Economic Integration and Value Chain. Case study from Central America Dairy

Working paper

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Introduction

Central America has the oldest and deepest integration process in the Americas. It has evolved from a market integration process to a broader process that includes social common activities, some common political and judiciary institutionalism, among others. However, trade matters are still the core of the integration since is the only arena where all Central American countries convey. Since 1960, this region has been opening internal trade to most regional products and today 95.7% of total goods have a harmonized external tariff and can freely move within Central American borders.

Institutional differences among countries have impeded to consolidate a formal common market and the integration process have taken a “variable geometry approach” (Martínez-Piva and Cordero, 2009), since those countries most interested or capable of moving faster towards a common trade regime, have been doing so, leaving others behind. The variable geometry approach taken in the region has permitted also that countries develop their external trade agenda separately, so postponing the creation of a common external tariff and an internal common market.

The combination of the trade integration process advances, mostly focused on trade creation and trade facilitation, and national institutional differences (market structures, groups of power, level of development, public support to producers, etc.) have determined how productive chains interact in this region.

Formation of regional value chains (RVC) within the Central American integration process is based on trade and foreign direct investment (mostly intra regional investments flows) that, is seen as a modality by which firms vertically and horizontally integrate separate economic activities located in different countries in order to capture a set of transactional benefits derived from placing these activities under common ownership (Dunning and Robson, 1987). This explanation of the multinational firm as a coordinated and integrated unit of decision taking which engages in cross-border value-adding activities relies on a dimension new to this area, namely that of market failure. In Central America, though regional firms are small compared with other multinationals from abroad, many have engaged in regional investments so integrating horizontally or vertically some of their activities. Most regional FDI occurs by the quest of productive assets since trade have permitted, for most products, the creation of RVC through regional borders.

This paper analyses the creation of RVC due to regional integration process. Countries and regional Institutional matters are identified so to understand the creation and specialization of countries that have similar endowments.

Problem

Though economic integration process in Central America last for more than 50 years, there are few research studies on how this process have facilitated the creation of RVC, weather by trade among neighboring countries, or by FDI.

Diverse institutional contexts in each country, have determined how firms operate and how they interact with other local and regional firms. In countries like Costa Rica and El Salvador, local entrepreneurs have developed a national industry in sectors like dairy, capable of trading large numbers of products and even investing in neighboring countries as part of an industrial strategy. Other, like Nicaragua and to some extent, Panama, extra regional FDI plays an important role in the creation of national and regional value chains.

To provide analytical evidence of the interaction of the regional integration process and the existence of RVC in a region where little analysis has been made on these matters constitute the main challenge of this paper.

Objectives

To determine conditions to enhance economic integration through RVC amongst developing small economic countries.

To determine the impact of vertical integration in economic integration.

To analyze the impact of trade and FDI in the development of different types of economic integration within the Central American Countries.

Conceptual Framework

Economic Integration and international trade

Balassa (1961) categorized different types of integration based on its level or deepening economic relations. From our point of view the most suitable definition is classical one that considered 5 levels of economic integration—free trade, customs union, common market, economic union and full economic integration- the last is the deepest and create a single market with common institutions. In line with Balassa, Markevicius (2011) stresses that the first step in an integration process is to integrate economically and after a set of trials and errors the countries can take steps forward to more complex integration levels until arriving to a political integration.

Central American countries have as a goal the creation of a common market. Though currently its process reached a superior level to a free trade area, it is not yet a perfect customs union since some external tariffs differ from country to country and not all products move freely in this territory, However, 95,7% of tariffs are harmonized and the region tends to become a custom union.

Regional economic integration has become an important factor in shaping the global pattern of investment, production and trade (Dunning, 1998; Kumar, 1994) and Central America is not an exception. International and regional trade is increasingly taking place in tightly coordinated forms, either as intra-firm trade or as trade between legally independent firms in quasi-integrated value chains and production networks. UNCTAD estimates that transnational corporations (TNCs) account for about two-thirds of world trade: one-third is intra-firm trade; the other third is directly affected by TNC sourcing strategies. Simple spot market transactions, where independent producers manufacture without knowing in advance who their customers will be and which product and process standards they expect them to comply with, are no longer the prevalent way of doing business. This is particularly relevant for integration processes since they facilitate trade, FDI and even movement of people in cases of deep complex integration processes.

