kurtosis coefficient
Entrepreneurship	114	0.481	0.414
Innovation	114	0.719	-0.500
SMEs performance	114	1.230	-0.635

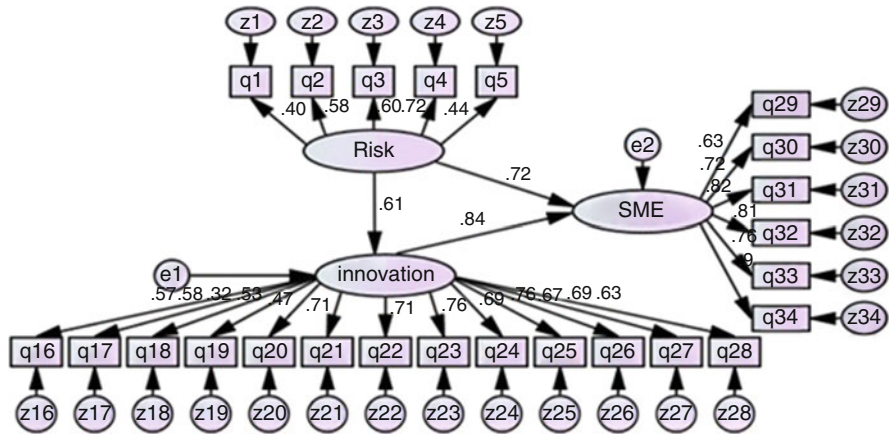


Fig. 5 Structural equation modeling of H4a

About H3, the *P*-value between two variables of innovation and SMEs performance is 0.026, that is a value lower than 0.05. Thus, it can be concluded that the hypothesis is confirmed at 99% confidence level. In other word, it can be said with 99% confidence that there is a significant relationship between innovation and performance.

About H4a, with regard to Fig. 5, the *P*-value between innovation and risk-taking is 0.000, between SMEs performance and innovation is 0.000, and between SMEs performance and risk-taking is 0.045, that is a value lower than 0.05. The *t*-value between SMEs performance and risk-taking is 3.325 that is the value higher than 1.96 value. The total path coefficient ratio between risk-taking, innovation, and SMEs performance is the value of 0.51. Thus, it can be concluded that the hypothesis is confirmed at 99% confidence level. In other word, it can be said with 99% confidence that innovation mediates the relationship between risk-taking and SMEs performance. According to Table 5, in connection with mentioned model, the fit indicators outcome has been shown at 99% confidence level.

Research results about hypothesis H4a (Fig. 6) showed that the *P*-value between innovation and pro-activeness is 0.000, between SMEs performance and innovation is 0.000, and between SMEs performance and pro-activeness is 0.002, that is a value lower than 0.05. The *t*-value between SMEs performance and pro-activeness is 3.250 that is the value higher than 1.96 value. The total path coefficient value between pro-activeness, innovation, and SMEs performance is the value of 0.57. Thus, it can be concluded that the hypothesis is confirmed at 99% confidence level. In other word, it can be said with 99% confidence that innovation mediates the relationship between pro-activeness and SMEs performance. The model fit indicators outcome of hypothesis H4b has been shown in Table 6.

About hypothesis H4c, with regard to Fig. 7, the *P*-value between innovation and autonomy is 0.000, between SMEs performance and innovation is 0.000, and between SMEs performance and autonomy is 0.000, that is a value lower than

Table 5 Fit indicators of structural model of H4a

Indicators	P	CMIN/DF	RMR	GFI	IFI	TLI	CFI	RMSEA
Hypothesis H4a	0.000	1.842	0.041	0.91	0.92	0.94	0.92	0.086

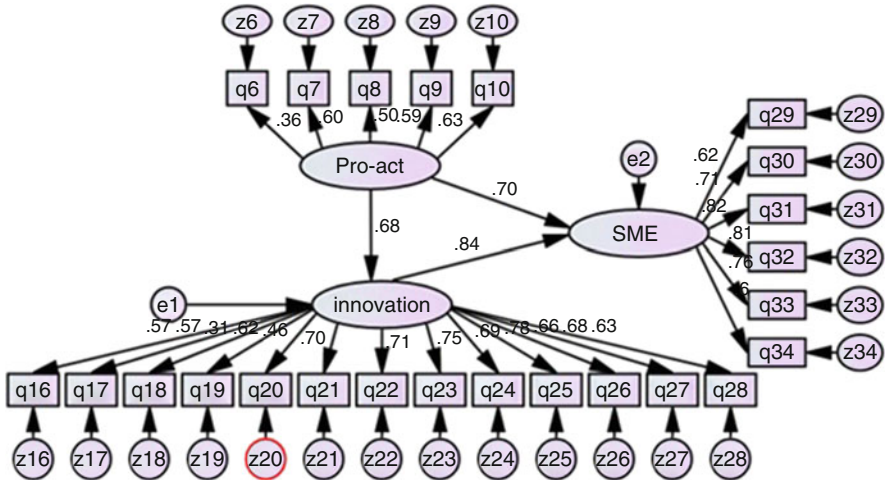


Fig. 6 Structural equation modeling of H4b

Table 6 Fit indicators of structural model of H4b

Indicators	P	CMIN/DF	RMR	GFI	IFI	TLI	CFI	RMSEA
Hypothesis H4b	0.000	1.623	0.054	0.086	0.93	0.90	0.93	0.074

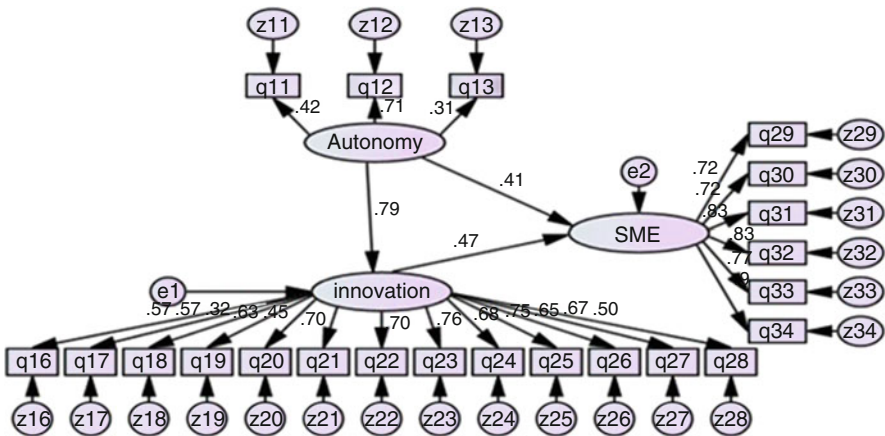


Fig. 7 Structural equation modeling of H4c

Table 7 Fit indicators of structural model of H4c

Indicators	<i>P</i>	CMIN/DF	RMR	GFI	IFI	TLI	CFI	RMSEA
Hypothesis H4c	0.000	2.054	0.036	0.94	0.91	0.91	0.91	0.087

Table 8 Log-linear of entrepreneurship and innovation with regard to the moderating variable of firm size

K-way and higher-order effects							
	K	df	Likelihood ratio		Pearson		Number of iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and higher order effects	1	23	275.121	0.000	394.667	0.000	0
	2	17	47.832	0.000	273.067	0.000	2
	3	6	0.069	1.000	0.068	1.000	3
K-way effects	1	6	227.289	0.000	121.600	0.000	0
	2	11	47.763	0.000	272.999	0.000	0
	3	6	0.069	1.000	0.068	0.000	0

0.05. The *t*-value between innovation and autonomy is 3.316 that is the value higher than 1.96 value. The total path coefficient ratio with regard to the figure in this hypothesis between autonomy, innovation, and SMEs performance is the value of 0.37. Thus, it can be concluded that the hypothesis is confirmed at 99% confidence level. In other word it can be said with 99% confidence that innovation mediates the relationship between autonomy and SMEs performance. According to the results of Table 7 in connection with mentioned model, fit indicators outcome also confirmed the model at 99% confidence level.

In the analysis of H5, for investigating the relationship between entrepreneurship and innovation, with regard to the moderating variable of firm size, the Log-linear test has been used. The results obtained from this test have been presented in Table 8.

Considering that for investigating the relationship between entrepreneurship and innovation, with regard to the moderating role of firm size, the ratio of Sig = 0.000, and it is lower than 0.05, hence, the hypothesis zero indicating the lack of trilateral relationship is rejected. Thus, there is a significant relationship between entrepreneurship and innovation with regard to the moderating role of firm size.

About hypothesis H6, for investigating the relationship between entrepreneurship and SME performance, with regard to the moderating role of firm size, the Log-linear test has been used. The results obtained from this test have been presented in Table 9.

Considering that for investigating the relationship between entrepreneurship and SME performance, with regard to the moderating role of firm size, the ratio of Sig = 0.034, and it is lower than 0.05, hence, the hypothesis zero indicating the lack of trilateral relationship is rejected. Thus, there is a significant relationship between entrepreneurship and SME performance with regard to the moderating role of firm size.

Table 9 Log-linear of entrepreneurship and SME performance with regard to the moderating variable of firm size

K-way and higher-order effects							
	K	df	Likelihood ratio		Pearson		Number of iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and higher order effects	1	29	289.917	0.000	458.111	0.000	0
	2	22	33.846	0.051	259.497	0.000	2
	3	8	2.745	0.949	2.480	0.963	3
K-way effects	1	7	256.071	0.000	198.614	0.000	0
	2	14	31.101	0.005	257.017	0.000	0
	3	8	2.745	0.949	2.480	0.034	0

Table 10 Log-linear of innovation and SME performance with regard to the moderating variables of firm size

K-way and higher-order effects							
	K	df	Likelihood ratio		Pearson		Number of iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and higher order effects	1	39	317.655	0.000	498.632	0.000	0
	2	31	77.991	0.000	338.162	0.000	2
	3	12	16.309	0.177	12.717	0.039	4
K-way effects	1	8	239.663	0.000	160.470	0.000	0
	2	19	61.682	0.000	325.445	0.000	0
	3	12	16.309	0.177	12.717	0.039	0

For investigating the relationship between entrepreneurship and SME performance, with regard to the moderating role of firm size, the Log-linear test has been used. The results obtained from this test have been presented in Table 10.

Considering that for investigating the relationship between entrepreneurship and SME performance, with regard to the moderating role of firm size, the ratio of Sig = 0.039, and it is lower than 0.05, hence, the hypothesis zero indicating the lack of trilateral relationship is rejected. Thus, there is a significant relationship between innovation and SME performance with regard to the moderating role of firm size.

5 Conclusion and Discussion

Continuous environmental changes threaten the survival of organizations variously. The rapidly changing technologies and short lifecycle of products have caused the firms to become innovative, develop new ideas, products, and processes, and take risks for dealing with rapid changes. Moreover, the increasing global and local competition has increased the need of firms to be pioneer and have aggressive

competition. Thus, the organizations for continuing their life require adopting appropriate strategic approach to maximize exploiting environmental opportunities with regard to their weak and strong points. There are always frequent opportunities in the business environment of organization, and those are more successful in this competitive market that identify these opportunities on time and exploit them. These factors particularly have special importance for SMEs. Since SMEs are important sources of employment and value creation for the community, achieving sustainable growth in these firms is vital for the economy, resulting in sale growth increase in the firm, and followed by recruitment growth, whereby the unemployment problem can be moderated to some extent in the community. With regard to the research results and the positive impact that entrepreneurial approach can have on SMEs performance, the policy maker managers are suggested to have considerable attention to entrepreneurial approach.

Another point the managers of SMEs should consider is the necessity of risk-taking. The managers should consider that in today's challenging environment in order to survive, are required to perform projects with high risk, invest on untested technologies, or supply new products to the market.

Innovation is considered as the engine for growth movement and economic development. The research results showed that innovation is as important for the medium firms as it is important and vital for the small firms too. Innovation in the field of business in the developing countries has more importance, that is where more SMEs have exact innovation, and there are not adequate external sources for protecting and encouraging innovation. Therefore, innovation can be effective as a potential solution for the development and growth of SMEs in general for all developing countries.

One of the main limitations of this research is to adopt a cross-sectional study over a specific time period, which is suggested that the results to be compared in future research, focusing on the implementation of longitudinal plans. Additionally, the research model has the capacity to add new variables, such as measuring the profitability of companies and combining with economic models to measure factors such as entrepreneurial risk or entrepreneurial returns, which is recommended to be considered in future research.

5.1 Management Implications

SMEs in Iran, with more than 60% employment and more than 94% of enterprises, provide good conditions for regional balanced support and development. These types of enterprises, which are defined by the number of employees in the country have always been faced with a large number of policy centers, and industrial support, especially financial supports, have led to increased competitiveness in them. One of the main reasons for the inadequate allocation of supports is support of a single SME, which leads to decentralization of government regulatory systems and concessional loans. Today, to support, direct and fund these types of

enterprises, supporting clusters of SMEs, instead of supporting a single and diffuse SME, considered by policy makers of many countries, and enterprises in these clusters, have experienced significant and different growth compared to single medium and small enterprises. Since they are successful clusters in Iran, increasing the competitiveness and growth of SMEs is necessary in Iran. On the other hand, most small companies have a single owner, and there is no good statistics and information about their past and present status, and company finance accounts are not kept properly. Determining short-term and long-term goals for them is difficult to implement. The lack of using scientific management in business development and the insistence on corporate governance based on past experiences, lack of knowledge, and lack of power to adopt consultation, employed force is not able to execute strategic management plans. Paying attention to strategic planning can increase the potential of active enterprises. Additionally, paying attention to new technologies and creating opportunities for enterprises to gain competitive advantage based on higher efficiency and the production of unique products rather than relying on factors should be considered as the goal of developing countries. This will be accelerated through attracting foreign direct investment. In addition, in order to make small and medium industries competitive, the most effective way is to modify the management and optimizing the production methods to increase productivity.

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The Impact of Business Ethics on Entrepreneurial Attitude of Manager



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Abstract Due to the rapid pace of changes in the world of business, which is inherently affected by managers' attitudes as well as their ethical behaviour, we intend to examine the relationship between these two elements. To do so, a hundred managers of the Telecom companies are surveyed. The data is gathered through a standard questionnaire which is confirmed by experts and its reliability is examined by Cronbach's alpha. The data is analyzed by SPSS 22 software, using regression and path analyses. Findings revealed that there is a correlation between the main variables of the study. Also, it is concluded that when managers follow ethical behaviours, they will be more prone to be creative and innovative in their businesses.

1 Introduction

Although studies connecting entrepreneurship and ethics are relatively new, during the past decades, entrepreneurship has undergone substantial growth and has emerged as a prominent scientific field. The interest of researchers in entrepreneurs is remarkable and on the rise, and the creation of new investments has turned entrepreneurship into a full-fledged academic major with specialized scientific journals, reforms in business school curriculums, and a rise in the number of entrepreneurship-specific research conferences (Peredo et al. 2004; Harris et al. 2011). On the other hand, organizational ethics emerged in the west as a scientific

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concept in the second half of the twentieth century and has attracted the attention of various researchers on personal and organizational levels in the past four decades and is referred to as a challenge facing many organizations around the world (Cardy and Selvarajan 2006). However, the common ground between entrepreneurship and ethics has remained in its infancy despite the recent attention it has received. In addition, some fundamental qualities in management have a direct effect on the relation between ethics and entrepreneurship (Harris et al. 2011). Today, the importance of business ethics becomes clearer in entrepreneurial configurations. According to Rutherford et al. (2009), entrepreneurs might be tempted to lie about the age and size of their companies (Finkle and Mallin 2011). Ethics introduces the current complex challenges present in various stages of an organization's life such as the initial stage, growth stage, stabilization stage and deterioration stage. Entrepreneurs might make unethical decisions while doing business. Ethical decision making is a challenge facing any entrepreneur in any company, large or small (Tanwar 2013).

In today's dynamic competition environment with rapid global changes occurring, organizations have increasingly committed themselves to entrepreneurial activities (Khajehheian 2017; Covin and Kuratko 2008), therefore, ethics acts as a framework through which entrepreneurship creates values related to society's real needs and entails real growth and sustainable development. Unlike common attitudes which consider ethics as a limitation for entrepreneurs, this view believes in a positive synergy between these two areas (Fateh Rad et al. 2015). One key viewpoint regarding ethical entrepreneurship is that business ethics should first and foremost focus on creativity, productivity, trade and services. Creative and productive businessmen pay significant attention to ethical people who believe business ethics must define business seriously and fundamentally as an ethical (moral) phenomenon (Hicks 2008). Ethics can also be codified to include old plans made of absolute principles to create the circumstances and a process for finding imaginative solutions to ethical problems. It is therefore important from a both economic and ethical standpoint to keep entrepreneurial spirit alive in an organization (Buchholz and Rosenthal 2005). This is because improving entrepreneurship and preparing a suitable ground for its development is instrumental in a country's economic advancement, especially for developing economies (Archibong 2004), and is a way of understanding and making use of opportunities, wherever they may arise (Finkle and Mallin 2011).

There is evidence suggesting that organizations with strong ethical cultures that are well managed and well invested in their human resources, have seen a rise in credibility and reputation and eventually their share prices (Buckley et al. 2001). Ethics is related to values. Entrepreneurship creates value. Values and value-creation mutually affect each other in various ways. In ethics, we discuss the nature of values but in entrepreneurship, we speak of opportunities (Harmeling et al. 2009). Therefore, theories of ethics can be utilized in the analysis of ethics (changes) and ethical policies of businesses at any time and across countries and

industries (Scholtens and Dam 2007). Entrepreneurship can be found in every organization; large or small organizations, patents, family businesses, state institutions, or non-for-profit organizations (Finkle and Mallin 2011). Entrepreneurs face complex ethical problems related to basic qualifications, employee-client relations, distribution predicaments and other challenges, because the initial emergence of a large number of these ethical issues is mostly inevitable for young startup organizations (Bryant 2009). Thus, organizations today are in positions where a tendency towards entrepreneurial activities is key to them (Shepherd et al. 2009). Ethics originate from an internal commitment to a positive and pious life, rather than a collection of rules and principles (Buchholz and Rosenthal 2005). Looking from outside an organization, the organizations that carry out their social and ethical duties enjoy higher public attention and a better position in society. Besides, if the service provider possesses the ethical components and principles and puts them to use, they will be able to cause customer satisfaction and loyalty towards the organization (Thomas et al. 2002).

In fact, an entrepreneur is someone who often says, one must break the rules in order to make use of opportunities that are identified or those which could be created. Following such principles might lead some entrepreneurs towards ethical problems, especially when breaking the laws takes place in legal or ethical areas (Brenkert 2009). Common entrepreneurship is related to exploring opportunities, innovation and creating investment in the new business and is implicitly related to ethical behavior through pursuing separate and possibly conflicting business goals (Haugh and Talwar 2014). Therefore, on the one hand, entrepreneurs are people regarded as creative innovators, praised for participating in social development through making new products, employment opportunities, and creating new facilities for us. On the other hand, entrepreneurs are often criticized for their one-dimensional pursuit of business success and a tendency toward compromising ethical principles if necessary. Thus, there exists a sophisticated and multidimensional between entrepreneurship and ethics (Frenkel et al. 2005). This study seeks to find an answer to the following question: Does ethics have a role in entrepreneurial attitude of managers? And, which ethical criteria are the most effective in this particular area?

2 Theoretical Framework

2.1 Business Ethics

Ethics is seen as moral principles governing or influencing an individual's behaviors; a system of ethical principles or rules of conduct. Ethics in itself means "believing in what is right or wrong; what is morally right or acceptable". Business ethics can to a great extent ensure profitability and survival, so that margins are

reduced, competition increases, the ability to compete and survive depends greatly on quality, faster and more reliable delivery, customer services, and values such as integrity and honesty in its new sense (Ironkwe and Promise 2015). An organization's ethical environment can be defined as a common set of norms, values and proper modes of behavior followed by an organization's members (Tanwar 2013). There exists one contradiction between the two concepts proposed for business ethics. Oxford English Dictionary limits ethics to the following definitions: (i) moral principles or system from a leader or a specific school of thought, (ii) Moral principles guiding an individual, (iii) Known rules of conduct in special associations or human congregations (Lu 2010).

Since there often is no right or wrong decision, business ethics is a state of awareness related to moral and humane values and business commitments which validate detailed reasoning in great decisions (Ironkwe and Promise 2015). What is important is not the motivation to seek personal benefit, which has existed in all ages and requires no clarification; but it is the shift in ethical criteria which turns a natural weakness into a glorified mentality and sanctifies it as an economic virtue, while it was previously condemned as an anti-value. The power that created this system, was the religion associated with Calvin, and Capitalism is the social reflection of Calvinistic Theology (Weber 2005; Dana 2009). Ethics, be it applied to business, law, medicine or any other profession, is derived from a set of universal values. Around 3000 years ago, Zoroaster pleasantly summarized ethics as: "*Good Thoughts, Good Words, and Good Deeds*". Therefore, ethics is not a modern day fashion. Many writers agree on the universal nature of ethical values, a concept found even in the writings of the world's biggest religious traditions. Among these values or virtues, we have recognized integrity, reliability, fairness, respects for others, justice, moderation and also reason, wisdom and prudence (Salamzadeh et al. 2013; Ironkwe and Promise 2015).

Ethical conduct on the internet includes a set of beliefs and standards shared by a group of people to help with decision making in doing the right thing. A deeper understanding of the ethical issues posed by the dynamic digital environment is necessary to figure out whether the ethical culture present in the cyberspace differs from that of the physical world or not. As a huge amount of information continuously shared through digital technology increasing individual access to knowledge reservoirs, the internet has altered the moral landscape. It is important that a focus on how to behave ethically on the internet in order to help spread much needed beliefs and practices (Ratten 2013). The aim of business ethics is to encourage businessmen and businesswomen to follow the codes of conduct which facilitate public trust in products and services (Ironkwe and Promise 2015). Business ethics is a relatively new branch of general ethics. But its presumptions are deeply rooted in Kantian duty-based ethics. Regarding entrepreneurship, Kantian ethics has a valuable share since it (i) considers business structures as human organizations, (ii) protects shareholders' interest through defending the "respect for individual" principle, and (iii) offers business ethics and using a tool to determine whether or

not the principles acted on are ethically valid. In other words, in business, Kant's categorical imperative is a fair play principle (Staniewski et al. 2015). A successful business is like a well-built house. Good ethics signifies a strong foundation. To build a successful and powerful business, considering good conduct leads to ethical core values: punctuality, trustability, humility, respect, relationship, dressing, cleanliness, honesty, sympathy, qualification, honor, customer centeredness, result orientation, risk-taking, enthusiasm, and continuity (Ironkwe and Promise 2015). Ethics of profit: good ethical outcome has been mentioned many years ago by the father of economics Adam Smith using the "invisible hand" metaphor, something gained passively by companies governed by personal interests (Vranceanu 2014). An element in the realm of business ethics is social responsibility which can materialize in economic, legal, moral or religious ways. It actually reflects the commitment of businesses to maximize social benefits and minimize social costs (Carroll 1991).

