
Prospective Poverty Alleviation in Colombian Rural Areas as a Result of New Zealand FDI in the Dairy Industry

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2 INTRODUCTION

The development of agriculture marks the birth of our species' civilization. Whilst agriculture is primarily important for the purpose of producing food, a fundamental necessity for human life, agriculture plays many more significant roles. Agriculture provides employment in rural areas, preserves social functions in a community, and can ecologically sustain the environment if maintained correctly (Cheong, Jansen, & Peters, 2013).

Given the higher majority of those living in poverty reside in rural areas (Castaneda Aguilar et al., 2016), if we wish to alleviate poverty in the world, we must consider the fundamental activity of their existence (Banerjee & Duflo, 2007). For this reason, it is important that we develop agricultural sectors with consideration of those within the rural environments (Cervantes-Godoy & Dewbre, 2010; Cheong et al., 2013; Christiaensen, Demery, & Kuhl, 2006).

Government policy on international involvement has a significant effect on the development of both agricultural sectors and the resulting effect on the residents of rural areas (Fischer & Velthuis, 1995; Hu & Antle, 1993). Due to the vast scope of the agricultural sector, this report investigates a particular industry; the dairy industry.

The motivation for this report is triggered by the free trade agreement (FTA) currently in negotiation between New Zealand and Pacific Alliance (Colombia, Perú, Chile and Mexico) and the concerns of some Colombian parties regarding the policies around the trade of dairy from New Zealand. This report provides analysis and recommendations in regard to the FTA in respect to alleviating poverty in Colombia through the intervention of New Zealand involvement in the dairy industry.

This report investigates the New Zealand dairy industry's involvement in South America – specifically, Chile – and the European Union (EU) dairy industry's involvement in Colombia. Through these two case studies, a previous example of the New Zealand dairy industry's involvement in a less-prosperous South American country is provided, and previous examples of more-prosperous European countries' involvements in Colombia are provided. The intervention of the governments and corresponding trade negotiations are considered, as well as private investments. This provides a suitable foundation for discussion and perspective recommendations for proceedings regarding the New Zealand dairy industry's involvement in Colombia.

The topic is of utmost relevance in view of the current negotiation between the Pacific Alliance and New Zealand, in particular, due to the concerns the dairy industry in Colombia has raised. However, many elements of this analysis also contribute to literature on foreign direct investment in the agricultural sector as potential tools for poverty alleviation in rural areas in emerging markets.

2.1 DEFINING POVERTY

The term 'poverty' is ambiguous in that there are many methods of definition (Ehrenpreis, 2006; Minato, 2007). The International Poverty Line, developed by the World Bank, determines those living under less than \$1.90 USD/day to be living in poverty (World Bank, 2018). This is a simple binary determinant for global poverty and is referred to by many data sources (Sharma, 2018), however, factors such as quality of life, education, health, etc. can be overlooked (Ehrenpreis, 2006; Minato, 2007).

The metric that will be referred to in this report includes more indicators in order to provide a deeper analysis: The Global Multidimensional Poverty Index (MPI). This index, developed by the Oxford Poverty & Human Development Initiative (OPHI) and the United Nations Development Programme has been developed with consideration of the Sustainable Development Goals (SDGs) (OPHI, 2015).

The MPI has three categories; health, education and standard of living. Within each category there are a series of binary metrics that, when calculated and offset against their weight factor, can be summed to find a comparable poverty index (OPHI, 2015). In the context of this report, the primary categories will be considered from a qualitative perspective in attempt to identify relevant factors from each case study.

Health indicators include nutrition and child mortality. Education indicators include years of schooling and school attendance. Standard of Living indicators include cooking fuel, sanitation, drinking water, electricity, housing and assets (OPHI, 2015).

2.2 EXISTING RESEARCH

2.2.1 FDI on Poverty Alleviation

Foreign Direct Investment (FDI)¹ and the resulting effects on poverty have been widely studied topics across many years of research. Magombeyi & Odhiambo and Klein, Aaron, & Hadjimichael provide holistic studies that analyse the topic through the collection and summarisation of previous studies (Klein, Aaron, & Hadjimichael, 2001; Magombeyi & Odhiambo, 2017). The majority of studies conclude that FDI does support poverty reduction due to a variety of reasons including through spillover effects, employment creation and an increase in investment capital (Bharadwaj, 2014; Fowowe & Shuaibu, 2014; Hung, 2005; Jalilian & Weiss, 2002; Shamim, Azeem, & Naqvi, 2014; Soumaré, 2015; Ucal, 2014; Utama, 2015).

Spillover effects are detailed as either horizontal or vertical. Horizontal spillover occurs when foreign subsidiaries transfer skills, knowledge and technology to local companies operating at the same level but at a different level of technological sophistication (Farole & Winkler, 2012). This can occur directly if foreign companies employ local labourers and train them with advanced methodology (Meyer, 2004). This can also occur through imitation by adopting technologies brought into the local industry from the foreign companies (Görg

¹ FDI in the context of this report is defined as an investment made by a firm or individual in one country into business interests located in another country.

& Greenaway, 2004; Meyer, 2004; Wang & Blomström, 1992). Marketing, administration and management skills can also be transferred. Access to more markets through international connections are also considered beneficial outcomes of horizontal spillover (Görg & Greenaway, 2004).