There are at least two types of multinational companies; horizontal multinationals are those firms that produce the same product in different countries and thus predicted to be concentrated among the countries that are similar in both size and in the stage of economic development (Markusen, 1984; Horstmann and Markusen, 1992; Brainard, 1993; Markusen and Venables, 1996). Vertical multinationals are the firms that integrate production vertically across national borders to take advantage of factor price differences (Helpman, 1984; Markusen, 1984). The reduction of the transaction costs is one of the main reasons for these multinationals to go abroad and therefore it is expected that regional integration may promote vertical multinationals and so, the creation of RVC.

Effects of integration and trade liberalization on competition –often imperfect- returns of scale and product differentiations are sensitive and difficult to predict (Norman, 1990 and Yamawaki, 2004). This difficulty permeates this work since

Central American firms may locate headquarters activities such as administration and R&D at home, but may locate procurement and production activities abroad, engaging intensively in intra-industry and intra-firm trade so benefiting from regional differences (Gasiorek, Smith, and Venables, 1991), as it happens in the dairy industry and will be explained later.

Foreign Direct Investments and Economic Integration

Foreign direct investments is seen as a modality by which firms vertically or horizontally integrate separate economic activities located in different countries in order to capture a set of transactional benefits derived from placing these activities under common ownership. This explanation of multinational firms as a coordinated and integrated unit of decision taking which engages in cross-border value adding activities relies on market failures, under perfect competitive market the access to resources would be infinite and the necessity for a company to go abroad will be unnecessary. The configuration of the relationship between cross-border agents is defined by the market failures and the governance structure defined to administrate the exchange of goods. (Dunning and Robson, 1987).

The practical linkage between economic integration and FDI flows has been appraised as a "mutually reinforcing effect" (Dent, 1997) and the two processes were considered intertwined in a sense that regional integration increased preference for local production within the area (Buckley et al., 2001). Economic integration increases the location advantages of the markets inside the trading bloc, and firms from outside may exploit opportunities of servicing these markets via local production by means of FDI. The level of FDI may also rise as firms from outside attempt to jump tariff or non-tariff barriers and to produce inside the region in order to defend their existing market share (Hoon Hyun, ~~2006~~2008).

Amongst different aspects of economic integration we could argue that customs unions may provoke trade diversion since they may increase external tariffs protecting internal markets. In this case in response to trade diversion, multinationals' take a defensive position shifting production to the customs union

(Hoon Hyun, 2006). As regional trade becomes more attractive than extra-regional trade, the level of trade from outside should show negative figures (Viner, 1950) and hence, defensive export substituting investment to local affiliates should show positive increases along with the volume of FDI inflows (Nielsen et al, 1992; UNCTC, 1990). This happened during the first years of Central American integration process, when external tariffs were high as part of the industrialization policy based on an import substitution strategy.

Traditional variables of the determinants of FDI location suggested in corporate investment theory that the size of the host market, growth of the host market, factor prices and potential are related to the static and dynamic effects of economic integration. A sizable market without boundaries enables local firms to realize economies of scale; hence the efficiency and competitiveness within the region should be enhanced (Balassa, 1961; Corden, 1972; European Commission, 1997). In Central America it has enable firms like Dos Pinos to increase its production and efficiency, as shown later. For outsiders, market expansion, demand-led growth, and technical progress induce neutral or negative trade increases while offensive export substituting investment to locally-based affiliates increases accumulative FDI inflows (Nielsen et al., 1992; UNCTC, 1990; Yannopoulos, 1990).

However, economic integration is not only relevant for large multinational firms but also to small and medium enterprises (SMEs) since its production and input chain will find new partners within the region. SMEs can take advantage of cross-border activities, which provide opportunities not only for revenue growth but also the exchange of knowledge and the enhancement of capabilities, which strengthen the long-term competitiveness of the firm. Many SMEs have taken this path in Central America, as dairy firms from El Salvador and Nicaragua have proven.

Current stage of integration in Central America is part of the so called “open regionalism” where integration deepens, facilitates trade and FDI and tend to create or strength regional institutions at the same time that is openly competing in global markets. This characteristic permits the coexistence of two types of FDI: one is focused in the regional market (like dairy producers investing in neighboring countries to have access to important inputs); and the other, focused in using the region as a platform to export towards third counties, mainly the United States (most of these firms are integrated to global value chains and are specialized in particular parts of that chain).

Value Chain analysis and governance

Concept of value chain. Concept of value chain governance.