2.2 Ethical Issues

A moral conflict arises when "individual considerations and personal responsibilities of an individual contradict their responsibilities in a group". A contradiction can be in one of two forms: internal conflict involving personal hierarchy of values and a contrast between personal and organizational values (Tanwar 2013). In general, one must state that it is not possible to declare an action as ethical or unethical with full certainty (Brickley et al. 2002). Business ethics exists in relations between organizations, between organizations and their social environment, organization and customers, organization and its employees, and organization and government officials. Actions taken by the organization towards any of these institutions, will carry consequences; thus. Entrepreneur ethics must ensure respectful relations beneficial for both sides (Staniewski et al. 2015). Business ethics are based on common and universal values which we call code of ethics according to which we devise the organization's comprehensive ethics document (Petersen and Krings 2009). Asgary and Mitschow (2002) have introduced 15 codes of ethics as international ethics codes as follows: trust, fairness, avoiding lies, honesty, transparent declaration of financial records; responsibility; respect for national sovereignty; supporting the financial goal of the host country; respect for social and cultural values; respect for human rights and individual freedom; commitment to done deals and agreements; creating equal growth opportunities for all; supporting organizational morality; showing respects in all relations; supporting environmental regulations; preserving organizational integrity and development; fairness and avoiding discriminatory behavior. Ethics is influenced by structures and relations, religion, normative and legal systems, family system, social learning, faith and people's experiences and attitudes (Stent 2006). Many ethical issues are related to

conflict of interests, honesty and fairness, and interpersonal and inter-organizational relations (Dadgar 2006). Unethical behavior, stimulates the business environment against a person, and leads to organizational failure (Buckley et al. 2001). Miller et al. have developed multi dimensions of comprehensive measurement of business ethics. They introduced the indicators of ethics as follows: comfort in workplace, focus on work, efficient use of time, hard work, self-reliance, and fairness (Miller et al. 2002).

Factors including work ethics in organization according to Azmi (2010) are: confidentiality, defamation, breaches of confidentiality, ownership of knowledge, honesty and commitment. Inkpen and Tsang (2005) mention trust as the main tenet of work ethics. Proponents of business ethics are two groups: (i) they believe that following business ethics results in increased value for shareholders and is a tool for achieving profit maximization (instrumental ethics view), (ii) The second group do not adhere to the instrumental view and believe that aside from financial considerations, employees must follow ethics because of their virtuous nature (Poesche 2002). Hosmer (1995) offers one of the most comprehensive categorizations taken from ethics theories as follows: eternal law, utilitarianism, deontological theory, distributive justice, contributive liberty (Thulasivelu 2012). Factors influencing work ethics can be divided into three groups: (i) Macro level (cultural elements, economic, political, environmental, social, religious and legal elements), (ii) Organizational level (competition, reward system, job characteristics, access to resources, organizational culture, organizational objectives, managers' conduct, organizational atmosphere, performance assessment), and (iii) individual level (personal beliefs, family teachings, individual attitudes and social relations) (Naude 2004).

2.3 Factors Affecting Ethical Behavior

There are several models in this regard in the world, the most important of which are: Bartels' marketing ethics (Caner and Banu 2014), Trevino's individual-situation interaction (Brown and Treviño 2006), Bommer et al.'s (1987) ethical and unethical decision-making behavior model. Stead et al.'s (1990) ethical conduct model, Mc. Donald and Nijhof's model of stimulation of ethical behavior in organizations (Pelletier and Bligh 2006), and Painter-Morland and ten Bos's (2011) ethical framework. Through the study of multiple ethical conduct models, several factors have been identified as having an effect on ethical behavior in organizations (Naude 2004). Through analysis of literature, factors influencing ethical behavior were identified and summarized as follows: Referent others, Manager's behavior, Reward system, Code of conduct, Organisational culture, and Level of moral development.

2.4 *Entrepreneurship and Ethics*

Entrepreneurship is the process of creating different and valuable things with allocating necessary time and trying with the assumption of financial, psychological, and social risks to reach financial rewards and personal satisfaction (Ironkwe and Promise 2015). Entrepreneurship is a mental state; a cunning, enlightened, and innovative mentality instead of business management. Ethics deals with distinguishing what is right or wrong and cares about the nature and background of ethics, including moral judgment, standards and codes of conducts (Tanwar 2013). The process of entrepreneurship begins with an informed and creative idea for a new product or service. An entrepreneur is ambitious and courageous and follows his/her initiative in developing his/her ideas in the new business (Hicks 2009). Entrepreneurship includes (i) process of creation; creation of value for the entrepreneur and for the target audience, (ii) time and effort; a lot of time is spent on creating something valuable for both the entrepreneur and the audience, (iii) risk; financial, psychological, and social risks, and (iv) rewards of entrepreneurship; autonomy, personal satisfaction and financial rewards for successful entrepreneurs (Ironkwe and Promise 2015). Thus, entrepreneurship is more than just proposing innovative or creative ideas for products or services (Brenkert 2009).

Entrepreneurship has increasingly been examined as a fundamental economic phenomenon, however, it has been looked at as an ethical phenomenon much less often. Contemporary business ethics base their practical goals on the following assumptions: (i) to stop predatory business methods and (ii) to encourage philanthropy and charity work. Business ethics needs to be founded on the values and virtues of entrepreneurs who create value and win-win trade with others (Hicks 2009). Entrepreneurial capabilities form a part of an individual's optional behavior affecting the view towards technological innovations. Entrepreneurial capabilities have been defined as levels of innovative, active, and risky behaviors in an individual (Ratten 2013). The common ground between ethics and entrepreneurship includes two connected set of issues. The first involves the importance of entrepreneurship for ethics, while the other one involves the moral grounds for entrepreneurship. Entrepreneurs face complex problems related to general fairness, staff and customer relations, honesty in communication, distribution disruptions, and other challenges. Entrepreneurship can be found in any organization- small or large businesses, family businesses, state institutions or non-for-profit organizations (Tanwar 2013). In an experimental study of recruitment relationships in Chinese small businesses, Cooke (2005) identified a set of ethical issues. Issued related to the nature of employees' legal rights are: culture of long working hours, general low level of resting and holidays, little or no payment of extra hours of work, limited wages and bonuses, lack of social security systems and so on (LU 2010). Many business managers believe that the qualities of entrepreneurs are creativity, innovation, risk-taking, and independent thinking (Huynh 2007).

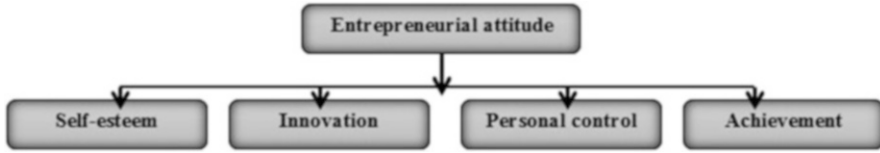


Fig. 1 Robinson et al.'s (1991) entrepreneurial attitude model

Joseph Schumpeter views entrepreneurship as a disrupting force in economy and describes it as “creative destruction”. Schumpeterian entrepreneurship includes three main features: (i) Entrepreneurship is understandable in advance, but it cannot be predicted in practice using typical rules and making inferences from the existing realities, (ii) Entrepreneurship forms long-term events and outcomes and in order to create appropriate opportunities, changes economic and social status quo, and (iii) The number and frequency of entrepreneurial occurrences depend on the relative quality of forces, individual decisions, actions and behavioral patterns (Fu and Yu 2001). Entrepreneurial attitude is measured with aspiration, innovation, autonomy, self-confidence (self-reliance) and identification of opportunities (Lindsay 2005). Each of these attitudes is comprised of three aspects: cognition (beliefs and thoughts), affection (positive and negative) and conduct (intent, goal and action). In line with these aspects, Robinson et al. (1991) believe that four important entrepreneurial attitudes are: aspiration, self-confidence, autonomy and creativity, to measure which the EAO (entrepreneurial attitude orientation) tool is employed (Van Wyk and Boshoff 2004) (Fig. 1).

Lumpkin and Dess (1996) believe five qualities, namely innovation, risk-taking, pioneering, aggressive competitiveness and professional independence of managers are indicators of entrepreneurial attitude (Lumpkin and Dess 1996). Four factors, namely success, innovation, self-control, and dignity have been found to correlate with tendency toward entrepreneurial attitude (Lung Choe and Ching Loo 2013). Crant (1996) found that entrepreneurial can be related to personal considerations of having a business. This study was carried out in a university in United States and showed that gender; level of education and businessman parents influence entrepreneurial attitude (Mohd Shariff and Basir Saud 2009). Caird (1988) concluded that entrepreneurial attitudes tend to appeal to autonomy, internal control, creativity, risk-taking and self-reliance (Mohd Shariff and Basir Saud 2009). There is imagination, creativity, freshness, and sensitivity are at the heart of entrepreneurship (Buchholz and Rosenthal 2005). Entrepreneurship consists of “how and through what patterns, opportunities to make products and services aimed at future are discovered, evaluated, and utilized by entrepreneurs (individuals and organizations) and bring along the creation of value in the light of social values”. According to this definition, aspects of entrepreneurship include: source of opportunities, identifying opportunities, evaluating opportunities, utilizing opportunities, entrepreneurs, and entrepreneurial environment (Dunham et al. 2008) (Table 1).

3 Research Background

Table 1 Research background

Authors	Research title	Results
Chell et al. (2016)	Social entrepreneurship and business ethics: are social and ethical same things?	The researchers examined questions about the ethical nature of social firms and concluded that in relationship between social entrepreneurship and ethics, problem identification must be carried out and also found that a wide range of concepts and methodological approaches are valuable as grounds for socially mature entrepreneurship and finding social organizational solutions tend towards social innovation in processes and practices (Chell et al. 2016)
Tlaiss (2015)	How does Islamic business ethics treat female entrepreneurs: insight from middle eastern Arabic countries	This study examines effects of Islamic values and business ethics on business activities of female entrepreneurs in Arabic countries. Results show how Muslim women entrepreneurs are after welfare in life and advance in their work while doing business. Muslim female entrepreneurs are committed to honesty, truthfulness, fairness, justice and good will and see them as tools for their company’s survival and success. The implications of this study are significant for academicians, global and multi-national companies, and have led to how business is done in Islamic countries (Tlaiss 2015)
Zulkifli et al. (2015)	The concept of business in Islam with regards to entrepreneurship	Introduced entrepreneurship as a catalyst and aid to the economic development of countries and found that Islamic business ethics can create informed entrepreneurs. (Zulkifli et al. 2015)
Ironkwe and Promise (2015)	Ethics in entrepreneurship: an outlook on Nigeria	This study focuses on helping entrepreneurship apprentices to support ethical practices crucial for survival and concluded that ethics, entrepreneurship and ethical aspects in management are very important and essential for business survival

(continued)

Table 1 (continued)

Authors	Research title	Results
Staniewski et al. (2015)	Aspects of entrepreneurial ethics	To answer the question: "how can the issue of business ethics be raised with entrepreneurs?", the researchers in this study examined the place of ethics in business activities and found that ethical behavior should be taught to entrepreneurs
Withey and Schwartz (2014)	Ethical orientation of aspiring entrepreneurs	In order to better understand the ethical orientation of aspiring entrepreneurs, the researchers evaluated business ethics using three tools of multi-dimensional ethics scale, ethical intensity scale and the scale used to control the orientation of desired social response on master of business students and graduates and found that ethics greatly affect entrepreneurs' decisions (Withey and Schwartz 2014)
Harris et al. (2011)	Ethics and entrepreneurship	To establish the possible relation between ethics and entrepreneurship, after examining several studies on the subject, the researchers widely identified and interpreted them and combined the key subjects
Fateh Rad et al. (2015)	Ethics and entrepreneurship; an opportunity-based look at the relation between ethics and entrepreneurship	After reviewing the literature on relation between ethics and entrepreneurship (entrepreneurial ethics, social entrepreneurship, and entrepreneurship and society), in order to better understand this relationship, made a comparison between two apparently unrelated subjects, and finally introduced ethics as a framework through which entrepreneurship creates values congruent with society's needs and ensures long-term growth and development
Amini et al. (2012)	Introducing a magical triangle of role of ethics in creative businesses	The researchers examined ethics with a focus on entrepreneurial ethics and the relation between them, and examined the relation and interaction of ethics and entrepreneurship and to examine the effect of each aspect of

(continued)

Table 1 (continued)

Authors	Research title	Results
		entrepreneurship (social entrepreneurship, entrepreneurial ethics, and entrepreneurship and society) and offered a comprehensive model of factors forming and influencing these aspects (Amini et al. 2012)
Qawamipour and Hashemi Golpayegani (2010)	Entrepreneurship and ethics	They focused on entrepreneurial ethics on micro level as well as examining the effects of specific ethical effects created in society by entrepreneurs and through entrepreneurship (Qawamipour and Hashemi Golpayegani 2010)
Brenkert (2009)	Innovation, breaking the rules and entrepreneurial ethics	In this study, a characteristic of entrepreneurial ethics, namely defiance of rules and moral pressures created by law-breaking entrepreneurs is examined and in the end, the researcher suggests that entrepreneurial ethics shouldn't be viewed from the angle of rules of fashion, and proposes an ethical decision-making model which goes beyond focusing on compliance with laws and focuses on understanding various personalities, businesses and societies in which entrepreneur is situated
Bryant (2009)	Self-regulation and ethical awareness among entrepreneurs	In this mixed-method study, the effects of cognitive factors on moral awareness of some entrepreneurs and complex relations between social cognitive stimuli and sensitivity towards ethical issues. The results showed that entrepreneurs with their characteristics and better control have higher awareness of ethics which leads to an emphasis among them on personal integrity and interpersonal trust. And entrepreneurs with different degrees of self-control have different intention and attitudes towards ethical awareness

(continued)

Table 1 (continued)

Authors	Research title	Results
Dunham et al. (2008)	Entrepreneurship wisdom: combination of ethical dimensions	In this study, in order to collect a single framework of entrepreneurial activity and decision-making, the researchers claimed that the necessary qualities of a successful entrepreneur are imagination, creativity, innovation, and discretion, all necessary systematically and theoretically for decision-making. So it was concluded that ethics and entrepreneurship are closely correlated
Buchholz and Rosenthal (2005)	The spirit of entrepreneurship and quality resulting from ethical decision-making: towards a unified framework	In this study, in order to compile a unified framework for entrepreneurial activity and ethical decision making, the researchers claimed that the necessary characteristics for successful entrepreneurship are imaginativeness, creativity, innovation, and discretion, all systematically and theoretically essential for ethical decision-making, so it can be said that ethics and entrepreneurship are closely related

4 Research Methodology

4.1 Purpose of the Study

The present study has a practical goal and since the effects of business ethics on entrepreneurial are being studied without intervention by the researcher, it uses a correlation methodology. In compilation of the related literature, background and operational definition of research keywords, the library and documentary method was used. In addition, data was collected through studying texts, articles, books, reports, journals, and studies done on business ethics as well as entrepreneurial attitude, through note-taking and tables and figures. The topic of the study covers ethics and entrepreneurship and the location included various managerial levels of the telecom companies in Iran including senior middle and operational managers. Since the main aim of the present study is to examine the effects of business ethics on entrepreneurial attitude of managers, the question posed here is: Does business ethics affect managers' entrepreneurial attitude?

4.2 Statistical Population and Sampling

The statistical population of this study included all senior, middle, and operational managers of telecom companies. These companies offer landline, cell phone, DSL and data services for both home users and governmental and public institutions, as well as businesses, with the aim of providing appropriate publicly needed communications, offering various ICT services, and an emphasis on maximum value creation for stakeholders all across the province. The total number of staffs of these companies is around 1000, of which almost 100 are managers. Since the senior, middle, and operational managers form around a tenth of all the staff, the census method was employed for sampling in this study.

4.3 Conceptual Model

With regards to the research literature and other models presented, the conceptual model of the present study is shown in the Fig. 2.

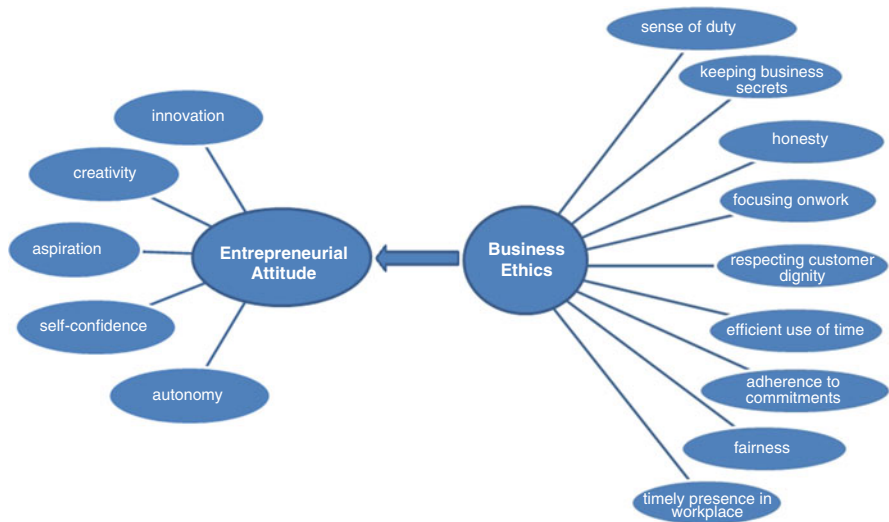


Fig. 2 Conceptual model of the study

4.4 Research Variables

Business ethics refers to a set of do's and don'ts which the employees of an organization (society) must follow in order to fully realize the qualitative and quantitative work outcomes they are committed to (Key and Popkin 1998). Ethics in workplace can be defined as: doing what in the workplace is right or wrong (Chidi et al. 2012). Entrepreneurial Attitude can be defined as personal orientation towards value-adding activities in future and self-employment in small businesses (Burger et al. 2005). In fact, entrepreneurial attitude, engages the individual in entrepreneurship (Shariff and Basir Saud 2009). Research variables are defined as follows (Table 2):

Table 2 Research variables

	Variable	Description
Business ethics	Sense of duty	Responsibility and commitment a person has towards him/herself (beliefs, values, job duties, and family) (Blunkett 2003). Sense of duty often refers to some type of relation between people and their environment. In terms of individual-organization relations, sense of duty has to do with accountability. In people's sense of duty, their attitude towards their actions also constitutes a part of their response and this response may be put to question (Fisscher and Nijhof 2005)
	Keeping business secrets	To observe ethics it is imperative that business owners avoid revealing confidential information relating to orders, deals, contracts, and working methods
	Respecting customer dignity	Respecting the customers by being punctual, trustworthy and polite (Ironkwe and Promise 2015)
	Honesty	Telling the truth, not lying, avoiding cheating or theft, which lead to attracting more customers (Ironkwe and Promise 2015)
	Adherence to commitments	Commitment means an attitude or orientation towards the organization which connects an individual to the organization (Gautam et al. 2004). Commitment in workplace is still one of the most elusive concepts to define for research (Sowmya and Panchanatham 2011)
	Fairness	Consists of viewing everybody as equal and on the same level, on the basis of which everybody will have equal rights due to their being equal (Ikeme 2003) Fairness usually materializes in interpersonal relations and comparisons people make between what they have given and taken with those of others (McDermott et al. 2013)

(continued)

Table 2 (continued)

	Variable	Description
Entrepreneurial Attitude	Innovation	Innovation is seen as an idea or behavior related to a product (Furnham and Bachtiar 2008)
	Creativity	Creativity includes both generativeness (ability to create ideas) and initiative (novel and unordinary responses) (Furnham and Bachtiar 2008)
	Aspiration	Consists of tendency towards doing difficult tasks
	Self-confidence	It is the ongoing evaluation and judgment an individual makes about himself (Crocker and Park 2004)
	Autonomy	It is seen as the vital dimension of entrepreneurial attitude and means that individuals or working teams (Crocker and Park 2004)

Table 3 Cronbach’s alpha of reliability coefficient

Reliability Statistics	
Cronbach’s alpha	N of items
0.937	71

4.5 Data Collection and Analysis

To gather the initial data which consisted of respondents’ answers regarding study variables a field research approach was adopted and a standard questionnaire was used. The questionnaire uses ordinal scale and includes 71 questions compiled in three parts. The first part consisted of demographic questions and included six questions. In the second part the effectiveness of the business ethics elements including 43 questions were evaluated, and the third part dealt with to how extent entrepreneurial attitudes of managers can be influenced, with consisted of 28 questions. The scale of measurement employed was the Likert scale. After data collection phase, multiple linear regression and path analysis using SPSS 22 were carried out to test the hypothesis.

4.6 Validity and Reliability of Questionnaire

To ensure the reliability of the questionnaire Cronbach’s alpha reliability coefficient was determined using SPSS 22. As shown in Table 3 the alpha coefficient of the present study is 0.937 which equals the standard amount and confirms the reliability of the questionnaire. The validity of the questionnaire was confirmed by a number of field experts (expert validity).

5 Results

Descriptive statistics and the information related to the statistical population's demographic information is summarized in the Table 4.

According to the table above we realize that 86.9% of respondents have graduate or higher degrees, and since 71.7% of respondents have 10 years or more of experience working in the telecom companies, it can be concluded that they are well familiar with the organizational culture, and this high level of familiarity positively affects the validity of the responses in this study and can guarantee its quality level to a great extent. In this study, the linear correlation between a set of independent variables and a dependent variable using a multivariate linear regression was examined. We will examine the outputs of the effectiveness of aspects of business ethics as the independent variable on the dependent variable, namely entrepreneurial attitude in the Table 5. As the initial output, the dependent variable of entrepreneurial attitude based on nine independent variables is analyzed and a regression model and the Enter method have been used.

Table 4 Demographic information

		Frequency	%	Valid %	Cumulative %
Sex	Female	49	48.5	49.0	49.0
	Man	51	50.5	51.0	100.0
Age	Less than 35	26	25.7	26.0	26.0
	35–45 years	55	54.5	55.0	81.0
	45–60 years	18	17.8	18.0	99.0
	More than 60	1	1.0	1.0	100.0
Marital status	Single	21	20.8	21.0	21.0
	Married	79	78.2	79.0	100.0
Level of education	Diploma	3	3.0	3.0	3.0
	Associate degree	10	9.9	10.0	13.0
	Bachelors	52	51.5	52.0	65.0
	Masters/higher	35	34.7	35.0	100.0
Type of employment	Contractual	63	62.4	63	63
	Official	37	36.6	37	100.0
Work experience	Less than 10	28	27.7	28.0	28.0
	10–20	52	51.5	52.0	80.0
	20–30	19	18.8	19.0	99.0
	More than 30	1	1.0	1.0	100.0

Table 5 Summary of model

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.789 ^a	0.623	0.585	0.27882

^aPredictors: (Constant), The timely, honesty, secrecy, focusing on work, efficient use of time, accountability, fairness, dignity customer, adherence to obligations

Table 6 ANOVA

ANOVA ^a						
Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	11.558	9	1.284	16.520	.000 ^b
	Residual	6.997	90	0.078		
	Total	18.555	99			

^aDependent variable: entrepreneurial attitude

^bPredictors: (Constant), the timely, honesty, secrecy, focusing on work, efficient use of time, accountability, fairness, dignity customer, adherence to obligations

Table 7 Coefficients

Model		Coefficients ^a				t	Sig.
		Unstandardized coefficients		Standardized coefficients			
		B	Std. error	Beta			
1	(Constant)	1.725	0.395			4.368	0.000
	Accountability	-0.010	0.083	-0.009		-0.122	0.903
	The timely	-0.087	0.053	-0.133		-1.633	0.106
	Fairness	0.080	0.049	0.141		1.633	0.106
	Secrecy	-0.132	0.064	-0.153		-2.076	0.041
	Adherence to obligations	0.203	0.059	0.343		3.453	0.001
	Efficient use of time	0.205	0.053	0.289		3.852	0.000
	Dignity customer	0.192	0.049	0.337		3.933	0.000
	Focusing on work	0.178	0.055	0.227		3.205	0.002
	Honesty	-0.031	0.017	-0.134		-1.847	0.068

^aDependent variable: entrepreneurial attitude

Table 5 shows the summary of the model. The amount of correlation (R) is 0.789, which shows there is a relatively powerful correlation between independent variables and the dependent variable (entrepreneurial attitude). But the adjusted R-square which equals 0.585, shows that 58.5% of the variation of entrepreneurial attitude among relevant organizations, depends on the nine independent variables mentioned in this equation. In other words, the set of independent variables, predicts half of the variance of entrepreneurial attitude.