Vertical spillover refers to forward and backward linkages in the supply chain. Pressure applied on backward links in the supply chain from the foreign companies can motivate domestic firms to improve the quality, performance and management of their services or products (Görg & Greenaway, 2004; Liu, Wang, & Wei, 2009; Sumner, 2005). Some foreign companies also provide support, training or access to raw materials for domestic companies (Meyer, 2004). Forward linkages involve the growth of industries that use the output from the foreign subsidiaries. If foreign companies improve the quality of these outputs this can increase the value of products further up the supply chain for domestic firms (Liu et al., 2009; Sumner, 2005). Many factors influence the extent of spillovers effects. These include the technological gap between local and foreign firms, the local firm's absorptive capacity, country institutional capacity and foreign firm characteristics (Farole & Winkler, 2012; Kemeny, 2010; Meyer & Sinani, 2009; Wang & Blomström, 1992).

However, some studies do show negative outcomes due to FDI. From panel data collected from 12 countries in Asia and Latin America between 1970 to 2005, Huang et al. found that FDI caused a negative effect on the mean income of the poorest quintiles (Huang, Teng, & Tsai, 2010). Another study from Ali and Nishat used data from Pakistan from 1973 to 2008 and also found FDI caused an increase in people in poverty within the country (Ali & Nishat, 2009). Some other studies have also shown no substantial impact either way (Akinmulegun, 2012; Gohou & Soumaré, 2012; Tsai & Huang, 2007). The evidence shows there are many political, economic, social, technological, environmental and legal factors that must align for FDI to beneficially impact poverty alleviation. However, under the pretence that governments have a major stake in the facilitation of successful poverty alleviation through FDI, it has been agreed by many that the accommodation through policy and institutional support provided is critical (Fauzel, Seetanah, & Sannasee, 2015). Overall, there is more convincing support for the beneficial impact of FDI on poverty alleviation rather than detrimental impact. However, as noted by Magombeyi & Odhiambo and Klein, Aaron, & Hadjimichael, there is a need for a case by case analysis as many variables need to be accounted for.

2.2.2 FDI in Agriculture on Poverty Alleviation

There are various studies that find the factors identified for FDI in general regarding technology transfer, employment creation and spillover effects can all apply positively to poverty alleviation in consideration of agricultural-specific FDI (Cheong et al., 2013; Hallam, 2009; Slimane, Huchet-Bourdon, & Zitouna, 2016). This contrasts with the impression that FDI in agriculture infers large-scale land grabs that are deemed as unethical due to violations of property rights, denial of access to land and water, and threats to food security (Chaudhuri & Banerjee, 2010).

While agriculture is not a high contributor to GDP, nor a large employer in more-developed countries, it does contribute more to GDP and significantly more to employment in less-developed countries (see Table 1) (World Bank,

2013). Referring to this statistic, Cheong et al. study various case studies regarding employment in a multitude of countries. They conclude that the size of agriculture in developing countries, the large majority of a population's poor living in the rural areas, and linkages with the rest of the economy, infer that agriculture must be supported in order for a country to progress in other more profitable activities. They find that there is no simple conclusion regarding the links between trade and employment, and that there are too many environmental, economic, political and socio-cultural issues that influence how development of the agricultural sector can alleviate poverty. However, they do state that legal protection and insurance for workers, phased-in trade liberalisation measures, focus on modernisation of technology and services and considerations diversification into other activities, and distribution of information regarding market developments are all critical factors to develop. (Cheong et al., 2013)

Table 1: The share of agriculture in GDP and employment.

Countries	Value added in agriculture (percent of GDP)	Employment in agriculture (percent of total)
High income	2	4
Middle income	9	40
Least developed	32	72
World	4	37

Source: World Development Indicators, World Bank, 2013

Hallam illustrates some of these topics through a description of policy recommendations developed by Food and Agriculture Organisation of the United Nations (FAO), the World Bank, United Nations Conference on Trade and Development (UNCTAD), and International Fund For Agricultural Development (IFAD) titled “Principles for responsible agricultural investment that respects rights, livelihoods and resources”:

1. Respect for land and resource rights: existing rights to land and natural resources are recognized and respected.
2. Food security and rural development: investments do not jeopardize food security and rural development, but rather strengthen it.
3. Transparency, good governance and enabling environment: processes for relating to investment in agriculture are transparent, monitored, and ensure accountability by all stakeholders.
4. Consultation and participation: all those materially affected are consulted and agreements from consultations are recorded and enforced.
5. Economic viability and responsible agro-enterprise investing: projects are viable economically, respect the rule of law, reflect industry best practice, and result in durable shared value.
6. Social sustainability: investments generate desirable social and distributional impacts and do not increase vulnerability.
7. Environmental sustainability: environmental impacts are quantified and measures taken to encourage sustainable resource use while minimizing and mitigating negative impacts.

Hallam concludes that the implementation of these principles will require widespread consultation with all stakeholders including governments, farmer organizations, non-governmental organizations, the private sector and civil society (Hallam, 2011).

2.2.3 FDI in the Dairy Industry on Poverty Alleviation

Direct research into the effects of dairy FDI and the effects on poverty alleviation has been a much less researched topic however there have been substantial results in this field. One major study from the FAO, the Global Dairy Platform (GDP), and the IFCN Dairy Research Group in 2018 aims to compile all literature regarding the effect of dairy cow ownership on poverty reduction (FAO, GDP, & IFCN, 2018). From the literature found, only randomised controlled trials were selected for further analysis to maximise accuracy of results. Key results are broad and target a variety of metrics.