Before deeping into the concept of value chain and governance it is wise to work with the concept of institutional arrangements and institutional environment. The institutional environment consists of the rules of the game (both formal and informal) which are established in society, within which institutional arrangements function. The institutional arrangements consist in a whole spectrum, ranging from markets at one end to central planning organizations at the other (Slagen, 2003; Zúñiga-Arias, 2008 and ECLAC, 2010). Social scientists has taken a fresh view on value chains, conceptualizing them as governance systems, or arenas where firms with different degrees of power struggle for achieving monopolistic market power, erecting trade barriers to protect innovation rents, and appropriating an increasing share of the overall gains of the value-adding process. International production sharing, where nations specialize in bits of the production processes in which they have the greatest comparative advantage, is central to many recent economic developments and industrialization experiences. In East Asia especially, the path of development typically follows a sequence of producing downstream intermediate exports and moving towards the production of upstream components thereafter (Sim, 2004). Normally, a developed country, which is large, will then specialize in producing the upstream components while the downstream components will be produced by the less developed small-open economy (Sim, 2004). However, among countries of similar size and level of development, like Central American countries, regional value chains tend to maximize efficiency among firms of a relative common size and power by trading inputs or using resources from neighboring countries promoting the coordination and verticalization both horizontal and vertically. The institutional environment in Central America is very diverse and firms face different sets of supports, constraints, regulations, etc. depending on the country they are located. The integration process have not been able to create an homogeneous business environment, which, along with income and costs differences provide incentives to firms to diversify their investments.

The trend towards value chain governance has multiple important development implications, and outcomes vary considerable depending on the concrete patterns of governance. Moreover, these patterns tend to affect producer and consumer groups differently, with positive effects for some stakeholders and negative ones for others.

For example, as large buyers press for lower purchasing prices, they drive their supplier's efficiency up, but at the same time enhance concentration processes and raise entry barriers for small firms. Also, the imposition of more stringent product and process standards puts additional demands on developing country producers and puts many of the weaker small-scale producers in danger, but also opens up certain new opportunities for product differentiation; and support for lead firms may enhance the competitiveness of the whole chain, whereby in most cases suppliers are likely to gain indirectly from increasing market shares; in other cases, however, it may strengthen the lead firm's bargaining power and enable it to appropriate additional buyer rents at the expense of its suppliers.

Methodology

This study will use case study methods to analyze RVC. The main idea of a case study is the deep understanding of special interest issues. In this particular case the researchers will focus in the dairy sector in Central America, especially in El Salvador, Nicaragua, Costa Rica y Panamá in order to understand how regional integration facilitated the creation of RVC.

This document is based on a previous study undertaken by ECLAC for which the consultant visited the different countries and draws the different dairy chain for each country. Besides, the study shows the importance of small business in the region's dairy sector and the coordination mechanisms and power balances among different actors in the value chain.

For this research several meetings with strategic stakeholders were held in situ and several statistical data set where used to describe the different value chains.

In the case of Panamá the authors will based the description and analysis of the value chain and economic integration on secondary sources. Besides statistical data sets will be use to better describe the process of economic integration and value chain.

Results

The dairy sector in Central America. An overview.

ECLAC (2010) showed that the dairy sector in Costa Rica is specialized with different production regions and different firms industrializing the milk. Dos Pinos (cooperative) is the strongest actor in the chain controlling around 80% of the industrialized milk. Small producers are members of the cooperative, so allowing the small producers to get access to better niche markets and to better prices.

Nicaragua has the biggest herd in Central America. The production system is not specialized; hence, they produce both cattle and dairy. Their production systems are extensive in the use of land, and quality control of milk is one of the most important challenges for that country, along with improving small producers' access to consumer markets. The European multinational Parmalat is the biggest player in the dairy value chain of Nicaragua.

In El Salvador the production of milk is developing in specialized herds and in the form of cooperatives and small private firms. One characteristic of the El Salvador diary sector is that local companies are investing in Nicaragua to increase dairy inputs for their firms. They invest in Nicaragua and develop local partnerships with small industries in Nicaragua and produce the national cheese. The cheese is triangulated to the nostalgic markets in the United States of America. This is a clear example of FDI within developing countries and Central American integration, as well as vicinity, has facilitated these investments and dairy product's trade. Dairy tariffs among Central American countries are as low as 0% for yogurt, but also as high as 40% for different types of cheese imports from Nicaragua to El Salvador (assuming this tariff as one important reason for contraband as well). The average dairy import tariffs from Costa Rica to Panamá are close to 17%. And in the case of imports from Nicaragua to El Salvador 31%. Nicaragua has 0% dairy import tariffs from Central America. And Panamá has the world´s dairy import tariffs only with Costa Rican Products. , and confidence for investors have been builded along the years. These two countries have specialized in their relative abundant factors, so Nicaragua is producing raw milk and trading it to El Salvador, where it is transformed into cheese that is later exported to the United States.