Due to the significance of F value in Table 6 (16.520) at the level of 0.01, we can conclude that the regression model of study composed of nine independent variables and one dependent variable (entrepreneurial attitude) is a desirable model and the collection of independent variables can determine the variation in entrepreneurial attitude.

Table 7, due to the standardized regression coefficients, namely beta coefficient, and the significance level of 0.05, shows which of one the independent variables directly and significantly affect the dependent variable of entrepreneurial attitude

and which ones do not. The beta coefficient shows that adherence to commitments, with a value of 0.343, has the highest effect on entrepreneurial attitude and the existing relationship is direct and meaningful. Also variables of sense of duty, timely presence in workplace, honesty and fairness do not have a significant relationship with the variable of entrepreneurship due to significance levels being higher than 0.05. And the variable of keeping business secrets has a negative effect on entrepreneurial attitude.

5.1 Path Analysis

The aim of this study is to examine the effect of business ethics on managers' entrepreneurial attitude. In this study, based on the theoretical conceptual model, there are nine independent variables (ethics dimensions) and five dependent variables (as dimensions of entrepreneurship). Then, using multivariate linear regression and with the help of the table of coefficients and beta coefficient, path analysis was carried out eventually the experiential model of the study was drawn.

Stage 1: examining the effect of independent variables → innovation

To interpret the results above, standardized regression coefficients (Beta) were used. According to the Table 8, the variable of adherence to commitments with a beta coefficient of 0.257, has the biggest effect on innovation. Therefore, token, an increase of one standard deviation in adherence to commitments variable, will result in 0.257 standard deviation rise in innovation variable, and conversely, a decrease of one standard deviation in adherence to commitments results in 0.257 standard deviation point decrease in innovation. It should also be noted that variables with significance levels of above 0.05 ($\text{sig} > 0.05$), do not have a meaningful effect on innovation variable. According to standardized regression coefficients, the graph of factors affecting innovation is drawn as follows (Fig. 3):

Stage 2: examining the effect of independent variables → creativity

According to the Table 9, the variable of efficient use of time, with a beta of 0.314, has the biggest effect on the creativity variable. Based on this result, an increase of one standard deviation in the efficient use of time, creativity goes up by 0.314 standard deviation. Conversely, with a decrease of one standard deviation in efficient use of time, there will be 0.314 standard deviation point reduction in the variable of creativity. According to the standardized regression coefficients, the graph of factors affecting creativity was drawn as follows (Fig. 4):

Stage 3: Examining the effect of independent variables → aspiration

According to the Table 10, the respect for customer dignity variable, with a beta of 0.337, has the biggest effect on the aspiration variable. Based on this result, with an increase of one standard deviation in the respect for customer dignity variable, aspiration rises by 0.337 standard deviation point. Conversely, with a decrease of one standard deviation in respect for customer dignity, there will be a 0.337 standard deviation point fall in the variable of aspiration. According to the

Table 8 Effect of independent variables on innovation

Model		Coefficients ^a				t	Sig.
		Unstandardized coefficients		Standardized coefficients			
		B	Std. error	Beta			
1	(Constant)	1.019	0.603			1.690	0.095
	Accountability	0.243	0.127	0.175		1.914	0.059
	Secrecy	-0.066	0.097	-0.062		-0.680	0.498
	Honesty	0.020	0.026	0.068		0.753	0.453
	Focusing on work	0.173	0.085	0.180		2.045	0.044
	Dignity customer	0.161	0.075	0.229		2.153	0.034
	Efficient use of time	0.145	0.081	0.167		1.793	0.076
	Adherence to obligations	0.186	0.090	0.257		2.077	0.041
	Fairness	0.095	0.075	0.136		1.264	0.210
	The timely	-0.151	0.081	-0.187		-1.850	0.068

^aDependent variable: innovation

Fig. 3 Factors affecting innovation



standardized regression coefficients, the graph of factors affecting aspiration was drawn as follows (Fig. 5):

Stage 4: examining the effect of independent variables → self-confidence

According to the Table 11, the focus on work variable, with a beta of 0.354, has the largest effect on the self-confidence variable. Based on this result, an increase of one standard deviation in the focus on work variable, leads to a rise of 0.354 standard deviation point in self-confidence. Conversely, with a decrease of one standard deviation in focus on work, there will be a 0.354 standard deviation point fall in the variable of self-confidence. According to the standardized regression coefficients, the graph of factors affecting self-confidence was drawn as follows (Fig. 6):

Stage 5: examining the effect of independent variables → autonomy

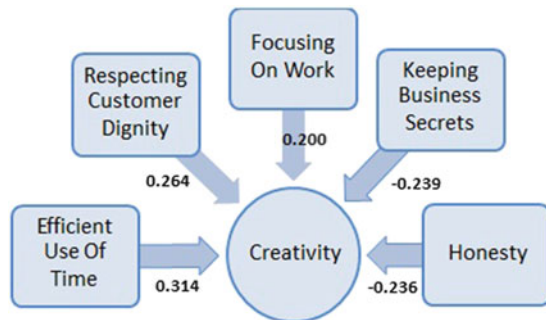
According to the Table 12, adherence to commitments variable, with a beta of 0.427, has the largest effect on the autonomy variable. Based on this result, an

Table 9 Effect of independent variables on creativity

Model		Coefficients ^a			t	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
1	(Constant)	1.893	0.616		3.071	0.003
	Accountability	-0.023	0.130	-0.016	-0.177	0.860
	Secrecy	-0.268	0.099	-0.239	-2.694	0.008
	Honesty	-0.071	0.026	-0.236	-2.697	0.008
	Focusing on work	0.202	0.086	0.200	2.336	0.022
	Dignity customer	0.195	0.076	0.264	2.556	0.012
	Efficient use of time	0.287	0.083	0.314	3.468	0.001
	Adherence to obligations	0.140	0.092	0.183	1.530	0.129
	fairness	0.110	0.077	0.148	1.424	0.158
	The timely	-0.028	0.083	-0.033	-0.336	0.738

^aDependent variable: creativity

Fig. 4 Factors affecting creativity



increase of one standard deviation in the adherence to commitments variable, results in a rise of 0.427 standard deviation point in autonomy. Conversely, a decrease of one standard deviation in adherence to commitments, leads to a 0.427 standard deviation point decrease in the variable of autonomy. According to the standardized regression coefficients, the graph of factors affecting autonomy was drawn as follows (Fig. 7):

After examining the beta coefficients obtained in previous stages, the size of effects of independent variables on dependent variables were determined and shown according to priority as below:

Priority	I.V.	Beta	D.V. affected
1st priority	Respecting customer dignity	1.147	Innovation, creativity, aspiration, self-confidence
2nd priority	Adherence to commitments	0.962	Innovation, self-confidence, autonomy
3rd priority	Adherence to commitments	0.962	Innovation, creativity, aspiration, self-confidence

Table 10 Effect of independent variables on aspiration

Model		Coefficients ^a			t	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
1	(Constant)	2.038	0.623		3.273	0.002
	Accountability	-0.165	0.131	-0.120	-1.256	0.212
	Secrecy	-0.112	0.100	-0.106	-1.114	0.268
	Honesty	-0.022	0.027	-0.077	-0.827	0.410
	Focusing on work	0.218	0.087	0.228	2.492	0.015
	Dignity customer	0.234	0.077	0.337	3.043	0.003
	Efficient use of time	0.113	0.084	0.131	1.353	0.179
	Adherence to obligations	0.088	0.093	0.121	0.945	0.347
	Fairness	0.046	0.078	0.067	0.595	0.553
	The timely	0.077	0.084	0.096	0.914	0.363

^aDependent variable: achievement

Fig. 5 Factors affecting aspiration



According to the identified priorities in the table above, the path analysis process continues below.

Stage 6: examining the effect of independent variables → customer dignity

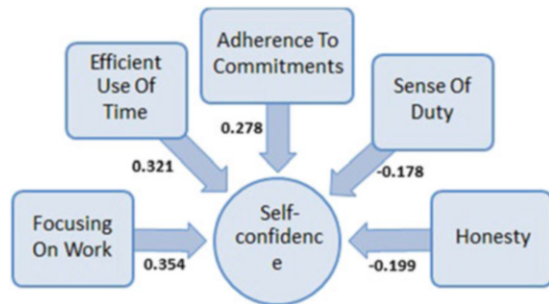
Since the respect for customer dignity variable has the biggest effect on dimensions of entrepreneurship (especially innovation, creativity, aspiration and

Table 11 Effect of independent variables on self-confidence

Model		Coefficients ^a			t	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
1	(Constant)	1.720	0.515		3.339	0.001
	Accountability	-0.232	0.109	-0.178	-2.137	0.035
	Secrecy	0.043	0.083	0.043	0.514	0.609
	Honesty	-0.054	0.022	-0.199	-2.428	0.017
	Focusing on work	0.320	0.072	0.354	4.429	0.000
	Dignity customer	0.077	0.064	0.116	1.202	0.233
	Efficient use of time	0.262	0.069	0.321	3.789	0.000
	Adherence to obligations	0.190	0.077	0.278	2.477	0.015
	Fairness	0.067	0.064	0.102	1.046	0.298
	The timely	-0.051	0.070	-0.067	-0.737	0.463

^aDependent variable: self confidence

Fig. 6 Factors affecting self-confidence



autonomy), in this stage the respect for customer dignity variable is assumed as the dependent variable and other variables are assumed as independent variables.

According to the Table 13, only the adherence to commitments variable, with a beta of 0.431, affects respect for customer dignity variable. According to standardized regression coefficients, the graph of factors affecting respect for customer dignity is as follows (Fig. 8):

Stage 7: examining the effect of independent variables → adherence to commitments

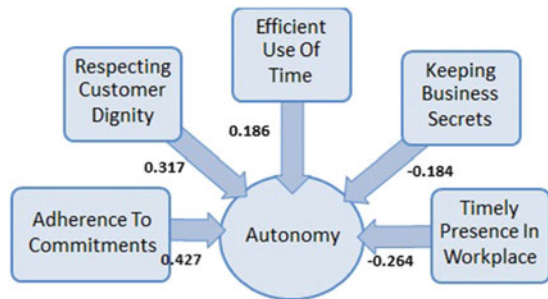
According to the Table 14, the fairness variable, with a beta of 0.466, has the biggest effect on the adherence to commitments variable. And the sense to duty variable has a negative effect on adherence to commitments. According to standardized regression coefficients, the graph of factors affecting adherence to commitments is as follows (Fig. 9):

Table 12 Effect of independent variables on autonomy

Model		Coefficients ^a				Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta	t	
1	(Constant)	1.954	0.800		2.442	0.017
	Accountability	0.126	0.169	0.069	0.747	0.457
	Secrecy	-0.258	0.129	-0.184	-1.999	0.049
	Honesty	-0.029	0.034	-0.076	-0.840	0.403
	Focusing on work	-0.025	0.112	-0.020	-0.224	0.823
	Dignity customer	0.294	0.099	0.317	2.972	0.004
	Efficient use of time	0.214	0.108	0.186	1.991	0.050
	Adherence to obligations	0.410	0.119	0.427	3.444	0.001
	Fairness	0.084	0.100	0.091	0.842	0.402
	The timely	-0.282	0.108	-0.264	-2.614	0.010

^aDependent variable: independence

Fig. 7 Factors affecting autonomy



Stage 8: examining the effect of independent variables → focus on work

According to the Table 15, only the keeping the business secrets variable, with a beta of 0.247, affects the focus on work variable. According to standardized regression coefficients, the graph of factors affecting focus on work is as follows (Fig. 10):

Stage 9: examining the effect of independent variables → entrepreneurial attitude

At this stage after calculating the means of dimensions of entrepreneurial attitude values, the effect of all independent variables on the entrepreneurial attitude variable is examined.

According to the Table 16, the variable of adherence to commitments with a beta coefficient of 0.343, has the biggest effect on the dependent variable of entrepreneurial attitude. Also variables of sense of duty, timely presence at work, honesty and fairness, duo to significance levels of above 0.05 (sig > 0.05), do not have a

Table 13 Effect of independent variables on respect for customer dignity

Model		Coefficients ^a			t	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
1	(Constant)	-0.752	0.844		-0.891	0.376
	Accountability	0.238	0.177	0.120	1.347	0.181
	Secrecy	0.103	0.136	0.068	0.756	0.451
	Honesty	-0.013	0.036	-0.033	-0.370	0.713
	Focusing on work	0.136	0.118	0.099	1.154	0.251
	Efficient use of time	-0.128	0.113	-0.104	-1.135	0.259
	Adherence to obligations	0.447	0.117	0.431	3.821	0.000
	Fairness	0.160	0.104	0.160	1.534	0.129
	The timely	0.143	0.114	0.124	1.262	0.210

^aDependent variable: dignity customer

Fig. 8 Factors affecting respect for customer dignity



Table 14 Effect of independent variables on adherence to commitments

Model		Coefficients ^a			t	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
1	(Constant)	1.171	0.742		1.578	0.118
	Accountability	-0.340	0.154	-0.178	-2.213	0.029
	Secrecy	0.116	0.121	0.079	0.961	0.339
	Honesty	0.114	0.030	0.287	3.767	0.000
	Focusing on work	0.052	0.105	0.039	0.492	0.624
	Efficient use of time	-0.103	0.100	-0.086	-1.025	0.308
	Fairness	0.449	0.080	0.466	5.585	0.000
	The timely	0.402	0.092	0.362	4.373	0.000

^aDependent variable: adherence to obligations

Fig. 9 Factors affecting adherence to commitments

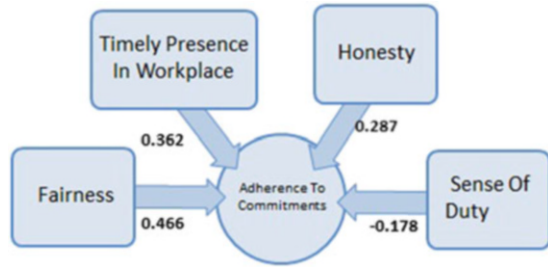
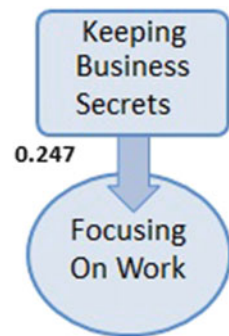


Table 15 Effect of independent variables on focus on work

Model		Coefficients ^a			t	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
1	(Constant)	1.930	0.717		2.691	0.008
	Accountability	0.031	0.156	0.022	0.199	0.843
	Secrecy	0.273	0.117	0.247	2.336	0.022
	honesty	0.036	0.032	0.122	1.142	0.256
	Efficient use of time	0.055	0.100	0.061	0.553	0.582
	Fairness	0.037	0.092	0.051	0.401	0.689
	The timely	0.059	0.100	0.070	0.589	0.557
	Adherence to obligations	0.051	0.103	0.067	0.492	0.624

^aDependent variable: focusing on work

Fig. 10 Variables affecting focus on work



meaningful correlation with entrepreneurial attitude variable, and the keeping business secrets variable has a negative effect on entrepreneurial attitude. The size of effects of independent variables on entrepreneurial attitude are shown in the Table 17 according to their priorities.

Table 16 Effect of independent variable on entrepreneurial attitude

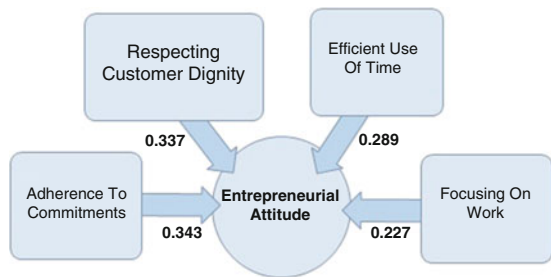
Model		Coefficients ^a			t	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
1	(Constant)	1.725	0.395		4.368	0.000
	accountability	-0.010	0.083	-0.009	-0.122	0.903
	The timely	-0.087	0.053	-0.133	-1.633	0.106
	Fairness	0.080	0.049	0.141	1.633	0.106
	Secrecy	-0.132	0.064	-0.153	-2.076	0.041
	Adherence to obligations	0.203	0.059	0.343	3.453	0.001
	Efficient use of time	0.205	0.053	0.289	3.852	0.000
	Dignity customer	0.192	0.049	0.337	3.933	0.000
	Focusing on work	0.178	0.055	0.227	3.205	0.002
	Honesty	-0.031	0.017	-0.134	-1.847	0.068

^aDependent variable: entrepreneurial attitude

Table 17 Effectiveness priorities of independent variables on entrepreneurial attitude

Priority influence	Independent variable	Beta coefficient
First priority	Adherence to commitments	0.343
The second priority	Respecting customer dignity	0.337
The third priority	Efficient use of time	0.289
The fourth priority	Focusing on work	0.227
The fifth priority	Keeping business secrets	-0.153

Fig. 11 Factors affecting entrepreneurial attitude



According to standardized regression coefficients, the graph of factors affecting the entrepreneurial attitude variable is as follows (Figs. 11, 12, 13, 14, 15 and 16):

The direct and indirect effects of independent variables → innovation

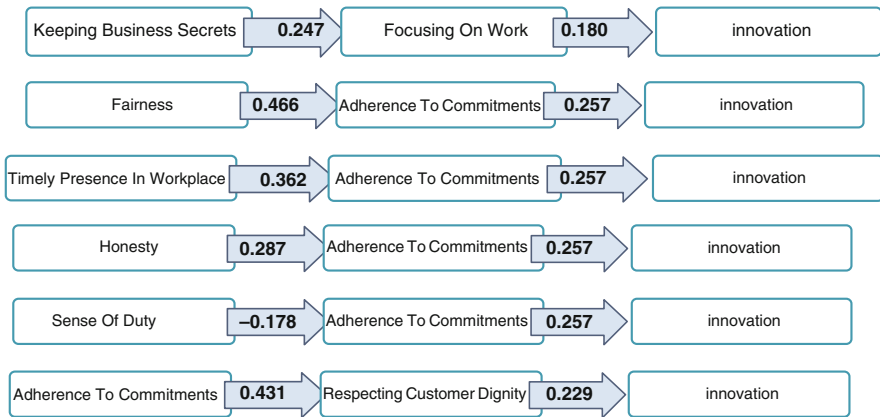


Fig. 12 Indirect relationships with innovation

The direct and indirect effects of independent variables → creativity

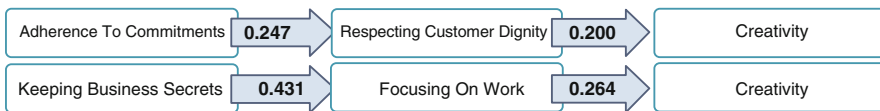


Fig. 13 Indirect correlations with creativity

After calculating the direct and indirect effect of variables, the tables below were obtained:

Independent Variables	Direct Effect	Indirect Effect	The Total Effect
Sense Of Duty	0.175	-0.045746	0.129254
Keeping Business Secrets	----	0.04446	0.04446
Honesty	----	0.073759	0.073759
Focusing On Work	0.180	----	0.180
Respecting Customer Dignity	0.229	----	0.229
Efficient Use Of Time	----	----	----
Adherence To Commitments	0.257	0.098699	0.35699
Fairness	----	0.119762	0.119762
Timely Presence In Workplace	----	0.093034	0.093034

Independent Variables	Direct Effect	Indirect Effect	The Total Effect
Sense Of Duty	----	----	----
Keeping Business Secrets	-0.239	0.0494	-0.1896
Honesty	-0.236	----	-0.236
Focusing On Work	0.200	----	-0.200
Respecting Customer Dignity	0.264	----	0.264
Efficient Use Of Time	0.314	----	0.314
Adherence To Commitments	----	0.113784	0.113784
Fairness	----	----	----
Timely Presence In Workplace	----	----	----

The direct and indirect effects of independent variables → Aspiration

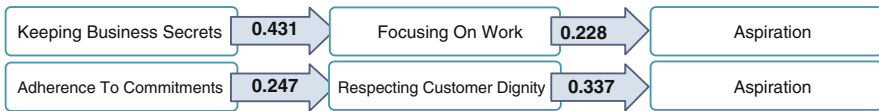


Fig. 14 Indirect correlations with aspiration

Independent Variables	Direct Effect	Indirect Effect	The Total Effect
Sense Of Duty	----	----	----
Keeping Business Secrets	----	0.098268	0.098268
Honesty	----	----	----
Focusing On Work	0.228	----	0.228
Respecting Customer Dignity	0.337	----	0.337
Efficient Use Of Time	----	----	----
Adherence To Commitments	----	0.083239	0.083239
Fairness	----	----	----
Timely Presence In Workplace	----	----	----

The direct and indirect effects of independent variables → Self-Confidence

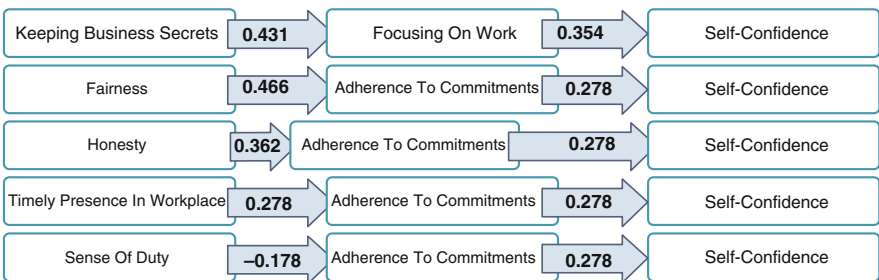


Fig. 15 Indirect correlations with self-confidence

Independent Variables	Direct Effect	Indirect Effect	The Total Effect
Sense Of Duty	-0.178	-0.049484	-0.227484
Keeping Business Secrets	----	0.152574	0.152574
Honesty	-0.199	0.079786	-0.119214
Focusing On Work	0.354	----	0.354
Respecting Customer Dignity	----	----	----
Efficient Use Of Time	0.321	----	0.321
Adherence To Commitments	0.278	----	0.278
Fairness	----	0.129548	0.129548
Timely Presence In Workplace	----	0.100636	0.100636

The direct and indirect effects of independent variables → Autonomy

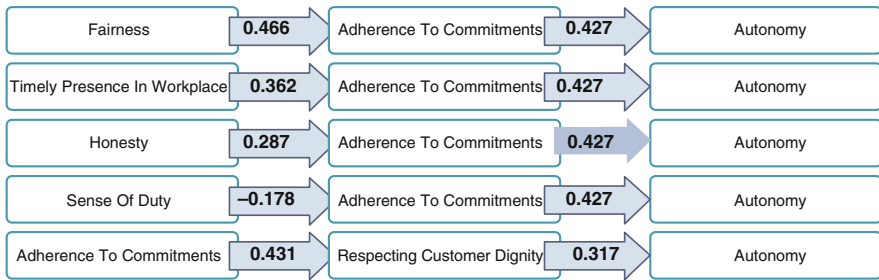


Fig. 16 Indirect correlations with autonomy

Independent Variables	Direct Effect	Indirect Effect	The Total Effect
Sense Of Duty	----	-0.076006	-0.076006
Keeping Business Secrets	-0.184	----	-0.184
Honesty	----	0.122549	0.122549
Focusing On Work	----	----	----
Respecting Customer Dignity	0.317	----	0.317
Efficient Use Of Time	0.186	----	0.186
Adherence To Commitments	0.427	0.136627	0.563627
Fairness	----	0.198982	0.198982
Timely Presence In Workplace	-0.264	0.154574	-0.109426

At the end, after concluding the results obtained from previous stages, the significant correlations with a weight of above 0.3 are offered as the experimental model of effect of ethics on entrepreneurial attitude in the Fig. 17.

