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Policy-change Triggered Environmental Uncertainty in a Dairy Cooperative: The Case of Mila in South Tyrol

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ABSTRACT

On April 1st 2015, the European Union lifted its quotas for dairy production, a system that has been in place since 1984. Prior to this, the region of South Tyrol in Northern Italy enjoyed protection from the constraints and penalties of overproduction. With the lifting of quotas in Europe, „Bergmilch Südtirol", a dairy cooperative based in Bozen, Italy, faces significant challenges. The aim of this exploratory single case study is to gain a better understanding of how a dairy cooperative copes with uncertainty in the context of a new economic environment. The data collected included semi-structured interviews, observations, and a review of internal documents of the cooperatives. Results support claims of the cooperative's resilience, despite new economic pressures. Recent Russian embargoes have also added to the challenges „Bergmilch Südtirol" faces. Despite good governance practices and sound financial performance in recent years, „Bergmilch Südtirol" may need to readjust its strategy, beginning with how the cooperative compensates its farmer-members for their milk

Keywords: Dairy cooperative, dairy production, dairy processing, production quotas

1 Introduction

Milk is the main output of the dairy industry. The perishable nature of raw milk before processing makes its distribution crucial for dairy farmers, and particularly for small-scale milk producers (Mishra, 2015). The dairy sector in Europe has undergone significant changes in recent years. In particular, the lifting of production quotas in 2015 has created significant changes in the sector. These changes have encouraged some farmers to reinvest in their farms and increase production capacity, in order to take advantage of overseas markets, a focus that contrasts with the former regime under quotas and penalties. The dairy industry has experienced mergers and consolidations that have led to increases in industry concentration, a decrease in the number of producers, and an increase in the scale of operations all across Europe. Because of milk surpluses in Europe, dairy producers have expressed concerns about the competitiveness of the dairy supply chain, arguing that price drops may jeopardize the viability of the sector.

As a result of these conditions, milk has become one of the most volatile agricultural commodities in the international market, particularly in Europe. The high volatility of commodity prices and their implications for food security are clearly among the most important issues facing the dairy sector. For decades, to protect themselves from this volatility, dairy farmers have embraced the cooperative model. Dairy cooperatives are recognized as powerful mechanisms that allow dairy farmers to vertically integrate in order to countervail power against oligopolistic powers in distribution and retailing. Generally, cooperatives have the freedom to choose among a variety of objectives. In several European countries, including Italy, the industrialisation of the dairy sector at the end of the 19th century involved the emergence of farmer cooperatives, which came to dominate during the 20th century (Van der Krogt,

Nilsson and Høst, 2007; Charlebois and Camp, 2007). Dairy cooperatives are acknowledged as economic agents that can organize a dairy supply chains with better strategic logistics between production, processing and distribution. Dairy factories emerged in Europe when farmers recognised that they could realise scale economies when merging their supplies of milk to be processed centrally by one organization (Berre et al., 2014).

In the region of South Tyrol, the situation is unique. For some time, dairy producers were not subject to overproduction penalties. The mountainous topography makes the region a net importer of milk to this day. With the ending of quotas, coupled with Russian embargoes on European food products, milk prices at farmgate have dropped to record lows. Despite significant drops in milk prices in recent months, however, dairy cooperatives in the region have continued to pay farmers at levels that far exceeds market prices (Charlebois and Labrecque, 2009). Meanwhile, retail prices began to decline, due to low milk prices across the continent. With retail prices dropping, this phenomena is compelling farmer-owner cooperatives that process milk to produce yogurt, cheese and other dairy products to reduce prices. To remain competitive, it would require management from the cooperative to renegotiate terms with its farmers.

These are the conditions affecting „Bergmilch Südtirol“, a farmer-owned cooperative in the region of South Tyrol in Northern Italy. While many studies have examined the role of dairy cooperatives in emerging markets (D'antoni and Mishra, 2012), few have looked at how dairy cooperatives address economic uncertainty with their farmer-members in a mature market. In addition, few cases in which farmers are indirectly affected by policy changes in the industrialized context have been conducted (Maynard, 2009; Wang, Chen and Klein, 2015). To address this gap in research, this exploratory case study aims to increase our understanding of how the end of the EU quota system has affected farmer-owned dairy cooperatives in regions where there was no milk overproduction. This case study also aims to evaluate how a dairy cooperative copes with environmental uncertainty with its farmer-members (Tamilia and Charlebois, 2007).

Our research concerns the application of the case study method to assess the effect of environmental uncertainty on one dairy cooperative in a unique market. This is likely the first application of such a methodology on a dairy cooperative in an industrialized setting. Principally, this study looks at providing strategic insights relevant to improving the sustainability of the dairy industry in South Tyrol. This purpose of this study is to investigate whether the EU reform on dairy quotas has had an impact on dairy cooperatives, and particularly, in South Tyrol where the quota system historically did not affect the market. The basis of the evaluation is a case study of „Bergmilch Südtirol“, a cooperative based in Bozen, Italy. The company also operates a plant in Bruneck, about eighty kilometers from its head office. Moreover, some limitations and future research avenues are presented.