There are little studies on the dairy chain in Panamá and the researchers could not find any study on the value chain of milk. But Latin American companies are very interested in the milk production of Panamá. Nestlé and Dos Pinos as well as others South American groups are investing and trading milk in Panamá. Costarrican firm Dos Pinos has invested at least two million dollar (US) on a cooperative in Panamá, which is another example of FDI between developing countries and we could argue that these investments are the strategic response to de aggressive development of the dairy companies in the region. Costa Rica is the main importer of milk from Panamá, and is the main exporter to Guatemala and Nicaragua. This situation underlines the intertwined value chain of dairy products in Central America.

Average yearly Export and Import of dairy products in Central America in tons. 1994 - 2011							
	Costa Rica	El Salvador	Guatemala	Honduras	Nicaragua	Panamá	Imports
Costa Rica		0.06	-	0.33	1.11	7.39	8.89
El Salvador	8.33		1.72	7.78	22.22	1.17	41.22
Guatemala	13.00	6.56		2.56	7.39	2.78	32.28
Honduras	4.17	4.61	1.11		5.22	0.72	15.83
Nicaragua	4.00	1.40	0.24	0.12		2.11	7.86
Exports	29.50	12.62	3.07	10.78	35.94	14.17	

Source: FAO, 2012.

According to FAO (2012), Nicaragua is the country that imports less dairy products from Central America (7.86 tons per year); mainly for two reasons: 1. the low average GDP per capita of Nicaragua and, 2. the high production rate of local herds. El Salvador is the country that has a higher average imports in Central America with 41.22 tons per year, this might be due to the small production area and the FDI conducted in Nicaragua.

Nicaragua is the biggest exporter in the region, followed by Costa Rica Panamá is exporting more than 50% of their exports to Costa Rica.

Main Characteristics of the Dairy Industry in Central America.

	Animals(Head)			Yield (Hg/An)			Production (tonnes)		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
Costa Rica	643,000.00	689,074.00	702,100.00	13,841.00	13,231.00	13,541.00	889,958.00	911,743.00	950,726.00
El Salvador	373,068.00	391,602.00	255,675.00	13,243.00	13,831.00	21,770.00	494,071.00	541,615.00	556,594.00
Guatemala	434,957.00	435,900.00	442,700.00	7,771.00	7,800.00	8,010.00	338,000.00	340,000.00	354,600.00
Honduras	513,393.00	538,131.00	558,877.00	15,515.00	13,081.00	13,229.00	796,506.00	703,902.00	739,351.00
Nicaragua	985,000.00	1,024,000.00	1,039,900.00	7,298.00	7,303.00	7,244.00	718,882.00	747,809.00	753,281.00
Panamá	148,900.00	159,569.00	162,600.00	12,669.00	12,100.00	12,386.00	188,635.00	193,077.00	201,400.00

Source: FAO, 2012.

El Salvador is the country with higher yields, follow by Costa Rica and Honduras. Nicaragua is the country with lower yields in the region. Costa Rica is the country with higher production followed by Nicaragua. Panamá is the country with lower production.

As it is seen in the table bellow, FAO (2012) shows that in a group of 250 countries, Central American countries are in the middle of the table. Several aspect can be described, El Salvador has the highest yield rate of the region (50); Nicaragua has the biggest herd in Central America and Costa Rica the highest production rate.

Position in the Dairy World.

	Yield	**Herd**	**Production**
Costa Rica	70	87	73
Nicaragua	104	75	79
Honduras	72	94	80
El Salvador	50	123	90
Guatemala	98	102	99
Panamá	75	131	113

Source: FAO, 2012.

Dairy Value Chain Nicaragua

Nicaragua has the biggest livestock in Central America. And it is the first exporter in the region.