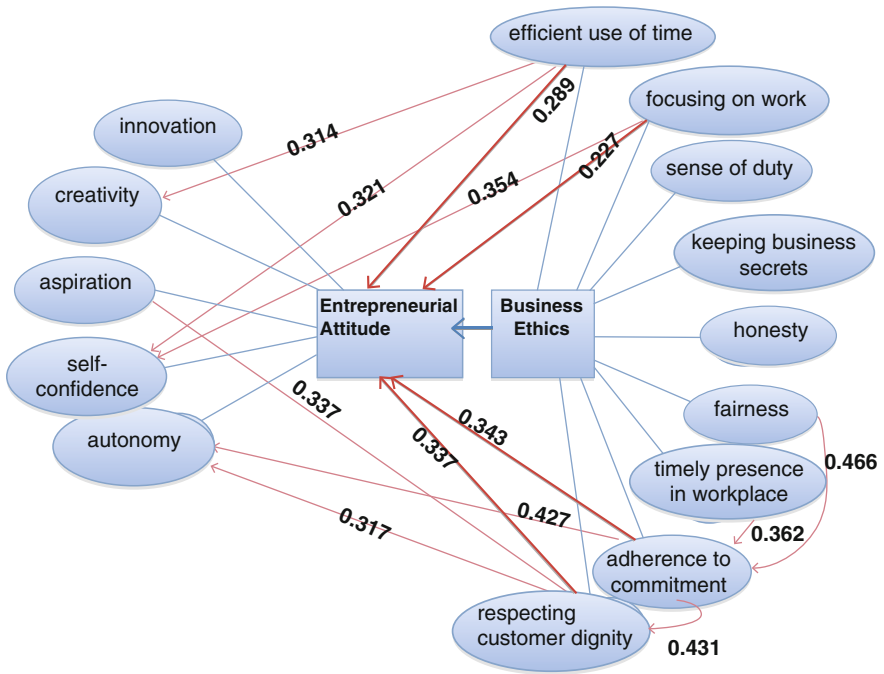


Fig. 17 The experimental model of the study

6 Discussion and Conclusion

The aim of this study is to examine the relation between business ethics and entrepreneurial attitude of managers. The research data were collected through distribution of researcher-made questionnaires, the reliability and validity of which were confirmed. Then, using multivariate linear regression and analysis using SPSS 22 software, the effects of all dimensions of business ethics as independent variables on dimensions of entrepreneurial attitude dimensions as dependent variables were examined. The amount of effect on each one of the dimensions was obtained using standardized regression (beta) coefficients, and the following results were reached. According to the findings, there is a significant relationship between business ethics and different dimensions of entrepreneurial attitude, according to the research findings, business ethics affect entrepreneurial attitude to a great extent. The findings of this research are in full agreement with the findings of Chell et al. (2016), Zulkifli et al. (2015), Ironkwe and Promise (2015), Staniewski et al. (2015), Witte (2014), Harris et al. (2011), Dunham et al. (2008), Fateh Rad et al. (2015), Amini et al. (2012), and Qawamipour and Hashemi Golpayegani (2010). The factor with the largest effect on entrepreneurial attitude is adherence to commitments and afterwards respects for customer dignity, efficient use of time, and focus on work, respectively, greatly and positively affect entrepreneurial attitude. The findings if this study are congruent with the findings of Azmi (2010) as well as Miller et al. (2002) which introduced the indices of presence of business ethics as: peace at work, focus on work, efficient use of time, hard work, self-reliance and fairness. After calculating beta coefficients and significance levels, it was found that keeping business secrets, has a negative effect on entrepreneurial attitude, while sense of duty, honesty, fairness, and timely presence in workplace do not have significant correlations with entrepreneurial attitude. This is not in agreement with the findings of Barone and Tellis (2015) which introduces honesty, fairness, justice and so on as business ethical values and essential for the survival and success of companies.

Therefore, due to the importance of entrepreneurship in organizational development so much so that it can make up against many present challenges, managers are advised to make use of existing resources and encourage employees to have entrepreneurial attitude and behavior and implement their plans in order to improve organizational efficiency, regardless of inflexible and rigid rules. Organizational entrepreneurial attitude will entail synergistic effects on the long-term development of the organization in various social, economic, and cultural dimensions. In this respect, managers can establish units in the organization under the title “innovation unit” or “entrepreneurship unit”, support innovative and entrepreneurial employees, prepare the grounds for improving the methods and progress, and eventually materialize the mid to long term goals of the organization. As is obvious from the findings of the present as well as previous studies, various aspects of business ethics have considerable effect on entrepreneurial attitude. And since many variables including culture, familial situation, social welfare, environmental conditions,

economic, and social conditions and the like affect ethical perceptions and behaviors, it would be beneficial for managers to take measures to pay attention to these factors in their organizations so that since the moment of recruitment and entering into the organization, the employees commit themselves to ethics and genuinely believe that each ethical behavior is a step towards realizing organizational goals and objectives and it won't be overlooked by managers.

In this study, we also found that adherence to commitments positively affects respect for customer dignity. Fairness, timely presence in workplace, and honesty have positive effects and sense of duty has a negative effect on adherence to commitments. The keeping of business secrets variable positively affects focus of work. Thus, after identifying reasons leading to employee errors and reducing their motivation, managers can work on alleviating them so that besides a timely presence at work, employees can do their work with higher concentration and motivation. Since, in this study, the variables of innovation, creativity, aspiration, self-confidence and autonomy were considered as aspects of entrepreneurial attitude, after direct and indirect analysis of the nine dimensions of business ethics on each dimension of entrepreneurial attitude we found out that: Adherence to commitments, respect for customer dignity, focus on work, and sense of duty, keeping business secrets, fairness, timely presence in workplace, and honesty have positive effects on innovation. Innovation, due to its importance, also received attention in Ben Kurt's study. Efficient use of time, respect for customer dignity, focus on work and adherence to commitment, respectively, have the largest effect on creativity, while keeping business secrets and honesty have negative effects on it. Bushhuls and Rodental in a study titled: "the spirit of entrepreneurship and quality from ethical decision-making: towards a united framework" have expressed the importance of creativity in ethical decisions in organization. Since creativity and innovation are known as the most important indispensable factors and elements and contributors to entrepreneurship, and entrepreneurship is the basis and framework for organizational development, managers are advised to have comprehensive plans to identify employee creativity and to support them in order to guarantee the survival and avoid the breakdown of the organization, and in a way that through educational opportunities, the development and growth of individual employees and their creativity are facilitated. By developing and disseminating the culture of innovation and acceptance for change, removing working time limitations, eliminating unnecessary rules, boosting decentralized management and proper delegation of authority, managers can also prepare the grounds for emergence of creativity and innovation as well as much needed opportunities for professional growth among employees and facilitate expression of ideas and opinions, promotion on the basis of merits, fairness in appointments and dismissals, possibility of utilizing expertise and skills, organizational support against job threats, fewer concerns about permanent employment, and clarity about duties and powers of operators.

Respect for customer dignity, focus on work, keeping business secrets, and adherence to commitments have remarkable positive effects on aspiration. Factors affecting self-confidence are: focus on work, efficient use of time, adherence to

commitments, keeping of business secrets, fairness and timely presence in workplace as well as sense of duty and honesty which have negative effects. Also adherence to commitments, respect for customer dignity, efficient use of time, fairness, honesty and sense of duty have positive effects on autonomy, but keeping business secrets and timely presence in workplace have negative effects on it. Bryant (2009) too, in a study titled: “self-regulation and moral awareness among entrepreneurs” concluded that entrepreneurs with their own characteristics have a stronger control and higher awareness towards ethics and this leads to an emphasis on personal integrity. As is shown in this study, one important dimension affecting entrepreneurial attitude is the efficient use of time. We therefore suggest that subsequent studies focus on how to manage time, usage of techniques, timing and time-saving methods to improve the levels of entrepreneurial attitude and consequently efficiency of the organization.

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Effect of Competitiveness and Orientation to Export on Marketing Strategy of SMEs



Ali Salehi

Abstract This chapter provides a quantitative measurement of relationship between competitiveness and commitment of businesses in export, and the marketing strategy of SMEs by using correlation. The research population included all managers and experts in export department of SMEs who had a record of working with Ghadir Company, totaling 400 individuals. Using Cochran formula and Morgan table, the sample size was reduced to 200 subjects, who were primarily selected via multi-stage cluster sampling, and finally screened by random sampling. Results based on Pearson correlation coefficient showed that there is a positive relationship among “firms’ commitment to export” and “the degree of competitiveness” with “the marketing strategies of product, promotion, distribution and price”. Multivariate regression analysis further showed that firms’ orientation to export” and “the degree of competitiveness” has a significant, major effect on the marketing strategies of SMEs.

1 Introduction

This chapter reports results of a study on impact of competitiveness and export-orientation on the marketing strategy of SMEs. The four marketing strategies considered as dependent variables comprised Product strategy, Promotion strategy, Price strategy, Distribution strategy.

In today markets, competitiveness plays a key role in the survival of organizations, both at their domestic markets and overseas. SMEs practicing export should employ a sound assessment program in order to benefit from the advantage of

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competitiveness. Since export promotion plans are believed to result in a further rise in the export volume of SMEs, as juxtaposed to larger players, the export-oriented behavior of SMEs, as well as the factors affecting their marketing and market-orientation, could be crucial in improving their export performance (Ejrami et al. 2016).

Official figures show that Iran ranks 66 worldwide on “industrial competitiveness”, with Turkey, KSA, UAE and Qatar standing higher. Also, as to “industrialization”, Iran’s stands at 48 among 144 states, with S. Korea leading and China ranking 4th. Additionally, the World Bank, in its “Doing Business 2017” report which compares 190 countries on ease of practicing business and the business environment, placed Iran 3 steps lower worldwide at 120, compared to its previous report. Also, on “global competitiveness”, the country went down two grades, to 76 (Central Bank of IRI 2017).

Amid the unfolding domestic competition and privatization, Iranian firms seem to suffer from lack of plans essential for managing the degree of competitiveness in export and its effect on marketing strategies. Adopting a descriptive-analytic approach, the study investigated the two latter issues regarding SMEs, measuring the relevant effect in each case.

2 Conceptual Framework

SME growth and success is viewed as key issues in economy. In Finland, considerable effort has been put to internationalization of SMEs as a way to grow. The Forest sector is particularly heterogeneous, while in some industries the domestic market will not grow (for example, furniture sector) and, in turn, innovations in other industries facilitate the transition toward international markets (for example in bioenergy).

Complex and rapid changes over the past few decades, and the acceleration in globalization have forced nations to further prepare for the upcoming change. Running large firms would be considered an advantage up to a few decades ago, claiming they would bring about a more dynamic and powerful economy. However, despite the emergence of large corporations over that period, recent changes, particularly round the clock innovations, the further complication of management and decision-making processes and a need to arrive at instant, urgent decisions, as well as the piling up of experiences from SMEs, is placing them at the fore.

SMEs are practically on top of agenda in many developed countries. With smaller capitals needed, yields from SMEs are higher; yet, in creating jobs, their role is prominent, as well as in paving the ground for innovation, invention and export promotion. Experts seem to be in consensus that SMEs create most of the job opportunities, and although growth in gross national income is multifaceted, those enterprises’ role in the economic growth of their nations is quite conspicuous (Sajjadi and Jafari 2016).

SMEs’ significant role in producing wealth, creating jobs, reducing expenditures and shedding poverty has turned them into driving forces for resolving economic problems; for the same token, modern theories of economic development have shifted focus from macro to micro levels, considering economic development the result of a nation’s endeavor to provide a suitable business environment for SMEs’ operation. With such emphasis, figures worldwide indicate the prominence of SMEs in the growth of developed, as well as developing countries, creating almost in two of new jobs, while already having employed approximately half of the workforce (Swirsky 2004).

Reasonable investment on new technology is suggested to turn businesses into frontrunners within the boundaries of their industry sectors. Technology increases productivity, improves production quality and competitiveness, and lowers taxes and long term costs, among other advantages. Both large firms and SMEs may benefit from novel technology, and have practically shown a tendency toward such investment, in order to overcome obstacles on their paths and to achieve their business goals (Arabzad et al. 2013).

Whether the organization is operating in the entire or part of the market would cause a further variation in the strategies adopted. Among the innumerable sides of competitive advantage, two major aspects may be suggested as the common denominator, i.e. the firm’s “commitment to export” and “degree of export competitiveness”; in turn, they affect the marketing strategy picked by SMEs and shape their economic behavior.

As businesses are concerned with devising proper marketing strategies and developing and understanding of the issues affecting such planning, this study investigated the relation between “commitment to export” and “degree of export competitiveness” within the context of SMEs, using the model depicted in Fig. 1.

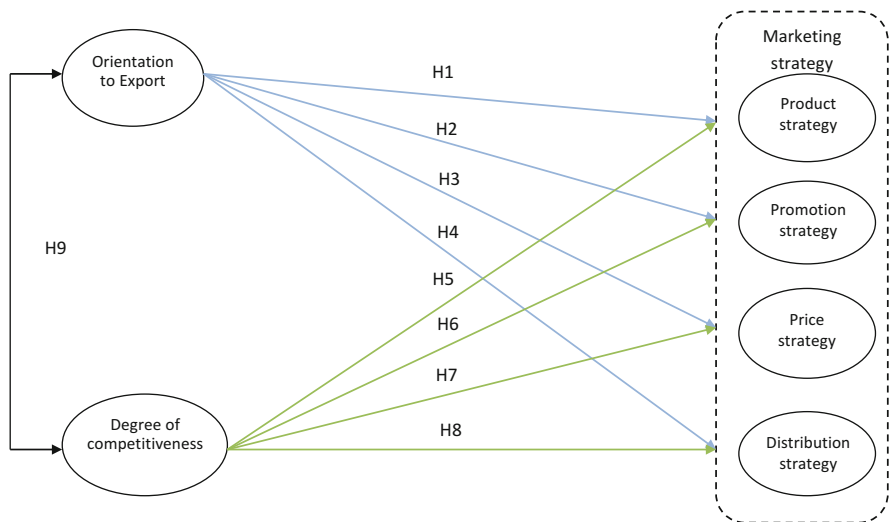


Fig. 1 Conceptual model

3 Research Hypotheses

Put simply, the hypotheses propose a relationship between each pair of factors (with hypothesis number coming in the end); i.e., there is a relationship between:

H1: *The firm's more orientation to export and the product strategy for the overseas market.*

H2: *The firm's more orientation to export and the promotion strategy for the overseas market.*

H3: *The firm's more orientation to export and the price strategy for the overseas market.*

H4: *The firm's more orientation to export and the distribution strategy for the overseas market.*

H5: *The export market's degree of competitiveness and the product strategy for the overseas market.*

H6: *The export market's degree of competitiveness and the promotion strategy for the overseas market.*

H7: *The export market's degree of competitiveness and the price strategy for the overseas market.*

H8: *The export market's degree of competitiveness and the distribution strategy for the overseas market.*

H9: *The firm's orientation to export and the export market's degree of competitiveness.*

4 Methodology

The study adopted a descriptive-analytic approach, using survey for data collection and correlation for data analysis. The population comprised all managers and talented experts in the export department of SMEs who had a record of working with Ghadir company, summing up to 400 people. Cochran formula and Morgan table, yielded 200 as the sample size.

Using a multi-stage cluster sampling, the primary sample was collected and via random sampling, the final sample was selected. To pick the managers and experts in each subsection, random sampling was used.

To ensure instrument validity, a questionnaire was distributed among some professors in the field and face validity was confirmed. Subsequently, content validity was tested by a sample of 15 experts in the field, confirming that the questionnaire was valid. Chronbach's alpha was then used to test the reliability of the questionnaire as the means of data collection. Actually, at first a group of 25 respondents filled in the questionnaires, and then Cronbach's alpha and SPSS software gave the calculation of internal consistency of the constructs relating to the indicators, and different scales in the questionnaires were measured, resulting respectively in some coefficients, namely for "product competitive strategic

variables”, 0.78, for “distribution competitive strategies”, 0.77, for “promotion competitive strategies”, 0.76, for “price competitive strategies”, 0.76, and the overall alpha for the entire instrument was 0.77. As noted, the questionnaire itself, and the various indicators within it, all enjoyed high levels of reliability and validity. However, some minor modifications were made next. For the analysis of statistical tests, Pearson correlation coefficient and multivariate regression analysis were used.

5 Findings

Descriptive results and findings are presented in Table 1.

Considering the results obtained from the above table, among the respondents, 91% were male, and 9% were female. 73.5% held a master’s degree, while 26.5% had a bachelor’s. 56.5% were 31–40 years of age, while 4% were 20–30; and 39.5% were above 41. While 16.5% had an executive job, 50.5% held an expert position, and only 33% were in managerial jobs. 12.5% had a work experience of 10–14 years, while 81.5% had 15 years of experience or more.

Table 1 Demographic characteristics of the respondents

Comments		Frequency	Percentage
Gender	Female	18	9
	Male	182	91
	Total	200	100
Level of education	Bachelor’s degree	53	26.5
	Master’s degree	147	73.5
	Total	200	100
Age	20–30	8	4
	31–40	113	56.5
	41 or older	79	39.5
	Total	200	100
Type of job	Managerial	66	33
	Executive	33	16.5
	Expert	101	50.5
	Total	200	100
Years of work experience	10–14	25	12.5
	15–20	75	37.5
	21–25	67	33.5
	26 or older	33	16.5
	Total	200	100

5.1 Analytic results

In order to measure the relationship between higher orientation of the firms to export and the strategies of price, promotion and distribution on the one hand, and on the other, the relationship between the degree of export market's competitiveness and above strategies, Pearson correlation test was conducted. Results are given in Table 2.

Hypothesis 1 *There's a relationship between the firm's more orientation to export and the product strategy for the overseas market.*

Based on Table 2 results, $r = 0.19$ and $\text{sig} = 0.01$, there's a correlation and positive/meaningful relationship at 99% degree of certainty and an error margin of less than 0.01%. Therefore, hypothesis 1 (H1) is verified and H0, which indicates the contrary is rejected. *So, as the firm's orientation to export increases, there should be a proportionate increase in the product strategy for the overseas market, and vice versa.*

Hypothesis 2 *There's a relationship between the firm's more orientation to export and the promotion strategy for the overseas market.*

Based on Table 2 results, $r = 0.49$ and $\text{sig} = 0.01$, there's a correlation and positive/meaningful relationship at 99% degree of certainty and an error margin of less than 0.01%. Therefore, hypothesis 2 (H2) is supported and H0, which indicates the contrary is rejected. *Hence, as the company's orientation to export increases, there should be a proportionate increase in the promotion strategy for the overseas market, and vice versa.*

Hypothesis 3 *There's a relationship between the firm's more orientation to export and the price strategy for the overseas market.*

Table 2 Results of Pearson correlation coefficient test

Variables	Correlation coefficient	Meaningfulness level (p)
Firm's more orientation to export—product strategy	0.19	0.01
Firm's more orientation to export—promotion strategy	0.49	0.01
Firm's more orientation to export—price strategy	0.54	0.01
Firm's more orientation to export—distribution strategy	0.53	0.01
Export market's competitiveness degree—product strategy	0.68	0.01
Export market's competitiveness degree—promotion strategy	0.60	0.01
Export market's competitiveness degree—price strategy	0.71	0.01
Export market's competitiveness degree—distribution strategy	0.56	0.01
Firm's more orientation to export—export market's competitiveness degree	0.46	0.01

Based on Table 2 results, $r = 0.54$ and $\text{sig} = 0.01$, there's a correlation and positive/meaningful relationship at 99% degree of certainty and an error margin of less than 0.01%. Therefore, hypothesis 3 (H3) is approved. So, H0, which indicates the contrary is rejected. *Hence, as the company's orientation to export increases, there should be a proportionate increase in the price strategy for the overseas market, and vice versa.*

Hypothesis 4 *There's a relationship between the firm's more orientation to export and the distribution strategy for the overseas market.*

Based on Table 2 results, $r = 0.53$ and $\text{sig} = 0.01$, there's a correlation and positive/meaningful relationship at 99% degree of certainty and an error margin of less than 0.01%. Therefore, hypothesis 4 (H4) is verified and H0, which indicates the contrary is rejected. *Hence, as the company's orientation to export increases, there should be a proportionate increase in the distribution strategy for the overseas market, and vice versa.*

Hypothesis 5 *There's a relationship between the export market's degree of competitiveness and the product strategy for the overseas market.*

Based on Table 2 results, $r = 0.68$ and $\text{sig} = 0.01$, there's a correlation and positive/meaningful relationship at 99% degree of certainty and an error margin of less than 0.01%. Therefore, hypothesis 5 (H5) is verified and H0, which indicates the contrary is rejected. *So, as export market's degree of competitiveness increases, there should be a proportionate increase in the product strategy for the overseas market, and vice versa.*

Hypothesis 6 *There's a relationship between the export market's degree of competitiveness and the promotion strategy for the overseas market.*

Based on Table 2 results, $r = 0.60$ and $\text{sig} = 0.01$, there's a correlation and positive/meaningful relationship at 99% degree of certainty and an error margin of less than 0.01%. Therefore, hypothesis 6 (H6) is verified and H0, which indicates the contrary is rejected. *So, as export market's degree of competitiveness increases, there should be a proportionate increase in the promotion strategy for the overseas market, and vice versa.*

Hypothesis 7 *There's a relationship between the export market's degree of competitiveness and the price strategy for the overseas market.*

Based on Table 2 results, $r = 0.71$ and $\text{sig} = 0.01$, there's a correlation and positive/meaningful relationship at 99% degree of certainty and an error margin of less than 0.01%. Therefore, hypothesis 7 (H7) is verified. *So, as export market's degree of competitiveness increases, there should be a proportionate increase in the price strategy for the overseas market, and vice versa.*

Hypothesis 8 *There's a relationship between the export market's degree of competitiveness and the distribution strategy for the overseas market.*

Based on Table 2 results, $r = 0.56$ and $\text{sig} = 0.01$, there's a correlation and positive/meaningful relationship at 99% degree of certainty and an error margin of less than 0.01%. Therefore, hypothesis 8 (H8) is verified and H0, which indicates the contrary is rejected. *So, as export market's degree of competitiveness increases, there should be a proportionate increase in the distribution strategy for the overseas market, and vice versa.*

Hypothesis 9 *There's a relationship between the firm's orientation to export and the export market's degree of competitiveness.*

Based on Table 2 results, $r = 0.46$ and $\text{sig} = 0.01$, there's a correlation and positive/meaningful relationship at 99% degree of certainty and an error margin of less than 0.01%. Therefore, hypothesis 9 (H9) is verified and H0, which indicates the contrary is rejected. *Therefore, as the firm's orientation to export increases, there should be a proportionate increase in the export market's degree of competitiveness, and vice versa.*

6 Multivariate Regression Analysis

6.1 Testing the Complementary Hypothesis

Regression analysis builds on the principle of prediction. That is, the more known about a phenomenon, the higher the quality of speculation of its other properties will be. In the multivariate regression analysis, several parameters come into play, where the multivariate regression coefficient (R) indicates a correlation between the independent variables and the dependent one. R ranges from 0 to 1, and the closer it is to 1, the higher the level of correlation among the independent variables and the dependent one.