2 Quotas and Dairy Cooperatives

Literature on dairy cooperatives and milk price fluctuations is scant. Few studies have undertook a general survey of cooperatives in uncertain economic contexts. Cooperatives often have been shown to boost prices at farmgate, predominantly when markets are volatile or even depressed (Wollni and Zeller, 2007; Bernard et al., 2008; Yoo, Buccola and Gopinath, 2013). The cooperative, a unique governance structure that supports the processing of many agricultural commodities, is a business owned by the organization's users in which farmer-owners supply the raw material.

Because it is controlled by farmers, but managed by employees with the appropriate skill sets, the ultimate goal of a cooperative is to maximize returns to farmers and to minimize costs of processing inputs, like labour, market development, and energy. Economic historians tend to explain the rise of the cooperative form in agriculture from the advantage of cooperative over private factories in reducing transaction costs with farmer-suppliers (Prasertsri, 2002; MacDonald et al., 2007; Labrecque, Dulude and Charlebois, 2015). Cooperatives are intended to create and add value to raw agricultural commodities by recognizing the heterogeneous nature of markets for dairy products. The vision and mission statements of cooperatives are generally more holistic and socially-driven than those of other private enterprises.

Cooperatives in the dairy sector have been successful and have played an important economic role for some time. Dairy farming is thought of as a profession that involves high market dependency, re-production, and the fostering of socio-economic values (Bor, 2014). Increasing volatility in milk and feed prices often leads to higher levels of market and financial risk and uncertainty for dairy farmers (Wolf and Widmar, 2014). In recent years, these variables have been quite relevant to the lives of most dairy farmers in the Western world.

To offset the negative effects of market volatility, many countries from around the world have established quota systems in order to regulate production. This approach is often called supply management. For milk, supply management is usually defined as a method to balance supply with domestic demand of milk, including dairy products, which require milk to produce (Carley, 1988; Henry de Frahan et al., 2011). Without a quota system, farmers often perceive themselves as vulnerable to market fluctuations. In such circumstances, smaller dairy farms and producers of fluid milk would have more difficulty reaching larger processors, and are often forced to accept less favorable predicament and payment terms (Bernstein, 2010). It can also be suggested that the heterogeneity in risk attitudes across farmers and across years is supported by research (Flaig, Dorothee, Ofir and Siddig, 2013). Risk aversion has changed markedly in recent years, as dairy producers have embraced an environment which is more influenced by global trades by investing in their production, hence increasing supplies (Bouamra-Mechemache, Jongeneel and Réquillart, 2008). As a result, prices become unpredictable, as it is often difficult to anticipate how markets will react (Boere et al., 2015).

As part of the 2015 Common Agricultural Policy (CAP) reform in Europe, milk quotas were dropped, changing the dynamics of the dairy sector across the continent. Before milk quota implementation, European Union (EU) dairy policy consisted of a variety of measures including price and income support provided through import levies, export subsidies, intervention buying, and subsidies on domestic demand. Certain policies and income support programs generated scenarios of overproduction, and restrictions needed to be subsequently implemented. This led to the introduction of milk quotas in 1984. The distribution of quotas was country-specific. In Italy, like other European countries, milk quotas were tied to the size of farms and land owned (Boots, Lansink and Perlings, 1997). Quotas stabilized the dairy market in Europe for almost three decades (McDonald et al., 2014). Most importantly, for regions like South Tyrol, research suggests that while milk quotas protected and enhanced milk production in regions where milk production is more challenging, they have also had a constraining effect on more entrepreneurial or productive farmers (Yan, Humphreys, and Holden, 2013). The end of the quota system in the EU have left many regions like these more exposed than ever.

Dairy cooperatives are known to strengthen the connection between farms and dairy processing, to increase productivity and milk quality, and to secure milk safety across supply chains (Ridoutt et al., 2010; Yu, 2012). Seasonal patterns of milk production and consumption result in supply and demand imbalances which often requires attention, and cooperatives are mechanisms that offset undesirable negative externalities generated by these imbalances (Washington, Kilmer and Weldon, 2002). Cooperatives in the dairy sector can always adjust, but resources are often scarce. To raise funds and adapt to market changes, for example, cooperatives are considered to be at a disadvantage because their organisational structure hinders their access to external financial resources (Grau, Hockmann and Levkovych, 2015). Cooperatives, like private organizations, are also effective economic instruments to develop markets for value added products stemming from agricultural commodities, but are often considered to have higher transactional costs. The difference is mainly related to strategic purpose and intent (Beck, Fallert and Elterich, 1991; Charlebois and MacKay, 2010). Cooperatives tend to adopt values intrinsic to agriculture, like environmental stewardship and sustainable development, and enjoy a reputation for having a significant impact on quality management. Producer organizations like cooperatives are often said to have the ability and governance structure to help farmers meet the increasing quality requirements of value chains (Acosta and Valdés, 2014). Nonetheless, the external environment may influence cooperatives in their ability to implement effective quality management (Faysse and Simon, 2015).