Dairy firms from Nicaragua are also engaged in vertical integration processes with industries form El Salvador. The State of Nicaragua has several national programs to promote and develop the cattle and dairy sector. There are two main issues that are of much concern to the sector: 1. low specialization; 2. low quality of the milk and weak controls in the processes and; 3. high production cost due to the price of concentrates for livestock.

The problem of specialization is linked to the problem of quality. There are few dairy farms specialized, therefore, many producers look at the dairy production as a sub-product of livestock. This attitude is negatively affecting the quality of milk. Low quality milk is not valued in the large industries of milk.

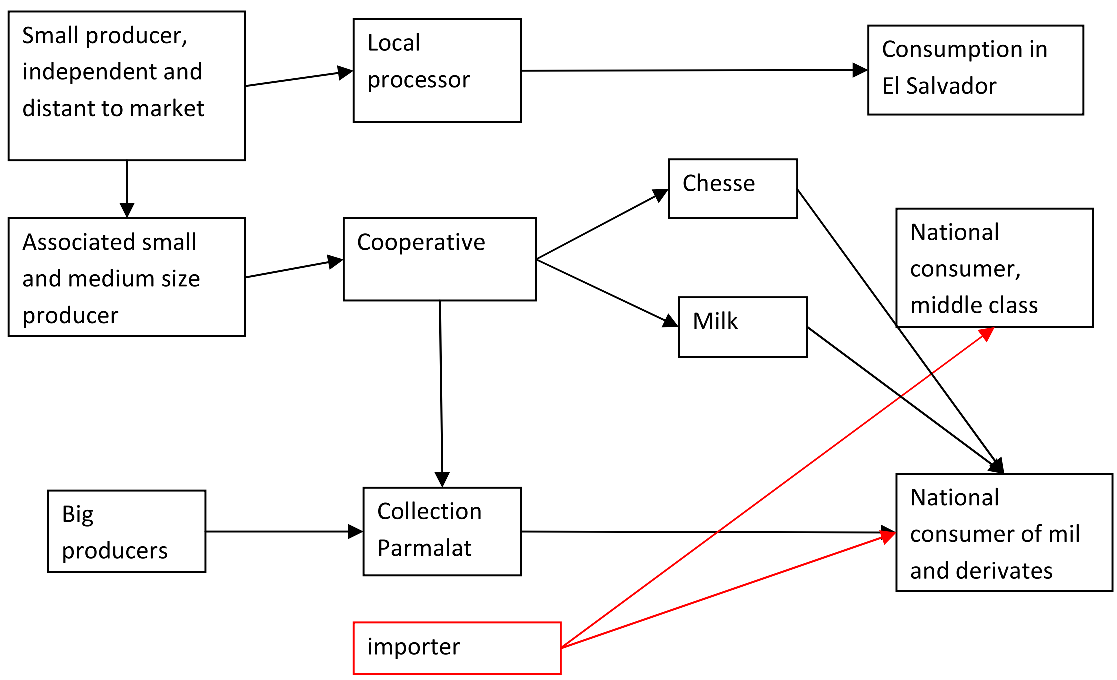
The production costs are related to the international prices of maize and soy and became a high financial burden to the small producers.

The governance of the dairy chain from Nicaragua has several institutional arrangements. For the large industries the vertical contract and incentives contract toward quality and volume. These large firms are contracting with cooperatives and large producers.

There is another group of producers linked to Salvadorian industries both in Nicaragua and in El Salvador. These producers are small and isolated from the main markets in Nicaragua and therefore, the most suitable sell option is to industries located in the region. The institutional agreement is an informal verbal contract and the way of payment is in cash after milk is delivered to the plant.

Small producers isolated form markets can also process their milk and produce chesses. These chesses are sold amongst neighbors and local rural markets.

DIARY VALUE CHAIN FORM NICARAGUA



Source: ECLAC 2010.