To measure the effect of “firm's orientation to export” and “competitiveness of the export market” on the product, promotion, price and distribution strategies, the multivariate regression method was used. Results of regression analysis are summarized below.

“Firm's orientation to export” with the standardized impact coefficient of 0.38 on price strategy, 0.24 on promotion strategy, 0.23 on distribution strategy, and 0.21 on product strategy, have each had the highest standardized coefficients on different aspects of SMEs marketing strategy. Therefore, it is suggested that:

- Firm's orientation to export has the highest standardized impact coefficient on price strategy, at 0.38. So, a standard deviation (SD) of change in the firm's orientation to export, would entail a 0.38 SD of “price strategy”.
- Firm's orientation to export has the second largest standardized impact coefficient on promotion strategy, at 0.24. So, a SD of change in the firm's orientation to export, would yield a 0.24 SD of “promotion strategy”.

- Firm's orientation to export has the third largest standardized impact coefficient on distribution strategy, at 0.23. So, a SD of change in the firm's orientation to export, would result in a 0.23 SD of "distribution strategy".
- Firm's orientation to export has the fourth largest standardized impact coefficient on product strategy, at 0.21. So, a SD of change in the firm's orientation to export, would give a 0.21 SD of "product strategy".

Moreover, based on the multivariate regression analysis results, "export market's competitiveness" with the standardized impact coefficient of 0.44 on promotion strategy, 0.43 on distribution strategy, 0.23 on distribution strategy, and 0.42 on price strategy, and 0.21 on product strategy respectively had the highest standardized coefficients at different dimensions of SMEs marketing strategy. Therefore, it can be concluded that:

- "Export market's competitiveness" has the highest standardized impact coefficient on promotion strategy, at 0.44. So, a SD of change in the independent variable "export market's competitiveness", would entail a 0.44 SD of "promotion strategy".
- "Export market's competitiveness" has the second largest standardized impact coefficient on distribution strategy, at 0.43. So, a SD of change in the independent variable "export market's competitiveness", would result in a 0.43 SD of "distribution strategy".
- "Export market's competitiveness" has the third largest standardized impact coefficient on price strategy, at 0.42. So, a SD of change in the independent variable "export market's competitiveness", would yield a 0.42 SD of "price strategy".
- "Export market's competitiveness" has the fourth largest standardized impact coefficient on product strategy, at 0.21. So, a SD of change in the independent variable "export market's competitiveness", would give a 0.21 SD of "product strategy" (Fig. 2).

7 Conclusion

Iranian businesses may improve their shares in those markets amid the rise in foreign currency exchange rates and the likely increase in the competitiveness power of their products and services in overseas markets (i.e. price, distribution, etc.) as an important aspect of marketing mix and by preserving or improving quality and doing international market research, managing export marketing and branding of manufactured products, with the ongoing advice of export professionals. To adapt to the status-quo, businesses should empower their export departments, as the purchasing power at domestic markets is falling, and export markets need to be targeted more often. So, as firms make efforts to increase their market share, and to attract more customers, the arrival of Iranian firms into new markets could bring

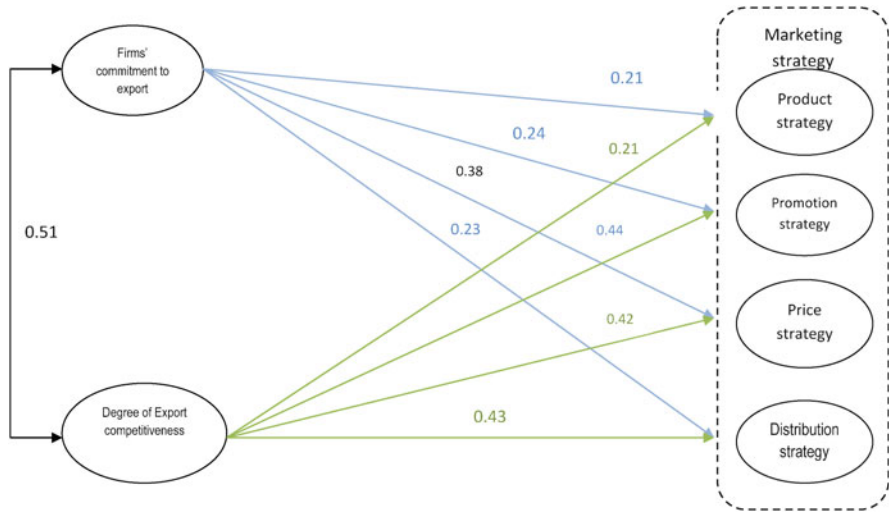


Fig. 2 Regression model showing effect of firm’s orientation and export competitiveness on marketing strategy

about more experience in bids and negotiation techniques, and might increase the country’s foreign trade income directly by providing services in design, consultation, management, supply and planning, as well as construction of projects with special contracts, or indirectly via promotion of goods export. This would result in the spread of research and innovation, increase the quality of goods and services, and create new opportunities for unexplored potentials, especially in consultation and construction contracting. In practice, financial problems, both domestically and overseas, of monetary organizations, still linger as major obstacles on the path of export firms.

Results of the current study show that there is a meaningful and positive relationship between firms’ orientation to export, the degree of competitiveness of businesses or SMEs, and all the four marketing strategies (product, promotion, distribution and price). In fact, the orientation has greatly affected the latter set of strategies. It can therefore be concluded that improvement in the market share of SMEs, amid competition, has a close relationship with firms’ orientation to export, which in turn is the most significant factor in implementing marketing strategies.

7.1 Suggestions

Based on the above findings, the following solutions and suggestions are proposed:

Given the results from testing hypotheses 1–4, to bring about qualitative and quantitative growth in the marketing strategies of SMEs, the communication network and group activities in the firms’ competition system should be put on

top of the agenda. To that end, proper mechanisms ought to pave the way for utmost development of a competitive system.

As to hypotheses 5–8, to enhance the competitiveness of SMEs in export markets, strategies should be used in ways that help identify the quality and quantity of different aspects of competitiveness.

As for the hypothesis 9, indicating a meaningful relationship between firms' orientation to export and the degree of competitiveness of export market, a new perspective could be taken on businesses and SMEs as to their particular export processes, which may lead to either success or failure of the firm in the export market. If the process of export is broken down into steps, a major step would be to choose the marketing strategies. This needs to be performed by a key department, which is overlooked in Iranian businesses. A failure to persist, whether in manufacturing or marketing arenas, to devise a full-fledged marketing plan is another weakness that has resulted in lost opportunities in promoting export. That is why the appropriate approach to marketing could bring about improved distribution and expansion of sales, as well as better design and pricing practices.

Based on results of the complementary hypothesis, indicating the effect of firms' orientation to export on marketing strategies, export promotion and marketing of SMEs, a support package for improving the financing of SMEs involved in export to regional markets ought to be attached to the strategic plan of national export promotion, considering that sanctions are in effect. The package could come in three sections, i.e. the solutions, actions and business policy development.

Also, it is suggested that businesses propose an export-driven action plan (either from scratch or by further reinforcement of an existing backbone) not only as part of their vision, but also as their long term mission. This could result in “purchase of export know-how” and selection of the right strategies and practice of export marketing management, in more systematic ways.

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Part IX
Big Data, Machine Learning and New
Technological Trends

Disruptive Innovation for Auto Insurance Entrepreneurs: New Paradigm Using Telematics and Machine Learning



N. Arun Kumar and Siva Yellampalli

Abstract Currently, Motor insurers are playing a passive role in terms of identification of risk incidents for the policy holders. Traditional insurance does not differentiate safe drivers and unsafe drivers. Since they do not have the vehicle telematics data of the policy holders. Many insurance corporations are planning to utilize telematics data to build a model of predictive risk for policy holder and claim possibility. They can reward safe drivers by low premiums and/or no-claim bonus. Likewise, unsafe drivers need to pay extra risk premium. This means drivers have a stronger incentive to adopt safer practices. This chapter describe black-box auto insurance predictive model utilizing basic telemetry like GPS sensor data for usage based insurance. Predictive model is developed using binary logistic regression machine learning technique. It is an informative chapter for entrepreneurs since it highlights the business proposition from an insurer perspective to gain competitiveness in highly commoditized insurance market.

1 Introduction

Existing insurance billing models are based on policy data and claims data. Policy data include vehicle cost, depreciation, first party or third party claims, and tenure of the policy. Claims data include number of claims and claim amount. Currently market segmentation is based on claims and we have no-claim and claim customers. It encourages customers to drive cautiously by giving no-claim bonus. This descriptive model is general and the premium cost is fixed since it does not consider usage. So customers who have low annual mileage with good driving behavior subsidize bad drivers who have higher annual mileage and exhibit reckless driving. It is unfair to good drivers and does not penalize bad drivers. So there is a need to rationalize the premium cost based on miles driven and driving behavior and provide value addition to insured. It has been observed that there is a growing competitiveness in

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insurance companies to reduce the number of claims and to prevent fraudulent claims. Usage based insurance (UBI) is seen as the next generation insurance model which fosters win-win to both insurers and insured.

In the proposed predictive model, premium is rationalized based on the usage and it is called risk-adjusted premium. It considers historical usage and predicts the future usage and categorizes customers accordingly. It categorizes customers as “Risk” or “No Risk”. This customer segmentation is accomplished by leveraging the technological advances in Telematics and Machine Learning. A customer categorized as “Risk” need to pay higher risk-adjusted premium compared to “No Risk” customer. This proposed new billing model goes beyond customer expectation by proactively alerting a driver regarding his/her behavior. By reducing risk there is likelihood of reduction of claims which benefit the insurers. So it promotes road safety and adds more rigor to already existing premium calculation mechanism.

Insurance companies have started providing insurance policies which add value to customers based on usage. These policies are classified in to three classes based on the parameter being considered for determining the usage. Mile-based insurance is the simplest form and considers only miles driven. Pay how you drive (PAYHD) and Pay as you drive (PAYD) insurance policies measure driving behavior in addition to distance travelled. The rigor in terms of type of usage is more in PAYHD compared to PAYD. Analytics related to driving behavior can be derived from telematics. PAYD may use aggregated GPS data to measure excessive speed, travel time without break, speed and time-of-day information, usage of mobile while driving, distance and time travelled. It may also include statistical information regarding the historic riskiness of the road. Telematics provide an advantage to the user by providing immediate feedback loop to the driver regarding the risk involved and the dynamic cost of the insurance. So it acts as a deterrent to the driver to restrain from reckless driving immediately for safety of self, co-passengers and pedestrians. Eventually policy holder gain monetary benefit by lower premiums or bonus additions. PAYHD policies include additional sensors like accelerometer. PAYD has two schemes namely basic scheme and extra risk premium. In basic scheme only kilometers travelled is considered. Extra risk premium scheme is applicable if someone drives too long without a break or travels at an excess speed. In this chapter, predictive modeling is used for extra risk premium scheme (Tselentis et al. 2016). It describes the low level architecture of the logistic regression model used in auto insurance risk premium calculator

1.1 Scope

The Logistic regression model (LRM for short) is used in an auto insurance risk premium calculator to predict the risk from features extracted from GPS data. In risk premium calculator, the LRM is used to perform regression and binary categorical classification of risk. The accuracy of the LRM as a ratio of correct predictions to number of predictions done is computed by using two features from GPS data.

1.2 Existing Implementations

PAYD insurance policies are offered by many insurance companies across the world, collecting data in a variety of methods. It differs on the level of privacy provided to the users.

WGV, a German insurance company gather vehicle speed and location information and it is being verified whether speed limit is adhered. If the speed exceeded for a given route, then the policy holder earns “negative” points that will have an impact on risk premium.

Progressive Casualty Insurance (US) and AVIVA (Canada) use proprietary devices which connect to OBDII (On Board Diagnostics II) port of the vehicle. This device collects trip start and end time, miles driven, duration of trip, number of sudden starts and stops, and time and date of each connection/disconnection to the OBDII port. This data is reviewed by the user in a computer and can be exchanged with the insurer.

In Germany, Swiss Re and DVB Winterthur insurance companies have a similar device to exchange data with the insurer. Route information, behavior of the user, kilometers travelled and route information is inferred by using GPS.

Hollard Insurance provide PAYD insurance based on GPS, which records all the data related to location, time and stores it in a server. The policy holder can access the policy details using internet.

Progressive Insurance Corp. (US), registered the US Patent US5797134 to capture necessary data using GPS and transmit it using GSM network. The data includes safety equipment used (seat belts, turning signals ...). It also includes driving behavior like rate of acceleration, rate of braking and observation of traffic signals and speed.

Norwich Union (UK), owner of European patent (EP) number 0700009 and Uniqa Group (Austria) follow the architecture using GPS and GSM. However, data is limited to time of day, riskiness of the road and kilometers driven.

MAPFRE (Spain) use architecture using GPS and GSM. The data includes percentage of night hours, average speed, time of day, type of road driven, average length of trips and kilometers driven.

STOK (Netherland) use architecture using GPS and either active or passive way to transmit data to the server. Passively by USB, Blue-tooth or wirelessly or actively by using GSM network. The statistics and trip logs are accessible by insurance companies and user (Troncoso et al. 2011). The summary of all existing PAYD implementation is given in Table 1.

1.3 Existing Predictive Models

Annual risk can be calculated as the product of per-mile risk and annual mileage. It was found that a relationship exist between reduction in VMT (vehicle miles travelled) and reduction in risk. Mileage is not the only important risk factor.

Table 1 Existing PAYD implementations

Company	Country	Methodology for data gathering	Methodology for transmission of data	Patent
WGV	Germany	GPS	User submission	
Progressive Casualty Insurance	US	Device in the vehicle	User submission using internet	
AVIVA	Canada	Device in the vehicle	User submission using internet	
Swiss Re	Germany	Device in the vehicle	User submission using internet	
DVB Winterthur	Germany	Device in the vehicle	User submission using internet	
Hollard	South Africa	GPS	GSM	
Progressive Insurance Corp	US	GPS	GSM	US5797134
Norwich Union	UK	GPS	GSM	EP0700009
Uniqua	Austria	GPS	GSM	
MAPFRE	Spain	GPS	GSM	
STOK	Netherland	GPS	Passive or active	

However, it has a substantial impact on risk. It has an influential factor on risk prediction along with other factors and not alone (Litman 2006).

Poisson and Linear models were used to predict insurance risk using annual mileage. It showed that mileage contributed explanatory power when used along with other risk factors (Ferreira and Minikel 2012)

Premium cost model based on mileage, location, time and driving behavior was built. Premium was based on fixed cost plus additional cost based on the linear combination of above mentioned risk factors and coefficients (Boquete et al. 2010).

We may encounter insufficient exact knowledge of risk factors and a large combination of these factors are needed for the prediction of risk. In this case fuzzy-linguistic approximation apparatus is suitable for projection of the evaluation of the ride which is used to calculate the insurance premium (Kantor and Stárek 2014).

A comparison of the performance of three models namely, logistic regression, random forests and artificial neural networks model was performed. Three months of data was sufficient to obtain best risk estimations (Baecke and Bocca 2017).

1.4 Design Overview

A GPS device with GSM (GPRS enabled) with required control board will be fixed into the vehicle as shown in Fig. 1. This device will be powered from the vehicle's battery. GPS capabilities provided include Speed, Idle time, Latitude and Longitude of the vehicle. It shall have a battery in it for the failsafe mechanism if the vehicle

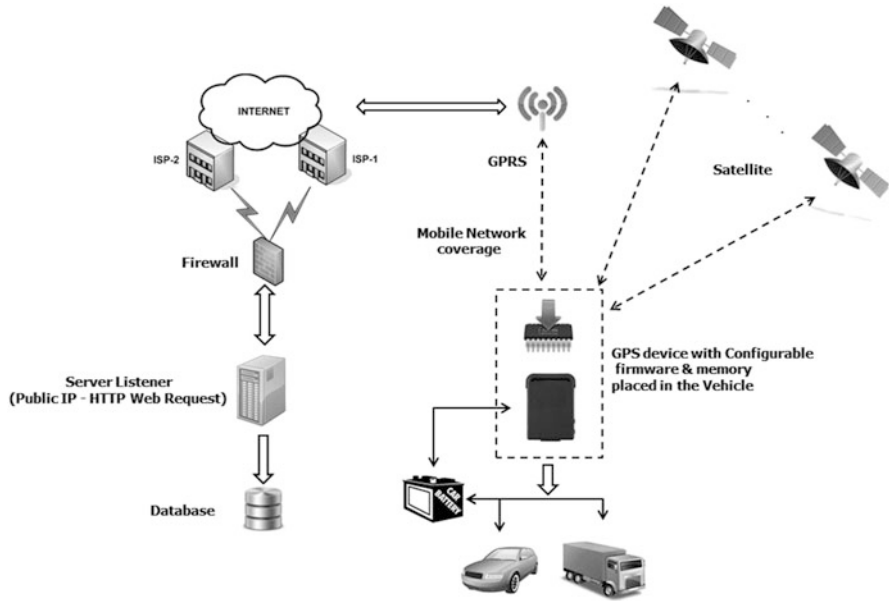


Fig. 1 GPS deployment architecture

battery has been disconnected or drained. The device shall be able to store the GPS Sentences in case of non-availability of the GSM network and the same shall be pushed to the server in the First In First Out basis (FIFO). The device shall provide OTA (Over the Air) based firmware upgrades. The device configuration settings like server address and other details should be configurable by SMS. The device shall be configured to send GPS Sentences as Web Requests. The HTTP based Web Requests will be received by public IP server. The device shall directly talk to Web Server which shall aggregate the telematics data and insurance data. It hosts the machine learning algorithm and generates the reports regarding the predictive risk (Husnjaka et al. 2015)

LRM is a customized version of generalized linear model and it is similar to linear regression (McCullagh and Nelder 1989). It is based on Machine Learning architecture shown in Fig. 2. It is used to compute the possibility of a dichotomous outcome “Risk” or “No risk” based on one or more independent variables which are called as predictors or features. The features are extracted from GPS data namely average speed and average driving time.

Machine learning architecture involves model, input, output and classifier. Any model before deployment needs to be learnt using offline system. In this case, mapped GPS and Insurance data is used as training dataset. Typically, it includes Risk, Average speed and Average driving time for each insurance policy holder. Classifier is specified during online learning of the model and it is also called classification cut-off. The model is scalable wherein new features like mobile usage

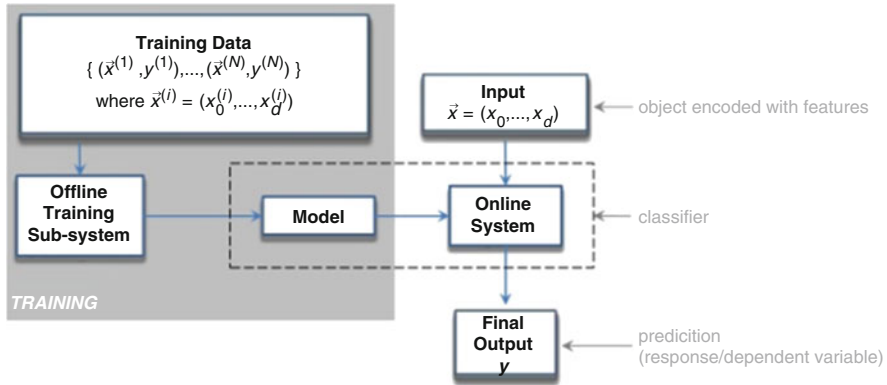


Fig. 2 Machine learning architecture

by driver, road condition can be added. Model can be calibrated using classifier and updated using online learning mechanism.

Risk is dependent on many factors namely, terrain, usage of mobile while driving, vehicle age, maintenance cycle, speed, road condition, travel time without break and driving behavior. “Risk” or “No Risk” is a dependent variable and speed, road condition, travel time without break and driving behavior are independent variables. LRM shall predict a discrete outcome with the assumption that there is no linearity between independent variables and dependent variables.

2 Methodology

Predictive analytics provides three learning techniques namely, supervised, unsupervised and reinforcement. In supervised learning predictions are made based on set of examples. It looks at different patterns and choose the best pattern to make predictions. In unsupervised learning the data is grouped in clusters so that complex data appears simpler or organized. Reinforcement learning choose an action in response to each data point. In the current context, supervised learning shall suffice to identify the behavioral pattern. Supervised learning can be used for classification, regression and anomaly detection. In the current scenario, classification methodology is chosen to perform segmentation by dividing the customers in to subsets with common behavior and homogeneity. Consequently, implementing strategies and decision making shall be easier. The primary objective is to quantify risk-adjusted premium based on customer segmentation.