A study from the International Livestock Research Institute reports that cattle can be sold in times of crisis. In this way they act as insurance. They provide meat, milk, skins and leather. They also provide draught power and fertilization. They therefore contribute to three major pathways out of poverty; 1) Increasing resilience; 2) Improving smallholder and pastoral productivity; 3) Increasing market participation (ILRI, 2008). Rawlins et al. found increases in height-for-age z-scores of about 0.5 standard deviations for children in households that received dairy cows (Pimkina, Rawlins, Barrett, Pedersen, & Wydick, 2013). Similar findings are reported from Ethiopia by Hoddinott et al. where cow ownership reduced child stunting by seven to nine percent (Hoddinott, Headey, & Dereje, 2015). Three studies report increases in crop yields (as much as a 175 percent increase in one study) (Bayer & Kapunda, 2006; Kayigema & Rugege, 2014; Lwelamira, Binamungu, & Njau, 2010). Six studies reported an increase in total income attributable to dairy cow ownership that ranged from 27 to 115 percent (Ahmed, 2003; Lwelamira et al., 2010; Mian, Fatema, & Rahman, 2007; Nicholson, Thornton, & Muinga, 2004; Squicciarini, Vandeplas, Janssen, & Swinnen, 2017; Tefurukwa, 2011). The main benefit of participating in a dairy hub or cooperative was deemed to be access to inputs and management advice. Five studies found reported that improved dairy management resulted in substantial increases in dairy income (46 to 600 percent) (Alemu & Adesina, 2015; Argent, Augsburg, & Rasul, 2014; Bayemi, Webb, Ndambi, Ntam, & Chinda, 2009; Kidoido & Korir, 2015; Mian et al., 2007; Rao, Omondi, Karimov, & Baltenweck, 2016). Three studies found significant positive impact on household food expenditure (Ahmed, 2003; Mian et al., 2007; Tefurukwa, 2011). Overall, all studies showed substantial positive impact on a wide range of indicators relating to poverty alleviation.

3 THE CURRENT NEW ZEALAND/COLOMBIAN CONTEXT

3.1 RELATIONSHIP

New Zealand and Colombia have maintained a friendly relationship since diplomatic relations were established in 1978 (Cancilleria de Colombia, 2019). Colombia has primarily exported coffee, animal products for pharmaceuticals and flowers to New Zealand. The total value of exported goods has been between \$14 and \$19 USD million annually between 2015 and 2018. New Zealand's primary exports to Colombia have been a variety of machinery and parts. The total value of exported goods has been between \$8.5 and \$9 USD million annually between 2015 and 2019 with the exception of a peak year in 2017 of \$14 USD million, primarily due to an increase in turbojet machinery exports (International Trade Centre, 2019).

Within recent years, New Zealand has increased investments in Colombia. In 2013 it was stated that New Zealand would invest \$2.9 USD million into developing agriculture in Colombia (Vance, 2013). According to a statement made in 2018 by New Zealand Under-Secretary for Foreign Affairs, Fletcher Tabuteau, New Zealand businesses are investing in "dairy development and water catchment management projects and are moving into the agribusiness, food processing, retail, construction, aviation, and health sectors" (Tabuteau, 2018). New Zealand have also invested \$0.65 USD million and their expertise in mine clearance towards the post-conflict efforts in restoring peace and productivity back to the Colombian people (El Mercurio, 2018; HALO Trust, 2018).

3.2 NEGOTIATION

New Zealand and Colombia's FTA is established through the Pacific Alliance of which New Zealand has been an observer of since 2012. This FTA is a first for their relationship. At the time of writing, there have been six rounds since negotiations began in June 2017. The aim was to have the agreement finalised in 2018, however, this has not been accomplished. (MFAT, 2018a)

The overarching goals of the FTA are to reduce trade barriers, allow better access in the services trade, level the playing field for international trade, and to deepen the relationship between New Zealand and Colombia, but also Latin America and Oceania (MFAT, 2018a). A complete list of the current FTA chapters under development can be found in Appendix 1.

3.3 COMPARISON OF DAIRY INDUSTRIES

The primary issue raised from the negotiation has been the concern of the Colombian dairy industry (Murcia, 2018). New Zealand is currently the world's top exporter of dairy, exporting 20 percent of total world exports (Workman, 2019). Colombia, on the other hand, has an uncompetitive dairy industry utilizing outdated technology, with underdeveloped management systems, in an environment with lacking support for public services such as power and transportation. The result of this is that milk production is low, susceptible to

volatile weather patterns, and 41 percent of the milk is sold through informal channels (Business Bridge, 2015; OECD, 2015; Oxfam, 2015). The dairy industry in Colombia represents 10 percent of agricultural GDP, 2.3 percent of national GDP, and supports over 600,000 jobs (Business Bridge, 2015).

The standard tariffs on dairy into Colombia that New Zealand is subject to are as high as 98 percent for many products, including milk powder (48 percent of all New Zealand dairy product exports in 2018) (Infoshare NZ, 2019; WTO, 2019). Various parties from all stages of the supply chain of the dairy industry in Colombia have publicly expressed their concerns that increased New Zealand dairy exports brought into the country due to eliminated tariffs will destroy the already-struggling Colombian dairy industry (CONtexto ganadero, 2018; Dinero, 2018; Vanguardia, 2018).

Colombia are currently trying to develop their struggling dairy industry through the CONPES 3675 policy. This policy, developed by the Ministry of Agriculture and Rural Development, otherwise known as the National Competitiveness and Productivity Policy of the Dairy Sector, was signed in 2010 in an attempt to increase the output of the Colombian dairy industry (Consejo Nacional de Política Económica y Social, 2010). Specifically:

1. To reduce production costs of the primary production steps of the chain in the main dairy regions, by incorporating technological advances and implementation of innovative production processes.
2. To promote associative and horizontal and vertical integration schemes in production areas to achieve economies of scale and strengthen the negotiation power for production, processing and commercialization of products of high added value.
3. To increase competitiveness through development of productive clusters, in such a way that the areas with competitive advantages for milk production receive investments and reach optimal conditions for its development.
4. To expand and supply domestic as well as international markets with quality dairy products at competitive prices to improve the profitability of the whole chain.
5. To strengthen the governance and institutional support of the sector, in terms of availability of information and legal control of the authorities in the production and marketing of milk and its derivatives.