Diary Value Chain from El Salvador

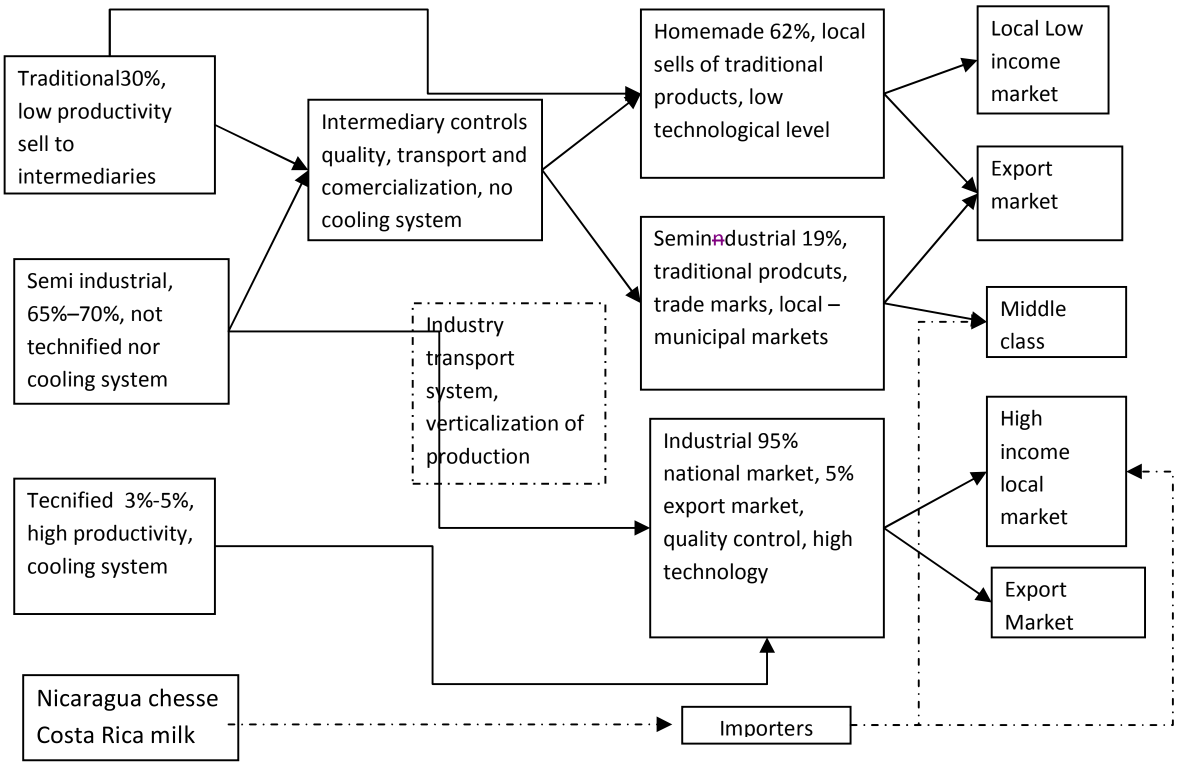
The nostalgic market in United States is a potent incentive for Salvadorian industry. The main product exported to the nostalgic market is “Quesillo”. El Salvador is not able to produce neither all the dairy products for local consumption nor enough for their exports therefore, Salvadorian firms imports milk from small Nicaraguan producers and are actively investing in Nicaragua to secure the raw material and intermediate products for their industrialization. The direct investments made by El Salvador are mainly in infrastructure (processing plants, containers and distribution channels).

El Salvador has a very developed industry that is able to produce high quality dairy products to local and export markets. However, due to the lack of import control and the expansion of contraband it is possible to find low quality quesillo in the local markets of El Salvador. Price mechanism is an important tool to assess the quality of the product.

The governance structure of the dairy chain in El Salvador is controlled by several semi-industrialized companies producing for local and export markets. They purchase raw materials from small producers via verbal contracts, allowing a complete vertical integration in the control of the production system. Another relevant agent is the cooperative sector that has a large industry with own supply of milk and has the capacity to enter local and export markets.

The normal contract is verbal and payment is at deliver of milk. Verticalization is shown during quality controls.

DIARY VALUE CHAIN FROM EL SALVADOR



Fuente, Banco Mundial, 2006.

Dairy Value Chain from Costa Rica

The dairy sector of Costa Rica is well organized comprising a large range of organizations such as cooperatives, private companies, producers' associations and has been a sector historically protected by the State.

The dairy sector of Costa Rica is specialized, producers´ dedicated to dairy are only producing milk and derivates. The Dairy products in Costa Rica are mainly industrialized and the market is controlled by Dos Pinos, a cooperative formed by small producer's covering over 80% of the market. This potential market control had made it possible to control quality of products and to vertically integrate the small producers.