Classification may be two-class or multi-class. Since we are interested in “Risk” or “No Risk” it is two-class classification. There are five primary factors which impact the choice of algorithm for classification namely, accuracy, training time, linearity, number of parameters and number of features. Accuracy of the model may

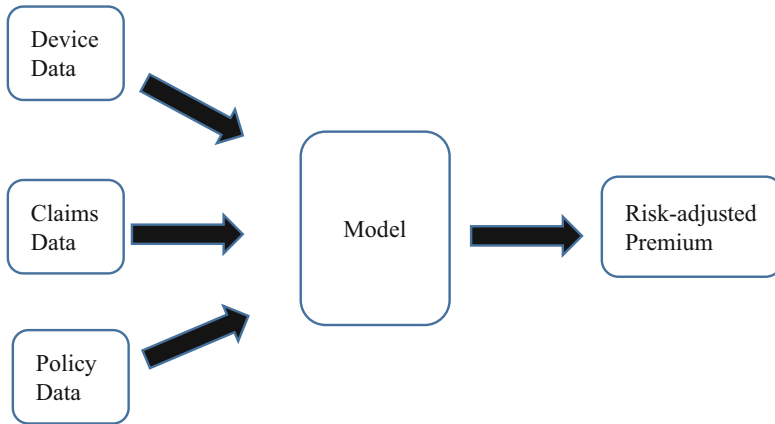


Fig. 3 Data sources

be accurate or approximate and it has an impact on the processing time. Training time is related to accuracy and it is key when time is limited. Linearity is an assumption made in the model that data trends follow a straight line and classes can be separated by a straight line. The error tolerance and number of iterations of the model are affected by number of parameters. If there are many features it may slow down the processing time of model.

Some of the prominent algorithms for two-class classification are logistic regression, decision forest, decision jungle, boosted decision tree, neural network, average perceptron, support vector machine, locally deep support vector machine and Bayes' point machine. In the current scenario, logistic regression is chosen since it is simple and fast. It exhibits excellent accuracy, fast training times and support use of linearity (Fig. 3).

2.1 Infrastructure

Risk-adjusted premium policy requires GPS unit with GSM network connectivity to be installed in the vehicle. Insurance companies need to host predictive analytical software which receive the GPS data and to process it for business insights. The GPS unit need to have configuration and firmware upgrade capability, battery failsafe mechanism, in-built memory for storing historical data, intelligence to check the GSM availability and send the aggregated data. The device may be procured from vendors or insurance companies may go for their own product. In either case the cost implication of the device need to be considered. Consequently, this equipment need to be certified for data transfer laws for telematics devices. Likewise, insurance companies need to adhere to legal considerations that the insured telematics data is used only for insurance purposes only. So there is an

overhead cost with regard to compliance of data protection laws. The deployment and operational cost of the policy and the ROI need to be studied further. This section provides an overview regarding the business entities and operational challenges.

2.2 Algorithm of Logistic Regression

Aggregated sensor data are transformed in to probabilities using logistic function. The obtained probabilities are discrete so it can be used directly to perform regression or predict future usage. So link function called logit is used to convert these probabilities to continuous values and regression is performed. Consequently, predictive model is built. However, it may not be functioning with the desired accuracy. So online learning is performed using stochastic gradient descent technique to optimize the model and to achieve the desired accuracy (Table 2).

2.2.1 Processing of Claim and Policy Data

After claim settlement, insurance companies perform reconciliation of the claim data in order to arrive at the next premium amount to be paid by policy holder. In general, premium is based on vehicle group or type, year of registration and previous claim amount. However this information is not used for predicting risk involved during the policy period.

Historical vehicle insurance claim data was obtained from insurance company for a fleet of 418 different vehicles used in distribution network of FMCG industry. Claim data consists of policy holder age, vehicle category, and year of registration, average cost of claim amount and count of claims. This data is maintained by insurance company at the initiation of the policy and also during claim settlement. The average claim amount is an indicator of the risk for the corresponding policy holder. Policies which have average cost of claim above a threshold value set by insurance company is categorized as “Risk” and others are categorized as “No risk”. This customer segmentation based on usage shall be used as training dataset so as to improve the accuracy of the model (Table 3)

2.2.2 Processing of Device Data

Insurance claim data is mapped with telematics data of the fleet to create training dataset. Telematics data consists of aggregated GPS data, which are average speed and average driving time. The training data has one categorical dependent variable called risk and two independent continuous predictor’s namely average speed and average driving time for each vehicle in the fleet. This training data is used to learn the predictive model by computing the coefficients (Table 4).

Table 2 Algorithm steps

Step	Procedure	Result
Processing of device data	Aggregating the data	Pre-requisite to predict the risk profile of customer
Processing of claim and policy data	Mapping with historical device data	Training data preparation based on risk profiles
Online learning	Training the model and configuration of learning rate	Accuracy improvement
Calibration	Configuration of classification cut-off	Model accuracy optimization based on external factors like road condition, terrain and route
Prediction	Segmentation of customers based on the risk profiles and mileage	Risk-adjusted premium is calculated for each customer

Table 3 Claim and policy data

Vehicle ID	Policy holder age	Vehicle group	Vehicle year of registration	Average claim amount	Claim count
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Table 4 Device data

Vehicle ID	Average speed	Average driving time	Mileage	Date and time stamp
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3 Results

Bubble chart plotted for as subset of vehicles for risk which is linearly proportional to average speed and average driving. Bubble with bigger size is risk and smaller size is no risk (Fig. 4).

It is observed that segmentation of customer as “Risk” or “No risk” is dependent on GPS device data, Insurance claim and policy data and model classifier data. GPS data is the actual data for which prediction shall be computed. Insurance data is used for offline and online learning of the model. Model classifier data is the classification cut-off threshold used in the calibration of the model. It is dependent on other factors like road condition, terrain, atmospheric condition and used to the fit the model.

The learned LRM model was used to predict risk for a given GPS dataset of a month. Consequently, reconciliation was performed with insurance claim data of 2 years to compute the segmentation. It was observed that accuracy was 51%. The Fig. 5 shows the predicted outcomes $p = 1$ (Risk) and $p = 0$ (No Risk) against the \times features (Fig. 6).

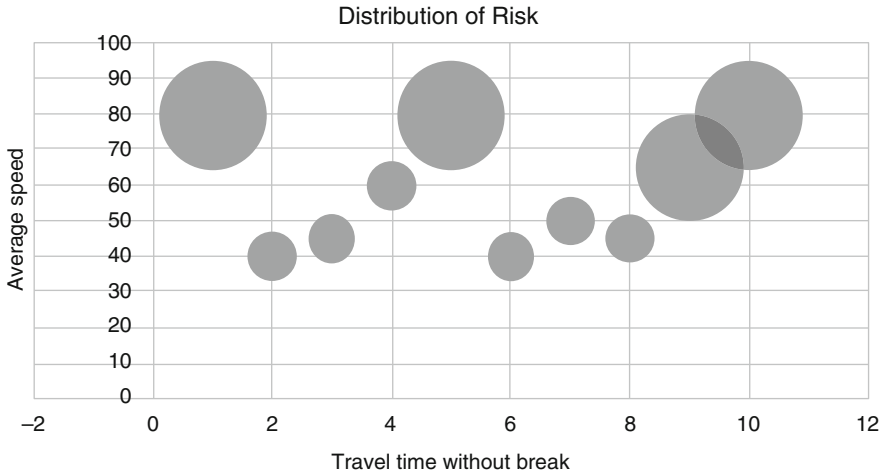


Fig. 4 Distribution of risk

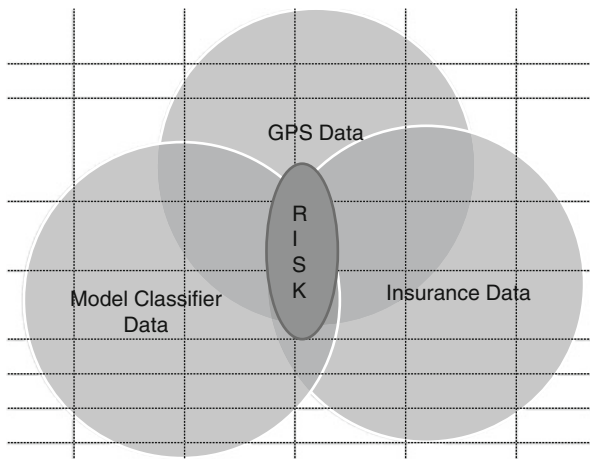


Fig. 5 Relationship diagram

3.1 Analysis of Results

In this chapter, telematics and insurance data of 418 vehicles were analyzed. Consequently, a predictive model with 51% prediction accuracy was developed using binary logistic regression technique. This model has the key advantage of calibration on the fly as per the business needs. Any degradation of the model can be circumvented by updating the model with online learning and tuning the classification cut-off. The cutoff value can be configured based on the aging of the vehicle,

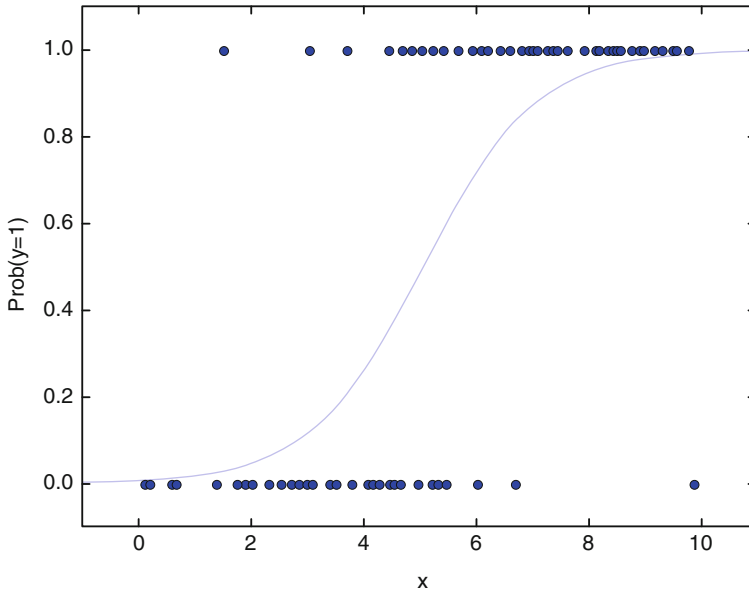


Fig. 6 Customer segmentation of risk and no risk

engine run in hours, road condition and terrain, driving behavior and other factors. It also helps the researcher to study the influence of one independent variable like driver behavior on the outcome risk while keeping other predictors constant. However, the predictive model drifts as the dataset size increases from moderate to large and features increase. Further study is needed regarding the comparative study of predicting risk in usage based auto insurance using SVM, Decision tree and other models. A benchmark would help the insurance companies to choose the appropriate tool.

An attempt has been made to create a synergy or fusion of insurance claim data and telematics data to predict risk. As on today, the insurance companies do not have business insight regarding the potential insurance claim. This information is vital in terms of business planning of insurance companies and also in alerting the policy holder regarding the imminent risk. So that the policy holder can take necessary precaution for safety. Following observations were made during execution of the model:

1. On correlating the accuracy of the learned model (70%) and executed model (51%) there was a dip of 19% due to other factors like road condition, terrain, vehicle maintenance cycle and mobile usage during driving which were unaccounted in the classification cut-off value of 0.5.
2. It is recommended to calibrate the model by performing online learning and revisiting the classification cut-off based on the above mentioned factors for the next execution in order to improve the accuracy

3. An additional feature namely, Jerk energy can be included in GPS dataset by using accelerometer to measure the driving behavior and improve the accuracy of the model
4. Prediction of risk can be planned on a fortnightly basis in order to improve the accuracy of the model instead of monthly basis
5. Segregating Insurance claim data based on average claim amount alone as “Risk” or “No risk” may skew the training data. It is recommended to include an additional feature like vehicle year of registration or policy holder age in training dataset.

3.2 Application

Due to privacy concerns personal vehicle owners are reluctant to embrace UBI. However, commercial vehicles, distribution network and public transport network owners are eager to leverage the UBI benefits (*Introducing Pay How you Drive Insurance*, 2016). We can list the following benefits:

1. Insurers can enhance lower premiums for non-risk drivers to improve volume which is profitable (Lovick 2011)
2. Improve pricing accuracy based on risk profiles (*Introducing Pay How you Drive Insurance*, 2016)
3. Enhance efficiency and effectiveness of claims processing by using telematics data as evidence and automating the process (Lovick 2011)
4. Prevention of fraudulent claims and underwriting, stronger customer engagement (*Introducing Pay How you Drive Insurance*, 2016)
5. Stronger customer engagement and retention of profitable accounts (*Digital Insurance Telematics Solution*, 2017)
6. Reduce claim costs
7. Differentiate brand and De-commoditization (*Introducing Pay How you Drive Insurance*, 2016)
8. Initiating new revenue generating personalized and customized value add services like Geo-fencing, Tracking, Automated Maintenance, Stolen vehicle recovery, Route planning, Reduce fleet costs (*Introducing Pay How you Drive Insurance*, 2016)
9. New entrepreneurs serving customers through smart phones or online touch points (*Top 10 Trends in Insurance in 2016*, 2016)

4 Conclusion

Traditional segmentation of pricing auto insurance based on descriptive model shall be rendered obsolete by this new predictive model. By using market segmentation insurance companies can encourage low-mileage drivers by attractive rates and

appropriately price un-profitable high-mileage drivers. Risk-adjusted premiums shall improve pricing accuracy, enhance safety, and reduce claims and fraud reduction. By market segmentation, insurers can focus and strategize policy changes and improve their competitiveness. While insured customers obtain value addition in terms of financial incentives as per usage accordingly.

Customers are concerned regarding privacy since the vehicle shall be tracked by GPS. So privacy friendly methodology wherein instead of sending instantaneous location information only aggregated data is sent to the insurer. Lack of transparency with regard to calculation of risk-adjusted premium has led to mediocre customer acceptance of UBI. This model is simpler and can be understood by any common insured person.

Customer segmentation improves premium pricing accuracy since it is risk-adjusted. It enables insurers to reduce premium for profitable customers with low risk and increase premium for non-profitable customers with high risk. It also enables customize services like contextual driving tips based on driving behavior which in turn reduce claims (*Digital Insurance Telematics Solution*, 2017). It also enhances customer engagement by customizing products based on the segment. With the geospatial location and behavioral data, it automates first notice of loss (FNOL) and first report of injury (FROI) reporting (*The Telematics Advantage: Growth, Retention and Transformational Improvement with Usage-Based Insurance*, 2012). Which in turn reduces latency time in investigation, settlement and downtime of vehicle. By supplementing claim data with the crash data fraud can be decreased. To summarize, UBI is the key for improved customer experience and retention, efficiency in claims settlement by streamlining manual process in to automation process, improved product pricing and to reduce losses due to claims and fraud. Insurance companies who embark on the journey of UBI shall increase the market share and remain competitive in highly commoditized market.

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Business Challenges of Big Data Application in Health Organization



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Abstract The growing trend of using information technology (IT) in the present era has been associated with generating a huge amount of data. Throughout the history, the healthcare industry has generated a large amount of data on patient care. The current trend of is in the direction towards digitalization of these large amounts of data. Digital data and information in healthcare organizations are growing extensively. These data are gathered from a variety of sources and create new challenges, which lead to a lot of changes in health sciences. In the near future, the high availability of digital data makes it difficult to handle them, and big data will overcome the traditional scales and dimensions. Today, improving the performance of the healthcare industry depends on having more information and more organized knowledge. Big data allow us to do a lot of works that could not have been done in the past. The progress of IT and solutions for management of big data can lead to more effective outcomes in healthcare. This article begins by presenting the current and future statue of big data in healthcare and then explains the features of big data in the area of health as well as the potential benefits of studying big data. Finally, it identifies and ranks the challenges of using big data by the use of a multi-criteria decision-making technique. The aim of this study is to identify the most important challenges for the adoption of big data solutions for healthcare organizations.

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1 Introduction

With the increasing use of IT as well as the use of digital equipment, in all of which there is data production, today we are faced with an issue called “data volume explosion” and with how these large and varies data and information can be managed, controlled, and processed with regard the structure in IT area and use it to improve structures and profitability.

In scientific areas, research on big data across the various scientific disciplines has been raised as a hot topic. Health and life sciences are among the most active areas where big data research is taken into account. As shown in Fig. 1, the extent of attention to big data in the field of health has been changed in recent years. Since 2009, academic studies on big data in the health area have increased with ups and downs, and tendency to study on this area has been grown day by day. At the moment, the extent of search for big data in health is at its peak. The importance of studying big data in health will increase in the future.

Digital information in the health area is growing extensively. Each year, one billion GB of data related to patients are generated by new information systems in the field of health (Kuo 2014). In 2012, digital health data throughout the world is estimated at 500 Pb and is expected to reach 25,000 Pb by 2020 (Sun 2013). Also, it is predicted that each year, the global growth of health data will be between 1.2 and 2.4 Eb (Hughes 2011). Due to the huge amount of data that are generated continuously with high speeds and variables are added to the dataset in a short time, they are called “the big data of health”. The data set in the healthcare sector is so large and complicated so that its processing, analysis, and maintenance traditional database management systems or data processing applications are very difficult. Therefore, big data management systems need to be developed in such a way that they can overcome this problem (Wang 2015). Creating the special capabilities of big data IT is necessary in big data management system, so it is needed to provide definitions of big data capabilities (Wade 2004; Priem 2001): the ability to manage a huge amount of different data that allows analyzing and real-time reaction is considered as one of the capabilities of big data (Hurwitz 2013); Another capability of big data is the ability to capture, maintain, manage, and process data with a specific expiration date. One of the benefits offered big data capabilities compared to traditional systems is the unstructured and semi-structured data collecting from

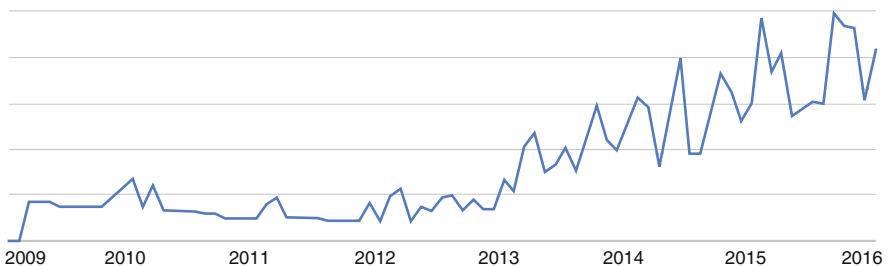


Fig. 1 Distribution of the amount of attention to big data in the field of health based on years (Google Trends-big data in health, 2009–2016)

current and past customers in order to gaining useful knowledge for better decision support, predicting customer's behavior by the software "predictive analyzer", and maintaining valuable customers by providing immediate functions (Simon 2013). Such advances have created great markets for active organizations in the issue of health. The possibility of offering new services is provided through macro data (Shah 2012). Macro (big data) will improve public health through policy-making and health programs, provide new sources of economic value, and provide a new insight into government accountability (Manyika 2011). Through macro data related to a patient, health organizations can get a more complete view of healthcare coordination's, health management, and patient interaction through patient care (Archenaa 2015). However, these organizations, before using big data need to understand their inherent abilities in acquiring organizational agility and operational optimization, and thus enhancing competitive advantage and creating value.

The healthcare sector as an organization that need skillful staffs with knowledge, due to association with society's health, is required to use efficient ways to offer services with better qualities, lower health costs, and timely fixing the needs of clients, which is only possible in the light of new methods of information management and assigning appropriate resources to analyzing big data. The combination of big data and new and old management technologies based on health information is the key to healthcare evolution (Wang 2015). Extracting information from health big data set can help improve measures, increase safety and eliminate excessive and unnecessary costs. However, some challenges remain to be overcome. The above points emphasize the importance and necessity of paying attention to the challenges of employing big data applications for health organizations. The use of big data, especially in health information technology, faces many challenges, which deserves extensive research and should be well-informed.

To date, the healthcare industry has not paid much attention to the potential benefits of big data. While most pioneering data studies have adopted technical views, it is necessarily to gain better understanding about the strategic implications big data because organizations need to use adaptable and intelligence strategies for success and competition in a thriving environment. Also, healthcare organizations need to identify and rank the challenges of using big data for its implementation in order to provide better services and more productivity to exploit potential benefits of big data. To address this shortage, this study provides an overview of the analysis of healthcare big data as it emerges as a new discipline. With regard to the above statements, the investigation of the new areas of activity provided by the big data to the organizations that are active in the healthcare industry and the identification of emerging markets can increase the competitiveness of these organizations and make them more successful in future competitive markets. As a result, using multi-criteria decision-making techniques, this paper aims to identify and prioritize the challenges of using healthcare big data. Also, the functional goals are: (1) Helping managers of healthcare organizations to deal more effectively with the challenges faced by big data; (2) Identifying the most important challenges in using big data affecting the implementation of big data projects in healthcare organizations; (3) Helping to improve the quality of exploiting the potential values of big data and using the potential of big data in healthcare research.

2 Literature Review

Successful applications and programs of big data technologies in business (McAfee 2012), biomedicine, and in particular in health sciences and healthcare (Hansen 2014) have led to the growing global popularity of big data (Huang 2015). Healthcare organizations have recently found a comprehensive understanding of the potential values of big data, and healthcare systems have shown that they are prepared to take advantage of big data solutions and use the potential of big data in healthcare research. Some of the uses and functions of big data in healthcare are listed in Table 1.

Table 1 A summary of studies and functions of big data in health sciences

Author and year	Findings
Duan, L., Street, W. N., and Xu, E. (2011)	The nursing care ordering system is proposed for supporting clinical decision, nursing training, and controlling clinical quality
Hoens, T. R., Blanton, M., Steele, A., and Chawla, N. V. (2013)	Reliable medical recommendation system—suggests to keep privacy. This medical system recommends and suggests a list of the best physicians based on the patients' satisfaction with doctors
Wiesner, M. and Pfeifer, D. (2104)	Offered Health Recommendation System (HRS) in the context of the Personal Health Recording System. In this system, medical information have been generally accepted or scientifically proven. The purpose of HRS is to provide and prepare medical information related to the patient's personal health status
Ginsberg, J., Mohebbi, M. H., Patel, R. S., Brammer, L., Smolinski, M. S., and Brilliant, L. (2009)	Google has provided a tool called "Google Flu Trends" to determine the trend of the flu, as well as an overview on the flu outbreak (Carneiro 2009). According to the Internet searches, the number of people who show flu symptoms can be estimated, which, with the same results, was 7–10 days earlier than the anticipation of administrative CDC ^a networks (Dugas 2013)
Signorini, A., Segre, A. M., and Polgreen, P. M. (2011) Paul, M. J. and Dredze, M. (2011)	Twitter is a social network that reflects popular thoughts and can tell about public events such as the spread of contagious diseases (Signorini 2011). By studying Twitter pages and analyzing keywords of the early signs of the disease, the risks of diseases such as cancer, influenza, depression, pains/suffering, allergies, obesity, and dental disease can be estimated (Paul 2011)

(continued)

Table 1 (continued)

Author and year	Findings
Delios, A. (2014)	Technology-led companies have introduced many advanced products. For example, Apple Watches by Apple, which measures heart rate, Latin by Baidu, who measures blood lipids, MUMU by Baidu, which measures blood pressure (Huang 2015), and Baidu’s Smart Chopsticks, which measures PH levels, temperature, the calories and freshness of frying oil (Delios 2014)
Honicky, R., Brewer, E. A., Paulos, E., and White, R. (2008, August)	In order to collect information on air pollution, they suggested adding and connecting sensors to GPS-equipped mobile phones
Jiang, P., Winkley, J., Zhao, C., Munnoch, R., Min, G., and Yang, L. T. (2014)	PING YIANG: Provides a wearable sensor system for continuous monitoring of old and outgoing data to big data systems
Salih, A. S. M., and Abraham, A. (2014)	It evaluates group designs and different hybrid algorithms for developing a new intelligent decision-making and healthcare system that contributes to health monitoring using wearable sensors
Chandola, V., Sukumar, S. R., and Schryver, J. C. (2013, August)	Varour chandola et al.: to understand how each of these areas contributes to understanding the health dimension, they analyzed healthcare data using social network analysis, temporal analysis, exploring text and building a higher order property
Muni Kumar, N. and Manjula R. (2014)	Muni kumar Netal: discusses how big data analyzes is useful for changing rural healthcare by gaining a views about their clinical information and effectively take the right decisions
Nambiar, Raghunath, et al. (2013)	Asthmapolis: The company has created a global positioning system (GPS) that controls the use of patients’ inhalation and ultimately leads to the treatment of asthma
Stephanie Baum (2013)	Diabetes and Big Data: Diabetic patients can also benefit from the Big Data Revolution. A company named “Common Sensing” has been manufacturing Gocap. Insulin pre-filled carts that not only record the amount of insulin consumed per day, but also record specific times and amounts of consumption. This information is transmitted to the mobile phone. These data are then available to healthcare professionals and allows them to diagnose problems before they are exacerbated and to know the appropriate dose or level (Mathew 2015)

^aCenters for Disease Control

3 Features of Big Data in the Healthcare Area

As shown in Fig. 2, big data can be defined using features related to volume, velocity, variety, honesty and value (which is called the 5V model) (Mathew 2015):

Volume: The data are continuously generated from real-time health monitoring systems in large volumes: EPRS, EHRS, laboratories, sensor devices, and so on.