3.4 NEW ZEALAND'S HISTORY OF INVESTMENT IN COLOMBIA

The Colombia Dairy Value Chain project was conceptualised in 2013 to identify the key issues the Colombian dairy industry is facing and how New Zealand innovation can benefit production. 170 farmers from Colombia were invited to tour the local dairy industry in New Zealand (CONtexto ganadero, 2014) and a team of experts from New Zealand visited the dairy regions in Colombia (MinAgricultura, 2014). The New Zealand team, led by research and development group, Agribusiness, concluded that there was a good climate for developing the dairy industry further (Vanguardia, 2014).

The project was eventually initiated in 2015, partnering with four dairy associations and supporting 40 farmers. From the New Zealand side, it is overseen and funded by the Ministry of Foreign Affairs and Trade (MFAT) Aid Programme and lead by the Agribusiness Group. From the Colombian side, it is directed by the Ministry of Agriculture and Rural Development while the research and development are organised through Agrosavia (formally Corpoica). Propais are also consulted due to their administration of the CONPES 3675 policy. New Zealand have invested \$2.65 USD million towards the project while Colombia have invested around \$0.65 USD million. (FAT NZ, 2017)

The aim of the project is to achieve three outputs; a network of target farms that have adapted and validated the proposed methods, improved farmer associations provided with business development support, and research towards extensions of the programme to enhance the delivery capability. (FAT NZ, 2017)

New Zealand specialists were able to identify and correct various ‘quick-fixes’ including the correction of soil pH, improved record keeping, and pasture development and management. However, the key outcome from the project is that Colombia is burdened by the use of the U.S. system of expensive concentrate feeding and the use of larger cattle breeds. One of the key aims of the project is to adapt the use of pasture-based feeding by optimising the growth of local pastures in order to decrease the cost of using imported concentrate feed (40 percent of milk production costs in some areas). New Zealand also uses smaller breeds of cattle which, although produce less milk per cow, do allow for more production per hectare. From 2016 to 2018, the project had achieved improved milk production by 77 percent and increased profit of 139 percent. Development is now planned for the extension of the programme nation-wide. The key task for this is to establish an extensionist diploma to be offered at various facilities around the country that will teach and qualify advisors to educate farmers about improved dairy production. The aim of the project is also to produce supporting resources for all activities in order for public publication.

4 CASE STUDY 1: EU INVOLVEMENT IN COLOMBIA

4.1 INVOLVEMENT FROM GOVERNMENTAL PARTIES

4.1.1 Free Trade Agreement

The EU/Colombia/Peru free trade agreement has been in effect since 2013 (EU, 2013). The agreement was a part of a new generation of trade deals that incorporated the sustainable development of partner countries in conjunction with other policy. The deal outlines the agreement to assist with internal conflicts in Colombia and help with emerging situations arising from natural disasters. The deal also mentions the need to combat inequality and poverty in the post-conflict phase (European Parliament, 2013).

The EU also required for Colombia to create a working plan in regard to the substantial work that they deemed necessary in the field of human, environment

and labour rights. In support of this the EU and Member States provided \$1.68 USD billion between 2000 to 2012. This money was directed to local productivity development and income generation, strengthening local institutions and citizen participation, and to human and victim's rights (European Parliament, 2013).

The FTA brought in a progressive tariff schedule on dairy products increasing quotas from 4000 metric tons to unlimited and extra tariffs from the high 98 percent on some HS codes down to 0 percent over the course of 15 years (European Commission, 2012).

4.1.2 Large-Scale Contributions Towards General Development

The EU's multiannual indicative programme (MIP) 2014-2017 for Colombia had a budget of \$74 USD million and provided support for two sectors; local economic development and institutional strengthening, and sustainable trade investment, focused on using trade as an instrument for poverty reduction (European Parliament, 2018).

In 2016, a post-emergency EU Trust for Colombia with a budget of \$105 USD million was established. The fund's objective is to support the implementation of the peace agreement, particularly in rural areas which 'have been disproportionately affected by the conflict' (European Parliament, 2018).

4.1.3 Direct Contributions Towards the Dairy Industry

In response to the negative reaction to the introduction of EU dairy products into Colombia during the FTA (Portafolio, 2010; Semana, 2010; Tiempo, 2010), the EU agreed to allocate \$33 USD million over a period of eight years (2010-2018) to support the implementation of the CONPES 3675 policy (El Espectador, 2018). The investment from the EU was added to the \$100 million USD budget from the Colombian government with the aim of carrying out practical solutions to achieve the goals outlined in the CONPES 3675 policy (El Espectador, 2018).

Four regions were assisted; Cundinamarca, Boyacá, Antioquia and Nariño. Workshops and training sessions were set up with local farmers to increase productivity. Basic innovations such as the usage of silage were complemented with higher level managerial lessons and the movement was to convert farms towards silvopastoral methods. Propais also worked with over 250 companies in order to develop management and marketing skills. The functions of internationalisation including the strict regulations for entering the European market were also discussed and fairs were set up to assist with networking. Six laboratories were enlisted to help with research and development and produce information resources for many various of the supply chain. Over the course of the project, over 70,000 producers were assisted, over 40,000 animals were genetically improved, over 4000 companies were given access to finance and 60,000 hectares were developed. A 7 percent increase in income was observed on average per farmer. (El Espectador, 2016, 2018; European Commission, 2016; Propais, 2019)

4.2 INVOLVEMENT FROM PRIVATE SECTOR

The three largest investments have come from European dairy giants Nestlé, Danone and Parmalat (who were later bought by Lactalis Group).