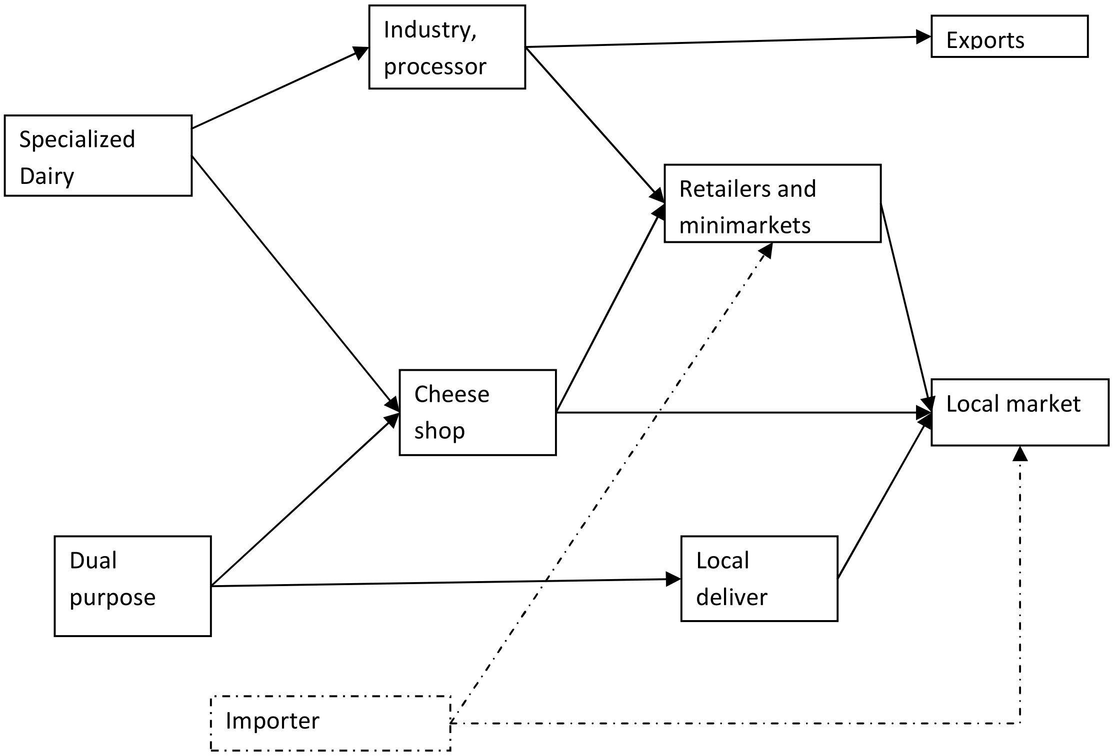
Small producers have designated quotas for their milk production. If producers deliver more raw milk than its quota the cooperative buys the exceeding production at half the market price. There are incentives contracts to promote quality of the product and several laboratory tests that are performed during the processes held between the farm and the production plant. Most of the milk delivered to the Cooperative plant is refrigerated as well as in is the production farms, where the production is mechanized.

In the case of Costa Rica, it is clear who the controller of the chain is, however besides this dominant agent there are other agents in the market: there are two additional cooperatives, one private company and one international company.

The producers' organizations have been making very successful political lobby over the years and among other achievements, the price of the milk is defined by the State and several dairy products face high tariffs (i.e. yogurt).

Dos Pinos (the dominant agent) has become an important exporter and it currently provides dairy product to Central America and the Caribbean countries. However, this firm is a net milk importer from Panama, where it has invested in industrial plants in order to increase it production capacity. Dos Pinos has tried to buy or to built a processing plan in Panamá

DAIRY VALUE CHAIN FORM COSTA RICA



Source: ECLAC, 2010.

Dairy Value Chain from Panamá

Panamá is not seen as a main agent in the dairy supply chain from Central America but has become an important provider of milk to Costa Rica, where most exports of milk aim to.

In recent year the Coca Cola Company have shown interest in acquiring the biggest mill processor in Panamá to control the local market and to expand the exports options. In march 2011 Coca Cola – FEMSA acquired the largest dairy producer in Panama (Estrella Azul) so consolidating its entrance in its regional market. At the same time Dos Pinos has invested 2 million dollar to vertically integrate a medium size Panamanian cooperative to secure the supply of milk that needs in Costa Rica in order to increase its production. This movement is part of the strategy to keep its share in the the Central American milk market.