Velocity: The need to process real-time data from current data such as remote patient monitoring, data from sensor devices, remote medical information, and so on.

Variety: Structured, semi-structured and unstructured data can be gathered from a variety of sources, such as conversations between individuals and patients, health community blogs, social media, and so on.

Veracity: Checking the quality of the data.

Value: This is the most important value of big data, checking the value of the data.

The most challenging part of health care data is the management of structured, semi-massive amount of structured, semi-structured and unstructured data. The healthcare industry also needs to work on prediction, prevention, and personalization to improve its outcomes.

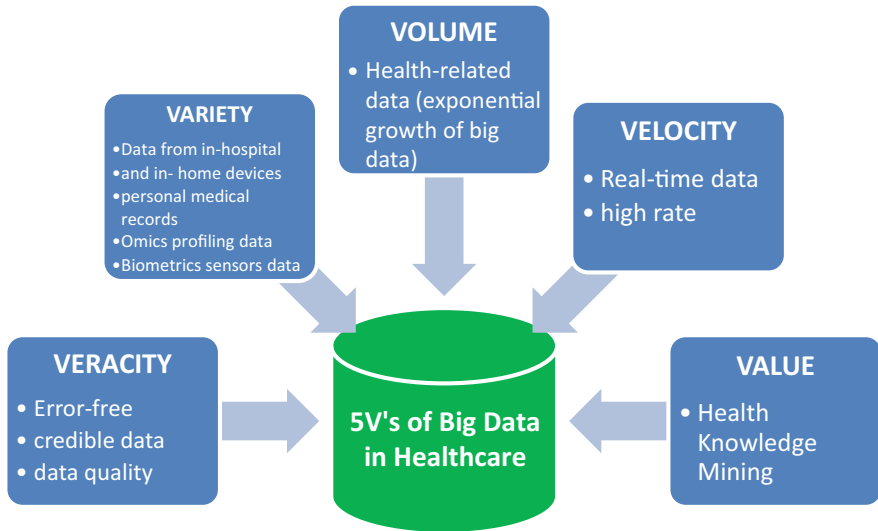


Fig. 2 Five-Variable model for healthcare big data

Table 2 Definition of criteria

Main criteria	definition
Volume	The data size is exponentially growing. Various resources, such as social networks, web server logs, traffic flows, satellite imagery, audio streams, bank transactions, web content, government documents, etc., generate a lot of data
Velocity	The data is produced at very fast speed and at real-time through applications and a lot of sensors in the environment. Many applications need to respond user upon data entry. In some cases, we may not be able to wait sufficiently, for example, to process a report in the system for a long time
Variety	There are many types of data sources and diversity in the data type, resulting in a lot of data structures. For example, on the Web, people use different software and browsers to send information. Most of the information is received directly from humans, and so error existence is inevitable. This variety will affect the comprehensiveness of the data. The more variety exists; the more likely error will occur

4 Conceptual Definitions

Challenge: refers to the problems that prevent the proper implementation of a plan (here the implementation of big data projects in the field of health).

Data: can be anything like patient history, doctor's prescription, medical pictures, drug photos, pharmacy information, medical journals, diagnostic reports, health insurance information, social media information, sensor data, etc.

Conceptual Definitions of the Main Research Criteria

So far, many challenges have arisen in the area of big data, which, to some extent, theoretically reveal various aspects of the problems in this area. These challenges have been mentioned as 3V's in three main dimensions: data volume, data velocity (rate), and data variety (Tables 2 and 3).

5 Research Method

The present study is descriptive-surveying. The statistical sample includes experts in this field (professors and postgraduate students) who are familiar with the subject of "big data". The data gathering tool was a researcher-made questionnaire. The data are from the academic year of 2016–2017.

In order to achieve the analysis challenges, first, big data were evaluated and explored by the library method of similar research and, finally, the challenges proposed by Kuo, Mu-Hsing et al. were introduced as the main challenges in the big data analysis. Data were collected to answer the research questions by researcher-made questionnaire. The questionnaire is based on three indicators that include nine sub-indicators (terms or components). Validity and reliability of the questionnaire have been confirmed by experienced professors. Expert Choice

Table 3 Definition of sub-criteria

Main criteria	Sub-criteria	Definition
Volume	Transferring large amounts of data	Large data research projects usually involve several organizations, geographically diverse locations, and a large number of scholars. Large amounts of data cause barriers to data exchange among groups
	Various sources	Large data on healthcare can be gathered from a variety of sources, including: Internal [e.g., EHR, Clinical Decision Support Systems (CDSS), Computerized Physician Order Entry (CPOE), Picture Archiving Communications System (PACS), etc.] and external [government resources, labs, pharmacies, insurance companies, Health Maintenance Organization (HMOs), etc.] resources
	Different geographic locations	Macro-data on health care can be obtained from a variety of locations (geographically, as well as on healthcare provider sites such as hospitals, clinics and medical clinics)
Velocity	Complexity of the analysis issue	If problem is simple to analyze, such as “how many years are the average age of diabetes patients in the world?”, then a simple average calculation algorithm can achieve answers at a time proportional to the number of records. If the study question is NP-hard (non-definite hard polynomial problems), the calculation time can be super-exponential. (For NP-hard analysis problems, the calculation time for finding solutions increases exponentially with increasing number of records)
	Inadequate real time of processing	The primary goal of healthcare macro-data processing is the use of computational models to predict complex health phenomena from complex and large-scale datasets. Delay in the processing time of complex data patterns can lead to a reduction in the quality of patient care
	Parallelism of the computation model	For analyzing big data, parallelism of many statistical analysis methods or data mining algorithms is difficult
Variety	Integration of different data formats	healthcare big data are divided into structured data such as traditional Electronic Health Records (EHRs), semi-structured data such as health record monitoring devices, and unstructured data such as the EHR/Personal Health Record (PHR), and Medical Picture Clinical methods and are often in different formats (flat files, Comma-Separated Values (CSV), relational tables, ASCII/text, etc.). Healthcare data do not comply with any standard standards. Integration of heterogeneous data sources is a challenge that otherwise contributed to more important views on existing data. The development of global laboratories, hospital systems, surgery rooms, IT finance and e-Health records (EHRs) systems are an important barrier to linking (integrating) data in an integrated database system. The health big data is incredibly large, distributed, non-structured, and heterogeneous, so that it is too complex and confusing to integrate and transform all of them

(continued)

Table 3 (continued)

Main criteria	Sub-criteria	Definition
	Data quality	The quality of data control, basically, determines the upper bound or product quality of the data. For example, GIGO (Garbage In! Garbage Out!) is a term, which means that if futile input information are used, then outputs will be futile. Data quality is critical for obtaining reliable data views, making decisions about patients’ healthcare, and obtaining optimal results
	Interpreting the main results	If decision makers do not understand the identified and discovered patterns, the ability to analyze big data is of limited value. Unfortunately, due to the complex nature of the analysis science, providing analytical results and the expression and interpretation of them by the use of non-technical specialists are a major challenge

software was used to analyze the data. AHP technique was used to rank the challenges of analyzing the health big data.

– **Analytical Hierarchy Process (AHP)**

The analytical hierarchy process (AHP) is in fact one of the most comprehensive systems designed for decision making with multiple criteria. Analytical Hierarchy Process has been introduced by Thomas. L Saati.

– **Steps of Analytical Hierarchy Process (AHP)**

1. Formation of hierarchical structure of the research
2. Preferential judgments
3. Calculations of relative weights
4. Integration of relative weights and obtaining the final weights of the indicators.

The identification of the indicators of the major challenges of big data was done through the study of the literature as well as experts’ opinions. Three indicators of volume, velocity and variety of data were considered as evaluation indicators. In the next step, we need to identify the sub-indicators. Finally, nine sub-indicators for the triple indicators were selected. After identifying the indicators and sub-indicators, we enter the steps of the analytical hierarch process.

Step 1: Formation of Hierarchical Structure of the Research In forming a hierarchical structure, the organization’s goal is placed at the highest level and is considered as a zero-level. Research indicators are placed at the next level, the level one. And the research sub-indicators are placed at the second level. Figure 3 shows the hierarchical structure of our research.

In this research, indicators are the same as that of big data and their challenges, which were identified, screened and categorized using research literature and experts’ opinions. Table 4 shows the research indicators and the symbols used for them.

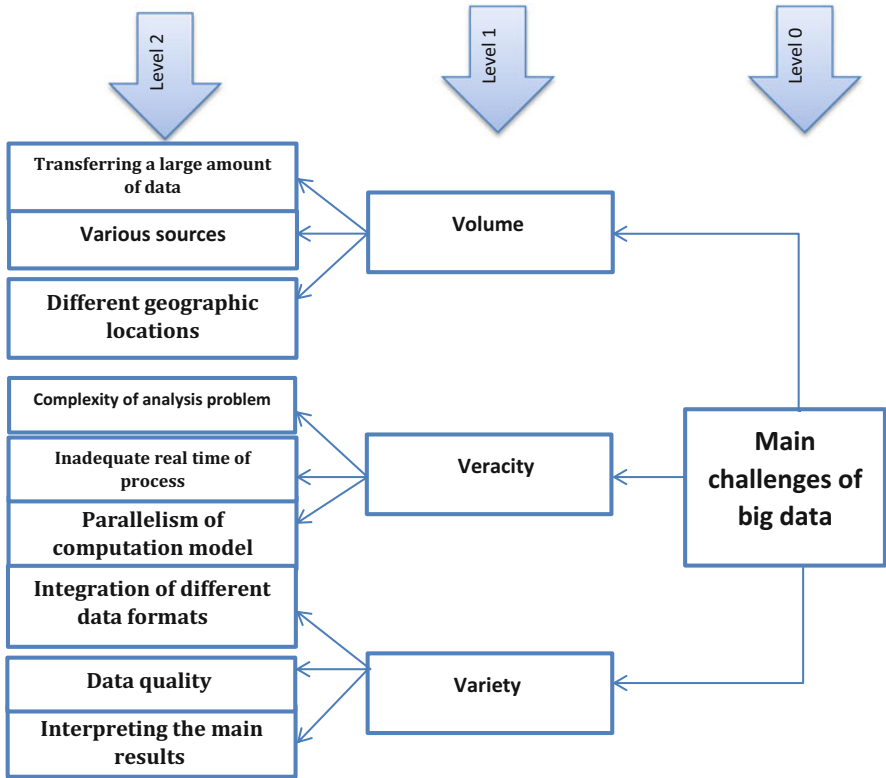


Fig. 3 Hierarchical structure of the research

Table 4 The list of research criteria

No.	Criteria	Symbol	Criteria	Symbol
1.	Volume	C1	Transferring large amounts of data	C11
			Various sources	C12
			Different geographic locations	C13
2.	Velocity	C2	Complexity of the analysis issue	C21
			Inadequate real time of processing	C22
			Parallelism of the computation model	C23
3.	Variety	C3	Integration of different data formats	C31
			Data quality	C32
			Interpreting the main results	C33

Step 2: Preferential judgments After the formation of hierarchical structure, questionnaires were designed and distributed to collect experts' judgments. In the analysis hierarchy process, the factors existing at each level should be compared to those above their level. According to the figure, the indicators of level 1 should be compared with the factors at higher level of them, i.e. target, pairwise. Also, the sub-indicators of level 2 should also be compared with the indicators of level 1 pairwise. Nine-Likert scale was used to answer to the questions in the questionnaire (Table 5). In the following, an example of a pairwise comparison table and how it is completed is presented.

Here we will have four pairwise-comparison questionnaires, which are as follows: (1) Pairwise comparison questionnaire, which compares the Level 1 indicators with the target; (2) Paired comparison questionnaire, which compares the sub-indicators of the indicator "volume"; (3) Pairwise comparison questionnaire, which compares the sub-indicators of the indicator "velocity"; (4) Paired Comparison Questionnaire, which compares the sub-indicators of the indicator "variety".

Step 3: Comparison of Relative Weights The following methods can be used to calculate relative weights: (1) Least squares method; (2) Logarithmic least squares method; (3) Eigenvector method; and (4) Approximate methods.

Usually, approximate methods are used due to the ease of routine methods and they include the following four methods: (1) row sum; (2) column sum; (3) arithmetic mean; (4) geometric mean.

We use the method arithmetic mean to calculate the weight. To do this, we first divide the elements of each column by the sum of that column to obtain a normalized matrix. In the next step, the sum of the values of each row of the normalized matrix should be divided by the matrix dimension (number of rows or columns) to obtain the relative weights of each of the sub-indicators relative to its own indicator. The sum of the relative weights in each questionnaire should always be equal to one.

Step 4: Calculating the Final Weight of the Options We must obtain the relative weight of all the questionnaires in order to calculate the final weight of the options.

– Calculation of the Inconsistency Ratio

Almost all calculations of the analysis hierarchy process are based on the initial judgment of the decision maker, which appears in the form of a pairwise-comparison matrix, and any errors and incompatibilities in the comparison and determining the significance between the sub-indicators and indicators will distort the final result obtained from the calculations. Inconsistency Ratio is a tool that specifies compatibility and shows how much confidence can be derived from the comparisons.

For example, if option A relative to B is with "more significance" (preferential value 3) than B and B relative to C is with "the same or a bit more significance" (preferential value 2), then it is expected that A relative to C is with "More

Table 5 Table of evaluation and pairwise comparison

Significance type	Same significance	Same or a bit more significance	A bit more significance	A bit more to more significance	More significance	More significance to much more significance	Much more significance	Much more to full significance	Full significance
Quantitative or preferential value	1	2	3	4	5	6	7	8	9

significance to much more significance” [Preferential value $6 (2 \times 3)$]. If the respondent chooses a value other than this, this would create an inconsistency. It may be easy to compare two options, but when the number of comparisons increases, it is not easy to ensure compatibility of comparisons and this confidence should be achieved using the consistency ratio. The experience has shown that if the inconsistency ratio is less than 10.0, then the consistency ratio is acceptable and otherwise the comparisons should be revised.

After identifying the hierarchical structure of the research, it is necessary to calculate and evaluate the weight of research indicators compared to the target. In order to calculate the weight of the research indicators compared to the target, a pairwise comparison of the indicators was developed. After creating a pairwise-comparison questionnaire, the research indicators have been provided to the experts to complete their research objectives. By completing the pairwise-comparison questionnaire, we put them into Excel software to evaluate and weigh the main indicators of the research compared to the target. If the level of inconsistency of the pairwise-comparison matrix of the main indicators is significant (less than 0.1), then we address them, otherwise the pairwise-comparison questionnaire must be returned to the experts to be reviewed. Since the number of experts in this study was more than one, the inconsistency ratio of all pairwise-comparison questionnaires was first assessed and then the average of their verification was calculated. Among the three main indicators, the indicator C1, i.e. volume, has gained the highest weight, so it is among the main indicators of the highest significance. The Indicators Variety and Velocity are also at the next ratings (Table 6).

In the second section, we try to use a pairwise-comparison questionnaire to calculate the relative weights of the sub-indicators of each of the main criteria (Table 7).

Now we can use the relative weight of the research indicators compared to the target and the relative weight of the second-level indicators compared to the main indicators in order to calculate the final weight of the second-level indicators. In order to obtain the final weight of the second-level indicators, the relative weight of the main indicators should be multiplied by the relative weight of the second-level indicators. In this study, we use the Expert Choice software to obtain the final weights of the second-level indicators. The following table gives the final weight of the indicators based on the research goal (Table 8).

As you can see, among the research options that are in fact the second-level indicators, the indicator “transferring large amounts of data”, which is a component of the indicator Volume, is the most important among all the indicators. The indicator “integration different data formats”, which is a component of the indicator “Variety”, is ranked second, and “parallelism of the computation model”, which is one of the velocity indicators, are ranked third.

Table 6 The prioritization results of the triple indicators (level 1)

Priority	Challenges (main indicators)	Relative weight
First	Volume	0.425
Second	Velocity	0.296
Third	Variety	0.279

Table 7 Results of the relative weights of nine sub-indicators and three main indicators based on the technique

Indicator	Relative weight of indicator	Rank	Sub-indicator	Relative weight of sub-indicator	Rank
Volume	0.425	1	Transferring large amounts of data	0.576	1
			Various sources	0.244	2
			Different geographic locations	0.180	3
Velocity	0.279	3	Complexity of the analysis issue	0.115	3
			Inadequate real time of processing	0.247	2
			Parallelism of the computation model	0.638	1
Variety	0.296	2	Integration of different data formats	0.689	1
			Data quality	0.149	3
			Interpreting the main results	0.162	2

Table 8 Prioritization results of the sub-indicators (level 2) based on the final weight

Priority	Sub-indicator	Final weight
1	Transferring large amounts of data	0.245
2	Integration of different data formats	0.204
3	Parallelism of the computation model	0.178
4	Various sources	0.104
5	Different geographic locations	0.076
6	Inadequate real time of processing	0.069
7	Interpreting the main results	0.048
8	Data quality	0.044
9	Complexity of the analysis issue	0.032

6 Conclusion

Big data will lead to creating great evolutions in the healthcare industry. This article showed various sources of generating and collecting health big data, as well as five characteristics of health big data. Then, it examined the challenges of adopting a big data solution in healthcare organizations, which will help healthcare organizations deal with them more effectively. Finally, with the review of articles focusing on the problems of the views, challenges and solutions of big data in relation to the healthcare industry, introduced the most important challenge that has been emphasized from the point of view of these articles. By reviewing the theoretical bases of the research in the field of the main challenges of big data and interviewing with the

professors and experts, it attempted to extract the related components; and finally the ultimate outcome of this work was the identification of nine sub-indicators in the subset of three main indicators “volume”, “velocity” and “variety” of big data. After the investigations, it was finally discovered that the use of big data, according to the experts, faces the challenges of volume, variety and velocity, respectively. The results of the prioritization in each of the three indicators indicated that in the big data challenge indicator “volume”, out of the three sub-indicators of the study, the sub-indicator “transferring large amounts of data”; in the big data challenge indicator “velocity” Index, out of the three sub-indicators of the study, “parallelism of Computation Model”; and finally in the big date challenge indicator “variety”, out of the three sub-indicators of the study, the sub-indicator “Integration of different data formats” ultimately earned the highest priority in the experts’ opinion. Also, the overall ranking results of nine sub-indicators identified below each of the three indicators showed that the sub-indicator “Transferring large amounts of data” has the highest weight as the first priority and the sub-indicator “complexity of the analysis problem” has the lowest weight as last priority in the experts’ opinion.

In addition to these challenges, there are other challenges that the healthcare industry faces with them in order to improve their healthcare practices; which can be considered as a research area for future work. For example, hospitals already have an old system and their compatibility with the new technology will always remain a problem. This challenge can be raised as issues related to infrastructure in future research.

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Big Data for Competitiveness of SMEs: Use of Consumer Analytic to Identify Niche Markets



Samira Nemati and Datis Khajeheian

Abstract This chapter investigates the application of big data, as valuable knowledge about market and consumers, to empowering enterprises to gain a competitive advantage for surviving in highly turbulent and fast changing markets. Considering the important role of small enterprises in economies, the focus is on small and entrepreneurial firms rather than large organizations. Two theories of Resource Based View (RBV) and niche markets have been used as theoretical ground. The article proposes that by consumer analytics, SMEs can identify the niche markets, that their resource can be configured to properly exploit the opportunities.

1 Introduction

Disruptive technologies revolutionized the way we live, work, communicate and do business. The fast pace of advances of these technologies, beside their effects on our lives, makes new possibilities for doing business, both for individual entrepreneurs and for organizations regardless of their size.

Pervasiveness of handheld devices has begun a new area of information age, that characterizes by non-stop creation of large volume of data by individuals. Almost by every interaction of users, new data creates and even when the phones are not used and are in pockets, cars or desks, they generate data like the location. Ericsson mobility report (2015) estimated that by 2020 the number of mobile phone owners will reach to 6.1 billion and the traffic generated by smartphones will be five times more. Such volume of generated data, provides a brilliant source of information about how users behave, purchase, work, travel, make love, spend leisure and many more valuable data that can be used for business purposes. In competitive markets,

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access, proper organizing, analyzing, and meaning making to these data are competitive advantage that determine the market leader.

Fast changing customers' preference and purchasing habits is a twofolded sword, and can be seen as a challenge as well as an opportunity. Understanding these changes creates a determining advantage for successful performing in the markets; and the data that generates by customers is the reliable and critical source of knowledge about these changes. Thus, knowing how big data might be properly used, leads to an advantage in existing competitive markets or to replace the enterprise toward less saturated markets by identifying the most proper markets for entry, investment and creating footage.

This chapter investigates how big data, as valuable knowledge about market and consumers, empowers enterprises to gain a competitive advantage to survive in highly turbulent and fast changing markets. Considering the important role of small enterprises in economies, the focus is on small and entrepreneurial firms rather than large organizations.

2 SMEs and Entrepreneurial Activities

SMEs are a key in encouraging the culture of entrepreneurship in the countries and in promotion of business growth (Dyerson et al. 2009). Role of SMEs in national economies is significant, and they contribute an average of 90% of national economic output (Wielicki and Arendt 2010) and are the largest contributor to employment in many countries (Ayandibu and Houghton 2017) and technologies, such as social media, have provided a fertile ground for activity of these SMEs. There are growing evidences that smaller businesses can gain business value from the use of social media for internal and external purposes (Geho et al. 2010).