4.2.1 Nestlé

Nestlé was founded in Switzerland² in 1866 and originally produced infant food (Nestlé, 2019a). Through many mergers and acquisitions Nestlé has grown to be the number one food producer in the world. Nestlé employs more than 300,000 people world-wide, operating in over 80 countries (Encyclopedia Britannica, 2019; Statista, 2018).

Within Colombia, Nestlé provide income to 4,000 local dairy farmers and a further 10,000 people working in other links of the supply chain (Nestlé, 2019b). Their first investment into the country was in 1944, building their first plant in Bugalagrande. Nestlé continued to invest in production facilities in Colombia, primarily focussing in Caquetá (Nestlé, 2012a).

In 2007, Nestlé began work with Centro para la Investigación en Sistemas Sostenibles de Producción Agropecuaria (CIPAV) to develop a silvopasture project. The project is directed to Colombian dairy farmers in order to provide advice on the latest technologies, animal nutrition, animal genetics and farm infrastructures. By 2012, the project had worked with ten pilot farms across 234 acres. This period saw the income of the farmers rise by 47 percent on average, milk production increase from 4.8 litres to 6.2 litres per cow per day and employment increase by two persons per farm on average. In total, more than 6000 farmers received loans and training through the project. (Dinero, 2013; Nestlé, 2012a, 2012b)

Following from the success of the initial projects. Nestlé secured financing from the Multilateral Investment Fund (MIF) to invest further in the silvopasture methodology in 2015. A total of \$1.5 USD million is to be invested as loans for farmers and technical assistance. 100 farmers are forecasted to benefit from this, facilitating the partial conversion to silvopasture farming. Increases in milk production per hectare of 20 percent from the third year and approximately 50 percent through the fifth year were projected. (BID, 2015)

4.2.2 Danone

Danone was originally founded in 1917 in Barcelona but later restarted in France in 1929. Today, Danone operate in more than 120 countries with more than 100,000 employees. (Danone, 2018)

After two unsuccessful negotiation periods with Colombian companies Noel and Alpina, Danone eventually made an alliance with Alqueria in 2007 (UNAL, 2016). Alqueria, founded in 1959, were the first Colombian company to produce UHT milk in bags which caused rapid growth in 1996 and incited a period of 40 percent annual growth (Dinero, 2017). Through the agreement, Danone committed \$110 USD million towards the construction of a new yogurt production facility in Cajicá and the development of new products (Portafolio, 2008). Danone would begin producing two of their yogurt brands at this facility. The plant was reported to supply 400 direct and indirect jobs (Dinero, 2008). As

² While Nestlé was founded by Switzerland which is not part of the EU, its operations are spread across the continent with a total of 115 factories. As such, from an operational point of view, Nestlé are subject to EU policy. Furthermore, as the largest food and beverage company in not just Europe, but in the world, Nestlé also have a large stake in contributing to EU policy. For these reasons, Nestlé is considered just as relevant in under the context of this report as any other dairy company founded in an EU country.

of 2018, Danone have left Colombia, selling their 51 percent of shares back to Alqueria (El Tiempo, 2018).

4.2.3 Parmalat

Parmalat was founded in Italy in 1961 (Parmalat, 2019a) and were eventually bought by Lactalis Group in 2011 who own an 83 percent share in company (Parmalat, 2019b). Today, they operate in 24 countries and employ 26,000 people (Parmalat, 2019c).

Parmalat launched in Colombia in 1995. Parmalat bought Proleche in 1998 and with it a new product line and expanding their national presence. Today, Parmalat company employs 1,300 people nationwide in Colombia. They currently operate five plants in the country where they primarily produce milk (UHT, condensed and powdered) and yogurt. (Parmalat, 2019a, 2019d)

5 CASE STUDY 2: NEW ZEALAND INVOLVEMENT IN CHILE

5.1 INVOLVEMENT FROM GOVERNMENTAL PARTIES

New Zealand and Chile signed a FTA that came into action in 2006 as part of the P4 agreement along with Brunei Darussalam, Chile, Singapore (MFAT, 2017). In 2016, Chile and New Zealand both joined the Trans-Pacific Partnership Agreement (TPP) FTA along with 10 other Pacific Rim countries (MFAT, 2018b).

The current FTA with Chile contains considerably less detail regarding the development of the partner nation when compared to the EU-Colombia agreement. Whilst there are no sections relating specifically the development of the dairy industry specifically, there are certain clauses that discuss the development of Chile as a whole. In particular, under areas of cooperation, there are several suggestions towards supporting job creation, sustainable growth and sharing of skills as well as emphasis on workshops, seminars and tours, etc. (MFAT, 2016b). However, these are merely suggestions.

The parties committed to promote and strengthen an open trade and investment environment that seeks to improve welfare, reduce poverty, raise living standards and create new employment opportunities. It is also noted that parties acknowledge that inclusive economic growth includes a more broad-based distribution of the benefits of economic growth through the expansion of business and industry, the creation of jobs, and the alleviation of poverty. A Labour Council was also established to meet biannually in order to manage labour rights. (MFAT, 2016b)

The primary element of training and sharing of techniques was the TecnoKiwi programme led by Corfo, the Chilean government's economic development agency and New Zealand Trade & Enterprise (NZTE).

The TPP FTA agreement introduced a progressive elimination of tariffs from 5.2 percent on most milk products down to 0 percent over an 8-year period (MFAT, 2016a).

5.2 INVOLVEMENT FROM PRIVATE SECTOR

The primary investor in the Chilean dairy industry is New Zealand co-operative Fonterra. Manuka and Chilterra are the two other New Zealand-backed companies running large-scale operations in the region.