Environmental uncertainty can impact Dairy cooperatives. Studies have shown that a cooperative's uncertainty about its farmers' behaviour has a direct and negative effect on the overall performance of the organization (Feng and Hendrikse, 2012; Charlebois and Hielm, 2014). The management of a cooperative must therefore use a variety of mechanisms, including selection of members, monitoring of performances and output, and finally, socialization opportunities (Rindfleisch and Heide, 1997) to mitigate this uncertainty. All of these measures can reduce performance shortcomings by farmer-members, and can enhance relationships. Finally, regarding changes in regulatory and socio-economic environments, research shows that a cooperative's performance, particularly in dairy, tend to be negatively affected by environmental uncertainty (Marcos-Matas, Hernandez-Espallardo and Arcas-Lario, 2013). Poor performances can have operational, financial and market-oriented implications.

3 "Bergmilch Südtirol"

Founded in 1962 by a group of ten farmers, "Bergmilch Südtirol" as it exists today was established in 1997. "Bergmilch Südtirol" (Mila being their most well-known brand, 'milk' and 'latte' in Italian) is a farmer-owned cooperative that generates approximately 200m € annually in sales. The mission statement

of the company is *Honest, healthy living from South Tyrol*, and it carries other major brands such as *Stella Bianca* and *Gastro Fresh*. „Bergmilch Südtirol“ is also part of another consortium called *Stelvio Cheese*. Their largest line of products is Yogurt, of which they produce about 56m kilos per year – nearly 40% of the yogurt produced in the region. Cheese represents about 25% of their production, as well as mascarpone, a “grana-type” cheese and of course, fluid milk. Sales have continued to increase by 5% to 6% very year over the past decade. Compared to its peer group, “Bergmilch Südtirol” would be considered as a top-tier performer during this period.

“Bergmilch Südtirol” operates two plants, in Bozen and Bruneck. As a result of a 1997 merger, both plants are part of the same cooperative. Before the merger, Bozen and Bruneck were struggling financially since both were engaged in a price war to retain their market share in South Tyrol. Most of the management is located at the Bozen plant, which has about 290 employees. Bruneck is the home of about 110 employees. „Bergmilch Südtirol“ is currently ISO and IFS certified, which allows the cooperative to remain in compliance with domestic and foreign requirements. Approximately 35m-45m € in sales are directed to the export market, and is growing.

As a cooperative, “Bergmilch Südtirol” interacts with its farmer-members on a regular basis. „Bergmilch Südtirol“ is now supported by over 1,400 dairy farmers in South Tyrol, and it is obligated by its charter to accept the milk produced by the group on a daily basis (Over 2,500 farmers deal with “Bergmilch Südtirol”, but many are no longer engaged). As most farms in South Tyrol do not have large grass lots, reducing the amount of milk that can be produced, farmers often send cows in the mountains during the summer time. This is a unique feature to dairy production in the area. Cows do not leave the barn during the winter months; as a result, production is reduced in the summer by about 30%, given that many cows go off the grid. Many dairy farmers in South Tyrol have one or two cows, and consider dairy farming to be a hobby. The largest producer has 150 dairy cows. Normally, one dairy cow could go through five lactations in its lifetime. In the summertime, however, “Bergmilch Südtirol” does provide an incentive to farmers to increase supplies, paying up to 0,10 c. per litre to entice farmers to supply more milk during the summer months, when cows are roaming in the mountains.

What is unique about South Tyrolian dairy farming is that many of those who cannot generate enough income from milk alone accommodate tourists year round. The picturesque view of the region allow for tourism to flourish; many city dwellers want to live like farmers, if only for a few days. Tourists pay to work on farms to get closer to the land, and reconnect with the origins of food. More than 80% of farmer-members host tourists, mainly from Germany and Italy.

The primary breeds of cattle in South Tyrol are Simmental and Swiss browns, and the largest producers are often located close to either the Bozen or Bruneck plants. (See Figure 1). Hectares indicate the size of dairy farms, and Italian regulations prevent farmers from owning too many cows, based on their production capacity. This is measured by the amount of farmland owned. This makes it very difficult for „Bergmilch Südtirol“ to ask larger farmers to produce more milk and build economies of scale (Charlebois et al., 2016).