Clearly, SMEs are not homogenous groups and in same type, but they differ from various perspectives (Chua et al. 2009; Parker and Castleman 2007; Derham et al. 2011). However, the mechanism of competition is mostly the same. As Johnson et al. (2008: 87) explained as dynamics of competition, entry of small firms to a market starts with attacking to the soft market segments that are not in the main interest of incumbent, and then to expand the share of market with widening attacks to the adjacent segments. In this pattern, selection of right market segment is in the heart of strategy for small firms and by Chui et al. (2012), Big Data analytics is the right means of identifying, evaluating, selecting and penetrating to these segments (Fig. 1).

One of the key enabler of dynamics of competition is consumer analytics (Dittert et al. 2017; Miles 2017). Consumer analytics is at the center of big data revolution, and its study lies at the junction of Big Data and consumer behavior (Erevelles et al. 2016). Changes in technology creates various windows of opportunities for SMEs to exploit the potentials of these changes, and big data captures rich and plentiful data about consumers in real time and provides patterns of consumer behaviors.

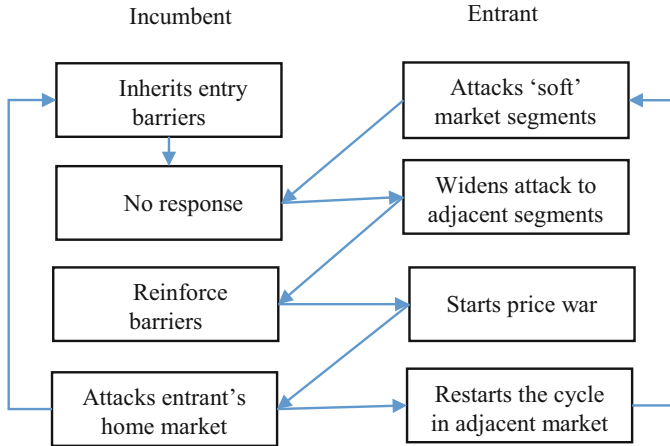


Fig. 1 Dynamics of competition (Source: Johnson et al. 2013: 87)

In this chapter, authors discuss the application of Big Data and particularly consumer analytics in competitiveness of small firms with a business perspective. The main idea is to describe the benefit of Big Data for managers of small firms and entrepreneurs in obtaining competitive advantage. For this reason, firstly two theories of resource based view and niche markets will be shortly explained and then Big data constructing blocks will be described. Finally, the authors discuss how use of Big Data and disruptive technologies of consumer analytics can provide SMEs with a competitive advantage to survive in competitive markets.

2.1 RBV Theory

Resource-Based View (RBS) is an approach toward the inside of the organizations and emphasizes on internal resources and capabilities of a firm. This approach suggests that any firm is a collection of unique resources that create the foundation for its strategy and determines the performance (Wernerfelt 1984; Hitt et al. 2001; Kellermanns et al. 2016). RBV identifies heterogeneous resources as the most important factor that influence on performance and creates sustainable competitive advantage in the market. This theory suggests four attributes for resources, namely value, rareness, non-substitutability and inimitability. Valuable resources is the base of competitive advantage and creates opportunities or neutralize threats. Rare resources are the ones that competitors cannot obtain them easily, because of their scarcity in the environment. A non-substitutable is a resources that no other resource can perform similar function or alternative value. And imitability implies on difficulty of competitors to create something like that. This latter is the most important attribute, because if a resource is valuable, rare and difficult to substitute, but imitable with competitors, it doesn't provide the firm with a competitive

advantage. Barney (1991) argue that imitability raised from three factors: unique history, causal ambiguity, social complexity.

Chan-Olmsted suggests that a RBV approach begins with identifying and assessing the firm's resources and capabilities, locating an attractive industry that such resources can be used within it, and finally selecting a strategy for utilizing these resources to exploit opportunities (2006: 164). By her, resource based view is applicable for many different types of organizations and specifically for firms that operate in creative industry such as media firms. She divided resources in property-based and knowledge-based resources and suggested a framework for firms in media markets. Using this approach, big data can provide a valuable, rare, non-substitutable and non-imitable resource that leads the firm ahead of game. Knowledge of extracting data, analyzing and interpreting them to customer knowledge is a sustainable competitive advantage in a highly competitive market. Erevelles et al. (2016) by considering three resources of physical, human and organizational suggest three processes for turning data to competitive advantage for a firm: (1) collecting and storing big data of consumers, (2) extracting consumer insight from Big Data, (3) using of consumer insight to enhance dynamic/adaptive capabilities.

After understanding of ongoing changes in the markets, giving a proper response is necessary. Such response most possibly needs reconfiguration of resources to gain sustainable competitive advantage. Ability to response to change comes from the dynamic capability, that is based in the RBV.

2.2 *Niche Markets*

Niche markets are the segments of market that their needs remained unsatisfied. The reason for existence of these niche markets are various. It might be the lower profitability of those segments in comparison with other market segments; It might be the cost of personalized value proposition for these customers; it can be technical difficulties; or many other reasons. In any case, niche markets are segments that there is no, or low degree of, competition. These niche markets are usually a proper place for entrepreneurs and nascent SMEs to acquire a small market share to expand it in the future (Khajeheian 2013, 2017a; Khan and Lew 2017).

However, identifying these niche markets is not easy. Normally the possible markets have been already identified by existing market players. Remaining ones have practical difficulties, or their size and profitability is not interesting enough. Considering the importance of these niche markets in success of enterprises and difficulty of finding the proper ones, identifying appropriate niche markets that fit with resources and capabilities of small firms is a critical activity that determines success or failure of a SME.

Dimmick (2006) suggests three central concepts in niche theory, that are measured along one or more of the resource dimensions: niche breadth, niche overlap, and competitive superiority.

Niche breadth refers to “the position occupied by an industry on a particular resource dimension.” (Dimmick 2006: 352). He showed that Breadth measures can be interpreted in the extension of their generalism or specialism. For example, on the advertising dimensions TV is a relative generalist.

Niche overlaps refers to the level of “similarity or competition between firms or industries provided that resources are limited or scarce”. The more forms and industries make their business in similar way, they compete more severely to access resources. Difference in resources leads to peaceful coexistence of firms within an industry, or among different industries, while similarity of resources makes a strong competition.

And finally, competitive superiority implies on which of each pair of competitors is the superior. By these three measures it is possible for an enterprise or small firm to assess if an explored niche market is proper to entry.

2.3 Emerging Markets

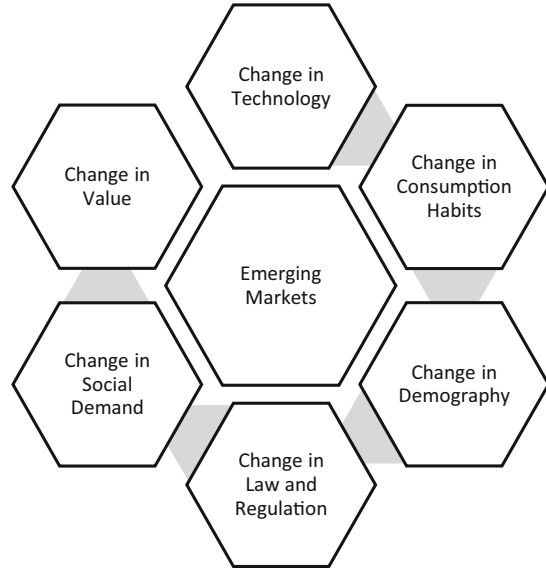
Advances in communication technologies increasingly create some new markets and diminish some existed ones. Some main market trends that brought by communication technologies are reduction of costs, lower entry barriers, and easier access to end-users and consumers. Media convergence also expands the consumer touch by increasing possibility of consuming services and products by a digital device. Such trends grow the potential, pervasiveness and profitability of markets and make them more interesting for competitors to enter and propose the value.

By this technological perspective, emerging markets are new markets for products or services that are created by change. In other word, emerging markets are the markets that are emerged from four types of changes: change in technology, change in demography, change in law and regulation, and change in media (Zerdick et al. 2004). Another definition has been provided by Khajeheian (2017b): “emerging markets are those that emerge from changes in (1) technology, (2) consumption habits, (3) demography, (4) law and regulations, (5) social demands, and, (6) values”. (see Fig. 2).

3 Consumer Big Data

Big data is a common term used to describe the progressive growth and availability of structured and non-structured data (Keyvanpour et al. 2014). “Several definitions of big data have been proposed over the last decade. The first definition, by Doug Laney of META Group (then acquired by Gartner), defined big data using a three-dimensional perspective: Big data is high volume, high velocity, and/or high variety information assets that require new forms of processing to enable enhanced decision making, insight discovery and process optimization” (Cavanillas et al. 2016: 30).

Fig. 2 Emerging markets as output of changes
(Source: Khajeheian 2017b)

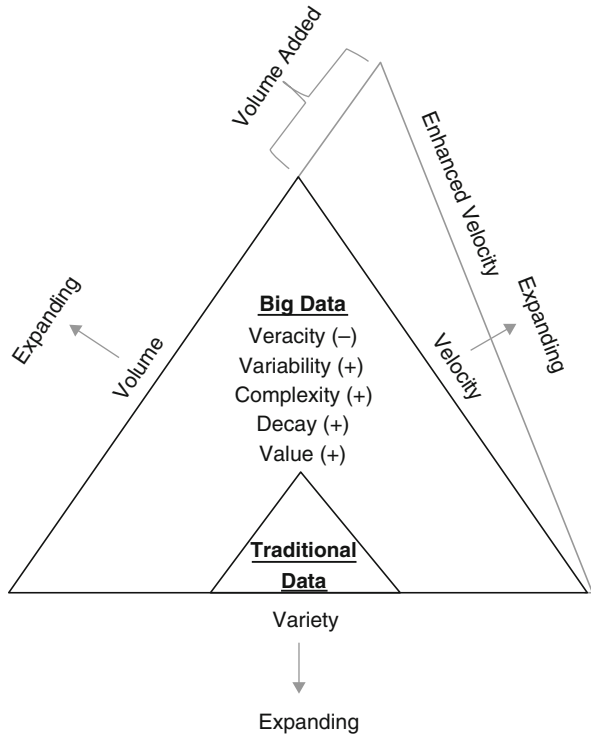


Keyvanpour et al. (2014), explains that many factors can increase the volume of data, including transactional data stored over the years, unstructured data from social media, e-commerce, sensors such as video, photo and audio. He also points out that velocity has created major challenges for many organizations, because data is generated with unprecedented rate, for instance from RFID tags, sensors and intelligent measurements, raised the need to cope with flood data flows at very fast times, close to real-time.

Variety actually refers to different data formats. “Technology advancement allows organizations to generate a variety of structured, semi-structured and unstructured data” (Lee 2017: 2). While traditional databases based on structured data, Unstructured data is generated more quickly, and due to the development of new analytical techniques, there is no obstacle for analyzing unstructured data (Lee 2017).

IBM expanded these basic factors by addition of a fourth dimensions, Veracity, that points out to the unreliability and uncertainty in data sources. SAS, added two dimensions of Variability and Complexity, that former refers to changes in the flow of data and latter points out to the complicatedness in select, clean, store and process of the data that comes from different sources (Erevelles et al. 2016). Oracle added Value as another dimension of big data and stressed that organizations need to consider the value of big data to increase their profits. At the same time, cost of data collection or data generation, selection of high-value data sources, and analyzing of data in such a way that they can generate value-added information for managers, must not be overlooked. Decay is another dimension, that refers to the devaluation of data over time. it implies on the importance of timely processing and analysis and point outs that in many cases real-time processing is required (Lee 2017).

Fig. 3 An integrated view of big data (Source: Lee 2017)



Lee (2017) suggests that although the dimensions of big data are articulated separately, but to proper use of big data, these dimensions must be considered as an integrated one. The Fig. 3 presents this integrated approach to big data dimensions.

Peter Bell (2013: 1) stated that “analytics is to management as a light bulb is to the darkness: it is illuminating and helpful in revealing both future opportunities and pitfalls”. for more accurate analysis of data, the first step should be to identify the correct data sources with respect to business objectives. For example, to know the customer’s attitude, one of the best resources can be their review about the product or services. Then, according to the data source, select the appropriate method for data analysis. Fan et al. (2015) have developed a framework for marketing mix that can help companies achieve better results from big data analysis. They say that data is first retrieved from different sources and then raw data is obtained by using an appropriate analytical method for the required knowledge. In Table 1, Data from different source is considered for a particular application.

One of the important applications is customer segmentation, which is vital for target market selection. Especially, for enterprises and small firms, finding a niche market is the key to success and it happens by finding the right market with unsatisfied needs. As Fan et al described in Table 1, by using the data source from demographics, social networks, customer review, click stream and survey data, and then using suitable analysis methods, it is possible to choose the

Table 1 A framework for big data (Fan et al. 2015)

	People	Product	Promotion	Price	Place
Data	<ul style="list-style-type: none"> - Demographics - Social networks - Customer review - Click stream - Survey data 	<ul style="list-style-type: none"> - Product characteristic - Product category - Customer review - Survey data 	<ul style="list-style-type: none"> - Promotional data - Survey data 	<ul style="list-style-type: none"> - Transactional data - Survey data 	<ul style="list-style-type: none"> - Location-based social networks - Survey data
Method	<ul style="list-style-type: none"> - Clustering - Classification 	<ul style="list-style-type: none"> - Association - Clustering - Topic modeling 	<ul style="list-style-type: none"> - Regression - Association - Collaborative Filtering 	<ul style="list-style-type: none"> - Regression - Association 	<ul style="list-style-type: none"> - Regression - Classification
Application	<ul style="list-style-type: none"> - Customer segmentation - Customer profiling 	<ul style="list-style-type: none"> - Product ontology - Product reputation 	<ul style="list-style-type: none"> - Promotional marketing analysis - Recommender system 	<ul style="list-style-type: none"> - Pricing strategy analysis - Competitor analysis 	<ul style="list-style-type: none"> - Location-based advertising - Community dynamic analysis

appropriate segment. In most studies, only one data source is used for specific applications, so complex and key cases require the use of several different data sources that are suitable for analysis (Fan et al. 2015).

In order to get better results in data analysis, it should be considered as a process. Some data analysis processes are presented as knowledge discovery models. By identifying the models and choosing the appropriate model, data sources and the appropriate method for data analysis can be considered. First, a suitable methodology for the knowledge discovery should be considered, then depending on that methodology, data and method should be selected.

Correct implementation of each process requires a specific model or methodology that can determine the framework and process scope. The process of knowledge discovery is not excluded from this principle. Different methodologies for this are presented, which categorized them into academic and industrial methodologies (Cios et al. 2007). The most important of these methodologies are presented in Table 2.

Table 2 Important knowledge discovery process models (Cios et al. 2007; Sharma 2008)

Model	Domain	Steps
Fayyad et al. (1996)	Academic	<ol style="list-style-type: none"> 1. Developing and understanding the application domain 2. Creating a target data set 3. Cleaning and preprocessing data 4. Data reduction and projection 5. Choosing the data mining task 6. Choosing the data mining algorithm 7. Data mining 8. Interpreting mined patterns 9. Consolidating discovered knowledge
Berry and Linoff (1997)	Academic	<ol style="list-style-type: none"> 1. Identifying the problem 2. Analyzing the problem 3. Taking action 4. Measuring the outcome
Cios et al. (2000)	Academic/ Industrial	<ol style="list-style-type: none"> 1. Understanding of the problem domain 2. Understanding of the data 3. Preparation of the data 4. Data mining 5. Evaluation of the discovered knowledge 6-use of the discovered knowledge
Cabena et al. (1998)	Industrial	<ol style="list-style-type: none"> 1. Business objective determination 2. Data preparation 3. Data mining 4. Analysis of result 5. Assimilation of knowledge
CRISP-DM (2000)	Industrial	<ol style="list-style-type: none"> 1. Business understanding 2. Data understanding 3. Data preparation 4. Modeling 5. Evaluation 6. Deployment

Table 3 Application and resource domain of models [adapted from Cios et al. (2007) and Sharma (2008)]

Model	Fayyad et al.	Berry and Linoff	Cios et al.	Cabena et al.	CRISP-DM
Application	Medicine, e-business, software development	e-business, sales	Medicine, software development	Marketing, sales	Medicine, marketing, sales, engineering
Resource domain	Human and physical	Human and physical	Human and physical	Human, physical, organizational	Human, physical, organizational

By a Resource Based View perspective, Erevelles et al. (2016) discussed that data is an important organizational resource and managers must learn how to use this resource to achieve the organizational goals. By proper development of data infrastructures, organizations are able to gain competitive advantage and survive in highly competitive markets (Fan et al. 2015). In an Oracle organizational document it has been suggested that considering the large amount of data as a concern for organizations, “firms need to be able to identify important data zone, then they store, analyze and evaluate the data, so they can get the most accurate results from the big data.” In Table 3, Cios et al. (2007) illustrated the application and resource domain of models.

As can be seen, industrial models that are presented in line with academic models for knowledge discovery, and data analytics (Cios et al. 2007), According to resource-based theory in the context of big data provided by Erevelles et al. (2016), all of the physical, human, and organizational resources are also included. Firms need to be able to consider the whole process and choose the best methodology for their purposes to get better results from the big data.

CRISP model was presented by examining the real needs and the absence of such an example, and it was validated by applying it to various projects. Today it is used as a reliable model (Keyvanpour et al. 2014). This model is presented in Fig. 4.

Each of the steps in the crisp model includes the sub steps that can cover all the steps needed for processing (Cios et al. 2007).

4 Big Data Analytics Tools

According to the explanations presented in relation to big data, the most important difference between big data and the available data in small scale is the size and volume of data. In addition to the large volume of big data that presents new challenges, the inherent characteristics of the data formats have not undergone any particular changes. Therefore, all the available algorithms for exploring common data, as well as the ability to cope with large volumes of data, can also explore

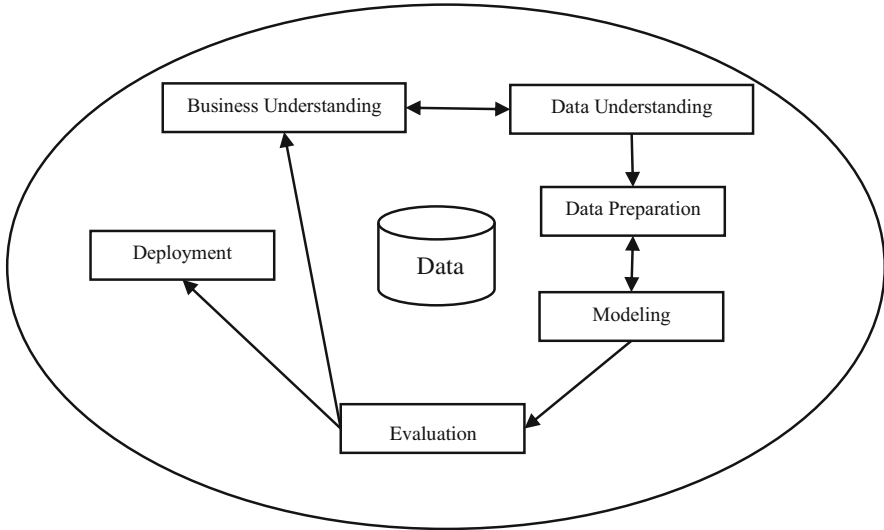


Fig. 4 The CRISP-DM process (Cios et al. 2007)

big data (Keyvanpour et al. 2014). Achieving real-time solutions that are very important for small organizations (SME) is made possible by looking at the aspect of time and data changes in the exploration of big data (Sen et al. 2016).

5 Big Data as Competitive Advantage

Most applications that derive from data analytics are the result of a correct analysis of customer data (Victor et al. 2014). Big data applications in business can be categorized into five general categories (Fig. 5), which include: (1) Making information transparent. (2) Accurate performance information. (3) Ever-narrower segmentation of customers. (4) Managerial Insight, and (5) New product and service development (Chui et al. 2012).

Big Data helps companies to (1) narrowly segment customers, (2) evaluate the segments (3) select target segments, (4) attack to the target market and conquer it, (5) expand the market by adjacent markets. Application of Big Data as a competitive advantage, especially for small firms is to use of right market segment to entry to the markets or to expand their market shares.

In spite of relatively low use of small firms' managers from big data, it is clear that collecting and analyzing of customer data is becoming a critical determiner of success or failure in competitive markets. The impact of big data is not limited to business, but in political campaigns the importance of big data proved. The main benefit of big data is to provide the managers with required insight about customers and markets and to help them with decision making. In fact, it can be proposed that

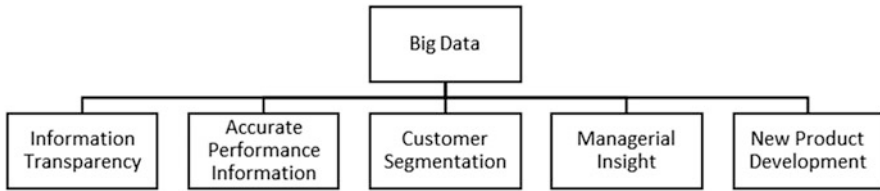


Fig. 5 Benefits of big data for business organizations (Adapted from Chui et al. 2012)

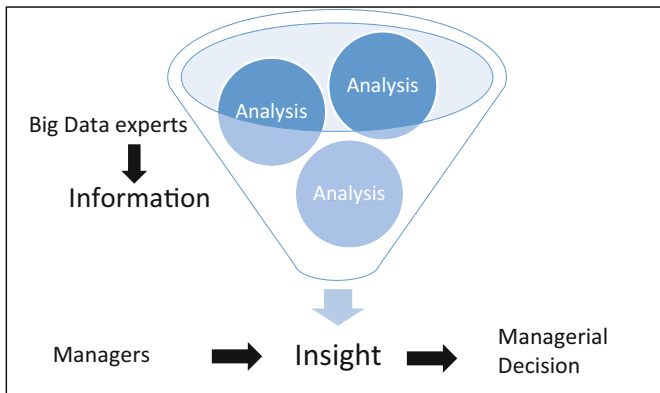


Fig. 6 Information to Insight, the distinguish between managers and big data staff

the application of big data in business perspective is decision making. By this insight, managers and entrepreneurs can decide about the strategic issues of their organization, to analyze the competition in future and to obtain and enhance the competitive advantage. But this insight for better decision requires some necessities.

Big data, in many cases, still considered as a technical issue rather than managerial concern. Many managers are not interested to involve in the process of interpretation of collected data and expect to receive a full insight from big data analysis that lead them to the right decision. This perspective is not correct and make the big data practitioners of organization in the position of managerial decision making, without providing them the required managerial information or required skills. This narrow border of decision making and analysis, or in better word, insight and information is the core contribution of this article. Big data in its pure manner, provides information about customers and markets and environment and resources and other related sources of competition. But managers must convert this given information into insight (Fig. 6).

This can be seen in identification of niche markets. A manager, entrepreneur is expected to explore opportunity and identify the proper niche market to enter. It requires alertness and social sources of information as well as proper information,

that generates from big data. However, the mistake is that entrepreneur or manager expect the big data staff to provide him/her insight about the market and what decision must be made. The insight is analysis of decision maker from the acquired information and meaning making to them in sake of purpose, that is success in competition.

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