5.2.1 Fonterra

The New Zealand Dairy Board (NZDB) – formed in 1923 – had been the sole overseas marketer of New Zealand milk and was controlled by the two largest cooperatives (New Zealand Dairy Group and Kiwi). Together they were responsible for 95 percent of New Zealand dairy production when they were granted special legislation to unite, forming Fonterra in 2001. (Nilsson & Ohlsson, 2007)

In 2002, Fonterra created a joint venture with Nestlé called Dairy Partners America (DPA) with the aim of increasing presence in the Latin America, strengthening local brands, forming alliances and making acquisitions behind country borders and trade barriers (Chisholm, 2009).

The NZDB had purchased 51 percent of Chilean milk producer, Soprole in 1987. Fonterra inherited this share of Soprole which in 2004 was Chile's largest milk processor, processing 22.5 percent of the total milk received by industrial plants (Fazio, 2000). The NZDB had previously been regarded as 'passive investors' however, under the new focus of Fonterra, New Zealand's operations in Chile intensified through Soprole (Chisholm, 2009; Gent, 2006). Fonterra would attempt to buy the remaining shares of Soprole from fellow key shareholder, Fundación Animat, and would eventually purchase them in 2008 for \$200 USD million bringing their total ownership of the company to 99.4 percent. They also acquired 86.2 percent of Prolesur, the branch which takes care of the process of buying and processing milk from producers. (Chisholm, 2009; Vélez, 2008)

Fonterra worked through Prolesur to assist farmers with on-farm services and education for farmers in conjunction with the TecnoKiwi programme. Also, through their annual trips around 100 farmers have visited New Zealand to learn best practices. (Oram, 2009)

5.2.2 Manuka

Manuka bought 47,000 hectares of land in 2008 and worked towards developing it into a world-class dairy operation. The farm is the largest dairy operation in Chile, supplying 8 percent of the nation's milk. In 2019, Manuka opened an institution to teach production of milk based on the grazing technique, milk quality, animal health, agribusiness and human resources. According to a Manuka spokesperson, Manuka "has constantly sought to help its employees to develop personally and professionally, enhancing their skills, recognizing their efforts, increasing their experience and providing them with new and updated knowledge". On average they contribute 12,000 hours of training each year including trips to New Zealand. (Manuka, 2019; Mercopress, 2008)

5.2.3 Chilterra

A joint venture between New Zealand and Chilean investors, Chilterra, formed in 2006, owns and operated six dairy farms on 1091 hectares (edairynews, 2013; Waibury, n.d.).

6 DISCUSSION

6.1 CASE STUDY ANALYSIS

When comparing the FTAs from both case studies, it is clear to see that the EU-Colombia agreement contains more detail in regard to inequality and poverty alleviation. There are many more clauses that state the dedication of the EU in working towards helping to support Colombia as a developing nation. The New Zealand agreement with Chile does contain certain details to this regard, however, they are not a prominent theme. Nonetheless, neither agreement clarifies exactly how the statements in the policies relate to real-world in terms of measurable actions nor outcomes. This is understandable given the broadly-scoped topic the policy is addressing is both ambiguous to measure and dependant on many unpredictable external factors. When comparing the EU and New Zealand perspective in these agreements, it can be argued that the focus on poverty alleviation established from the EU does at least provide a base structure for the actions that were put in place.

New Zealand contributed more to the development of the Chilean dairy industry through the private sector in the form of FDI than through governmental support. Comparing this with EU's involvement with Colombia, it is clear that both Colombian and European governmental parties have been working together under a common set of goals (CONPES 3765), and funding has been generated for this. While the reach of the investment from the EU has been wide, the increase in income per farmer is much less than observed through the Colombian Dairy Value Chain with New Zealand. The eight-year project with the EU only achieved a 7 percent increase per farmer in comparison with the 139 percent increase observed over two years with New Zealand. The EU project affected many more people, however, the validation of the New Zealand techniques shows a much more promising development. The apparent improvement of New Zealand involvement compared to European thus far can be attributed to a number of factors. Firstly, the New Zealand project was targeted to a much smaller number of farmers which meant there was more facilitation of targeted support. Secondly, New Zealand collaborators would argue that the New Zealand pasture-based farming techniques and smaller genetic breeds of cattle are more cost-effective than the concentrate feeding systems with larger cows that are more suitable to Europe and the U.S. While the EU did provide a written promise to support the Colombian dairy industry through their negotiations, and funding was supplied, it was obvious that the intended outcome was not as productive when compared to the work undertaken by New Zealand in Colombia thus far. For optimal progress to be observed, deeper research and development and key, measurable outcomes are required to back up such commitments should they be made in FTAs.

In comparing the involvement of both private sectors, it is clear that New Zealand's involvement in Chile more directly targets the production of raw milk and milk powder end of the supply chain. New Zealand is therefore supporting the rural lives of those working on the farms through employment opportunities and the development of technical experience. Two out of the three EU companies in Colombia are more focussed on the production of processed dairy products such as yogurts and cheeses and therefore do not directly support the

rural lives of those working in the farms in this sense. Nestlé is the exception to these which focusses on both production of processed products and the development of farms through their silvopasture project. In this regard, New Zealand's involvement from the private sector, and Nestlé's involvement, more directly target the lives of those living in communities affected by poverty.