Panamanian officials are nowadays improving quality controls, and their productions systems. They are developing several State Programs to improve and develop the dairy sector such as IICA and MIDA project to develop a strategic plan for the Panamanian dairy sector…. The main problem this sector faces in Panama is its lack of organization. Additionally, there is little research available to understand the value chain of dairy products in this country. Panamanian dairy sector is in a initial stage of expansion to the export market. The State is nowadays promoting and supporting the dairy sector. The market has few large companies and many small producers. This is one reason why COCA COLA-FEMSA and Dos Pinos are competing for coordination or veticalization of processes with the biggest agents in the dairy value chain of Panamá.

Source: PROLACSA, 2003.

FDI and Integration of the Central American Diary Industry

It has been explained before that there are at least two types of strategies related to FDI in the dairy industry in Central America.

There is the case of FDI from El Salvador to Nicaragua, where evidence can be found that shows industries from El Salvador acquiring and settling industries in Nicaragua to produce under their supervision “quesillo”. These chesee is then exported to El Salvador and re-exported to the nostalgic market in the United States. The alocation of these industries is in places far from the main markets and therefore Salvadorian can buy mailk at better prices and facing very low competition for raw matierials from other agents in the chain. In other words, they accept to increase the transaction cost of negotiating and enforcing the contracts in order to secure a constant milk supply with low competition from other agents in the chain.

In the case of Costa Rica and Panama, FDI works differently, because they are investmenting in cooperatives and companies that are already producing dairy products. The effect of both cases is vertical integration of production and processes.

Dos Pinos reduces the transaction costs by signing a contract with cooperatives which bears the high transaction cost of controlling the small producers of milk. The FDI of Dos Pinos can be seen as a defensive strategy for exports, once theCoca Cola Company showed interest in buying the largest producer of dairy products in Panamá, Dos Pinos decided to invest in the competition. With this investment Dos Pinos gets access to the Panama´s local market and secure an increase in the supply of milk to the plants in Costa Rica.

Salvadorian investments are related to the better (efficient) use of resources. The scarsity of resourses in El Salvador (especially land) is an incentive to the industrial sector to look for better access to land and hence to the supply of milk. The strategy is not to enter and compete in the local market but to produce “quesillo” in a cheaper production system and get a larger marging when exporting to the United States.

These two examples show how medium and large size companies from a open development economies use the same strategies that large firms from developed countries. In addition, the examples underline the importance of an integration process that has created conditions for trading dairy raw materials and so creating a RVC. Local companies have benefiting from these regional conditions and have extended, trough FDI, its actions to neighboring countries.

Final Remarks

There is a lack of studies in relation to the analysis of economic integration within small economies form developing countries. Further research should be conducted to understand the drivers and impacts of FDI among small economies from developing countries.

Case studies must be conducted to sistematize the impact and motivations of firms to move abroad and invest in other Central American countries.

Further research will permit the design of solid public policies on FDI from and to open-small developing economies. Policies for SME's and regional trade will also benefit from further research.

Further research on the relationship between Costa Rica and Panamá in the dairy sector will show the motivations for of the RVC strategy of Dos Pinos vis à vis the Coca Cola Company recent participation on dairy prodctus in the region. In the other hand, case studies covering the FDI and trade between El Salvador and Nicaragua will underline the strategic access to resources (land and livestocks) in Nicaragua from El Slavadorian firms at competitive costs.

Case studies shown that the rules are important to the development of different institutional arrangements. It is clear that countries with strong institutions make agents of these chain better off in comparison with agents producing in weaker institutional frameworks. This is why Costarrican producers are better off in terms of incentives, access to credit, protection from competition, secure prices for production, among others. which is reflected in the strenght of the dairy sector en general. In the other hand, Nicaraguan producers faces two different scenarios: insolated producers, have dificulties to bring their products to main markets, so engaging in arrangements with Salvadorians cheese producers is an positive solution, instead other producers located close to main markets are related with transnational plants through formal contracts.

Vertical integration is the most common governance structure that its found in the dairy industry in Central America. The deepness of the verticalization is different amonst agents and countries. There is possible to find complete vertical integration like the trade relationship between El Salvador and Nicaragua and partial verticalization between Costa Rica and Panamá. The main difference is the decision to bear the risk or to share it with other actors. The precense of big players that has high bargaining power also is a factor for the configuration of the chain (Costa Rican case). Another factor, but less importan is the competitive market where both cases develops. A better approach to the problem might be to study the development of the chain in precense of different market failures and the strategic decisions taken by the diferent actors in the chain.

Further research must be conducted in line with the impact is market failures and the aligment of the incentives within the value chain.

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