6.2 NEW ZEALAND IN COLOMBIA

6.2.1 Open Trade Policy

When analysed at face value, it could be argued that there could be some stakeholders in New Zealand who would support an open trade policy regarding dairy imports to Colombia due to the increased export potential. This interest could originate from the perspective of those who see Colombia as nothing more than a potential market. If the fears of the Colombian stakeholders are valid and this would indeed destabilise the dairy industry in Colombia, this would eventually allow for even more profitable New Zealand export potential as the internal Colombian supply capability decreases. This decrease in Colombian milk production would cause a detrimental effect on the livelihood of the rural Colombian populace who rely on dairy income and, in this sense, negatively affect the state of poverty in Colombia. Some may argue that redistribution of employment is a natural consequence of any free trade agreement and that due to the principle of comparative advantage, there must be both winners and losers for the economy to improve overall. This improvement on the economy would then induce further benefits for those living in poverty in the long term if industries that are favoured by comparative advantage (for example coffee and flowers) can be developed to generate employment. In theory, this stronger Colombian economy would also facilitate the government to afford more support for rural areas.

However, under further analysis, there is a deeper truth to the situation. It is true that the reduction of European and U.S. tariffs that progresses yearly does pose a significant threat to the Colombia dairy industry if Colombia is not able to reach a level of milk-production competitiveness internally. However, the threat of New Zealand exports is only relevant should New Zealand parties actual intend to export to Colombia. Furthermore, the increases in dairy production as a result of the support efforts occurring in Colombia thus far already show signs of opportunity. The Colombian industry is already generating interest from many experienced international parties and contributing a significant amount of research themselves. If the Colombian dairy industry is able to develop to a point of competitiveness, New Zealand imports will no longer be more affordable. If this development occurs through partnerships with European stakeholders, it will be harder for New Zealand to develop entry modes at a later stage. Under this consideration, it would be advised that New Zealand actively take part in the development of the Colombian dairy industry in order to increase their stake in the future production increases and profitability. The opportunity for collaboration and investment between New Zealand and Colombia, rather than direct exporting presents a more sustainable and arguably more profitable outcome for all parties involved. Under this premise, the worries of increased imports from New Zealand, as expressed by the Colombian dairy industry in various media outlets, become irrelevant.

6.2.2 Developing the Colombian Dairy Industry

Key issues of the Colombian dairy industry have been identified through the Colombian Dairy Value Chain project and preliminary communication, research, and development has achieved a positive indication of improving productivity and a foundation for continued progress.

This research from New Zealand joins a larger pool from many invested parties. Given that one of the key issues identified by this research is the lack of integration of research and development, it follows that there will be an increase in the availability of this information which will lead to accelerated development from all invested parties. The Colombia Dairy Value Chain project has already identified and collated a wide range of scientific data regarding pasture development and breed genetics.

However, increased productivity on the farm alone will not make the Colombian dairy industry competitive. The supporting infrastructure such as transport, services, communication networks and support from local governance will be the primary bottlenecks faced by the industry. The research from Colombia, New Zealand, and Europe all establish that there must be more integration of all of these aspects in order for the dairy industry to compete with the rising international pressures.

These are larger, more embedded issues and there are relatable elements that affect the development of every industry in Colombia. The EU are working towards supporting Colombia through this period with the funding from the post-emergency EU Trust and multiannual indicative programme and New Zealand have also put \$0.65 USD million dollars towards the effort. The most significant potential for developments under this umbrella of support is that there is opportunity through the aim of supporting the post-conflict recovery to develop the production of milk as a means of generating new income for those displaced by the peace agreement. The consistent view from Colombians interviewed was that the solutions to the internal issues of Colombia are indeed internal also. While the support, monetary or otherwise, from external parties is very much appreciated and utilised, the deeply ingrained issues of infrastructure development and integrity within governments are issues that must be predominantly tackled internally.

New Zealand is able to contribute to these initiatives, however, given the scale that the EU is able to finance and implement the support effort, in many ways it could be more effective for New Zealand to collaborate with the EU with any efforts in this regard, rather than develop independent initiatives. New Zealand's most impactful attribute is the extensive knowledge of dairy production innovation – especially given the suitability to transfer techniques due to the climate and terrain that has already been established. Innovations in areas such as breeding, pasture optimisation, seasonal planning, and farm management will require the institutional framework in order to be transferred. It is therefore important that the FTA accommodates the collaboration between groups from the New Zealand Ministry of Foreign Affairs and Trade Aid Programme and Colombian Ministry of Agriculture and Rural Development. Due to the specificity of the industry and the existing research, measurable outcomes in production gains can be identified and an action plan can be established. This can be integrated within the FTA in order to establish commitment from both

parties. As the stakeholders invested in the development process in Colombia are also part of the private sector of the New Zealand dairy industry, this will interest in the private sector and encourage the facilitation of FDI.

It is important to note that the parties interviewed from both New Zealand and Colombia that are directly involved with the Colombian dairy industry are not concerned with the free trade agreement as a means of facilitating development. The Colombian Dairy Value Chain project was initiated prior to the discussion on the free trade agreement and is socially based with the intent to improve the lives of the rural populations. The primary focus of these groups is on the direct collaboration between the NZ MFAT and Colombian MADR. They see the main driver of collaboration between nations as an agreement between these two high-level institutions, rather than the holistic free trade agreement.

Finally, it must be noted that all interviewed parties are accepting of foreign investment. A representative for a local dairy association stated that there were three conditions that must be met. Firstly, that investments create employment. Secondly, that investors consider the social effects of their input with respect to the community and culture. And finally, that investors do not damage the environment. ProColombia, the government agency promoting foreign investments, stated that they were supportive of investments or strategic alliances with dairy companies and cooperatives with the intent of building dairy production infrastructure such as pasteurisers, milk powder facilities, and cheese and yogurt factories. ProColombia did state that these infrastructure investments were preferred as it meant that the local production of the raw product was conserved for local producers.

6.3 ANALYSIS AGAINST THE GLOBAL MULTIDIMENSIONAL POVERTY INDEX

Given that the majority of poverty is in the rural areas, the developments supporting the dairy industry are most impactful when targeted at the farming communities e.g. the milk producers. Improved dairy production in these areas has two main benefits; employment and infrastructure.

If productivity increases, this reduces the need for as many workers, therefore decreasing employment. However, increased production also increases profitability and, due to the potential capital introduced from New Zealand in order to expand operations, increased employment opportunities are likely.

Secondly, if dairy companies wish to optimise their productivity, it would be in their best interest to improve the transport and services infrastructure. Not only do overseas companies have a higher standard of expectations for the facilities offered to their workers, many services are core business requirements that also benefit the community.

The benefits can be analysed across each indicator of the three MPI categories. To summarise again; Health indicators include nutrition and child mortality. Education indicators include years of schooling and school attendance. Standard of Living indicators include cooking fuel, sanitation, drinking water, electricity, housing and assets.

The most obvious conclusion is that employment generates an income for families. This provides the finances to afford health care and food which increases nutrition and decreases child mortality. This also provides a payment method for better schooling and school resources. It also takes the pressure away from children from having to work, allowing them to study more, strain their bodies less. Income also allows for each of the indicators of the Standard of Living category such as cooking fuel, assets, electricity and housing to be purchased, established or maintained.

In terms of infrastructure improvements that also align with dairy production benefits, the key improvements are to roads, water supply and communication networks. Roads increase access to education and healthcare. Communication networks improve efficiency of daily tasks and accessibility to online information, and water supply obviously impacts the Standard of Living indicator, but also improves Health if the improved water supply is cleaner. These are the standard factors that can be derived from the literature, however, the implementation of these factors is completely dependant on the size and type of investment made. The outreach to the communities is dependant whether it would be required for such infrastructure to passthrough the localities of those in need. For example, a single block of land purchased from a single investor that is then managed by a local and integrated into the current system does not infer that any large investment in supporting infrastructure is required. However, investment into a higher-level company that results in the possibility for operational decisions to be influenced, and the introduced capital to realize such changes, can result in the third party investing in better infrastructure.

7 CONCLUSION

A free trade agreement's primary purpose is to outline a reduction in tariffs that result in cheaper trade between nations. This is always done with the intention of developing all parties involved. Under the umbrella of development, a free trade agreement is also an opportunity to agree on many other intentions, discuss how they can be achieved, and implement institutional change to achieve them. A free trade agreement is a conversation that forms a relationship with each parties' goals aligned. This conversation is documented in the form of a policy document that is signed by both parties to show their commitment to their relationship and their aligned goals.

While a free trade agreement is not necessary for New Zealand and Colombia to work together in the dairy sector with consideration of poverty alleviation, the Pacific Alliance FTA presents an opportunity to ensure that intentions are aligned, and institutional changes are planned within the context of wider agreements. The final outcome of this body of work is to provide recommendations of how to document this conversation in order to ensure commitment to this development and the maximisation of poverty alleviation.

New Zealand's previous interaction with Chile showed more input from the private sector in New Zealand than from governmental stakeholders. However, the development with Colombia so far is showing that there is already significant evidence that New Zealand and Colombia can work together to develop the Colombian dairy industry and positively impact rural poverty. The clauses

documented in the European-Colombian FTA do outline commitment to social intentions, however, these higher-level goals should be integrated with an accompanying document that specifies more measurable outcomes derived from longer-term research and development. The work New Zealand has performed thus far in Colombia showcase the ideal methodology of research and development that is required to estimate such outcomes.

Under the premise that it is more competitive and arguably more profitable for New Zealand to invest into Colombia rather than export in terms of an entry mode, the discussion of tariffs becomes irrelevant. In the case of New Zealand and Colombia, Colombia presents a fertile land available for foreign investment and suitable for transfer of New Zealand farming techniques. Investment with the intention to develop the industry and reach international competitiveness is welcome by many Colombian parties and presents a more profitable opportunity to New Zealand investors over exporting. ProColombia have specifically expressed interest for FDI in milk production infrastructure such as pasteurisation plants, milk powder facilities, and yogurt and cheese factories. However, also important for a documented agreement is that the concerns of the host country are considered. These key points are that the investing party must create employment, consider the social factors of the community and culture, and maintain the local environment.

The two primary benefits to poverty alleviation from improving the dairy productivity are increases in employment and infrastructure. An increased productivity in the dairy sector can lead to less employment due to the implementation of innovative techniques from New Zealand that require less labour. However, with an increase in productivity comes an increase in profitability that when supported by the New Zealand capital has the potential to increase employment opportunities. Furthermore, the development of infrastructure required for optimal dairy production output also benefit the rural communities through improved roads, communication networks and water supply should the investment be of a large enough size in order to justify such costs.

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9 APPENDICES

9.1 APPENDIX 1: ITEMS UNDER REVIEW IN NZ-PACIFIC ALLIANCE FTA

- Goods market access
- Rules of origin and procedures related to origin
- Trade facilitation and customs cooperation
- Trade remedies
- Sanitary and phyto-sanitary measures (SPS)
- Technical barriers to trade (TBT)
- Cross-border trade in services
- Investment
- Temporary entry for business persons
- Financial services, maritime services and telecommunications
- Electronic commerce
- Government procurement
- Intellectual property
- Competition policy and state-owned enterprises
- Environment
- Labour
- Trade and Gender
- Good Regulatory Practices
- Cooperation (including domestic regional economic development)
- Small-and medium-sized enterprises (SMEs)
- Indigenous issues
- Legal and institutional chapters