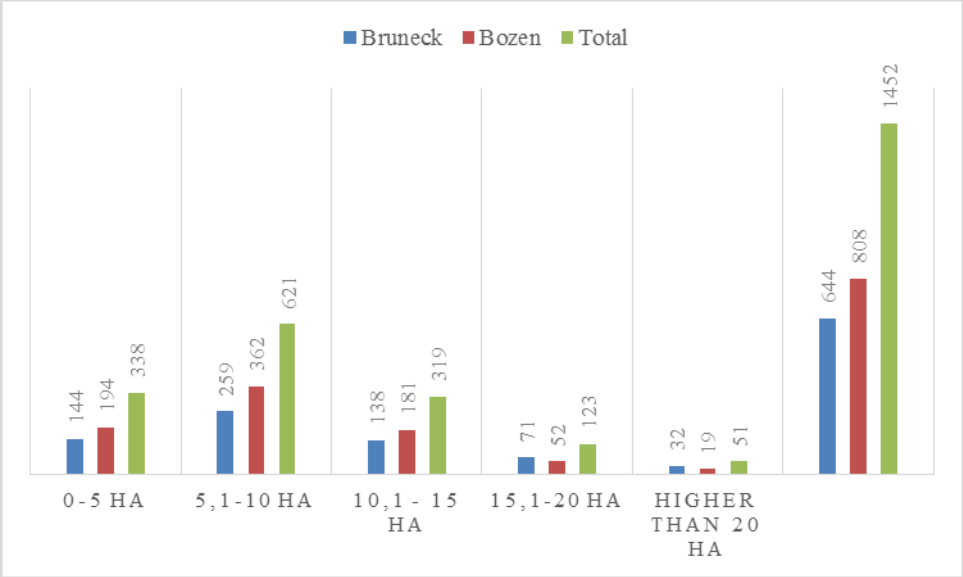

Figure 1. „Bergmilch Südtirol“ Farmer-Members

The number of farmer-members is currently dropping at a significant rate. In 2005, "Bergmilch Südtirol" was working with 5,000 dairy farmers. In 2012, that number dropped to 3,200. In 2015, that number is now lower than 1,500 dairy farms. The lower number of dairy farms indicates that many are looking for a better way of life, and giving up on farming altogether. "Bergmilch Südtirol" will likely experience a continued trend of smaller farms closing. The exodus of more dairy farmers is desirable for Bergmilch Südtirol, since they were receiving too much milk from producers. Since "Bergmilch Südtirol" has to buy the milk from its farmer-members, surpluses are sold to competing firms like Nestle or Parmalat at a much lower price, since market prices are much lower. As supplies have dropped, so has waste. The Bruneck area is knows to produce much more milk than in Bozen, which is why milk is often transferred from Bruneck to Bozen. With its unique climate, the Bruneck region has many larger farms that also grow feedstock like maize.

The logistics needed to acquire the milk varies based on a farmer's production capacity. Most farmers go to a depot where their products are picked up by a "Bergmilch Südtirol" truck at a common point. Based on narratives, it seems that most farmer-members are not overly interested in the business health of the cooperative (Nasser et al., 2011). They are mostly interested with how much "Bergmilch Südtirol" is able to pay them for their milk. Based on interviews with small group of farmers, perhaps no more than 10% are considered as engaged in the financial and commercial viability of the organization. It seems most of them are often more educated and younger than their peers (Charlebois et al., 2015). "Bergmilch Südtirol's" relationship with farmers has changed over the last ten years. Many younger farmers, who are often more educated, require less support from "Bergmilch Südtirol" when dealing with best practices. „Bergmilch Südtirol" does not interact with dairy farmers as much as they used to, due to the creation of an application on smartphones. Great distances prevent farmers from meeting regularly, but „Bergmilch Südtirol" always organizes a summertime event to inform farmer-members of how the cooperative is performing.

In addition, "Bergmilch Südtirol" is subject to EU-based and South Tyrolian regulations. For example, dairy farmers are not allowed to feed cows with genetically modified crops (Charlebois and Van Acker, 2016). „Bergmilch Südtirol" has standards which are deemed more demanding than other regions; the company scrutinizes protein levels, temperature monitoring, bacteria presence and fat content very closely. On average the cooperative puts eight to ten farmers every month on probation, due to non-compliance. The probationary period can last anywhere between three to five days. Delinquent farmers are not common.

As a cooperative, supply chain management practices are key, and links are built through a traceability system. Interestingly, traceability in Bruneck is still paper-based, unlike Bozen, where traceability processes are now computerized. The reason is based on which products are manufactured at each plant. Yogurt, which is manufactured at the Bozen plant, requires a more dynamic and intense process; as a result, the computerization of traceability systems was necessary, and easier. In Bruneck, where artisan cheesemanship is a dominant process, is more manually intensive, which makes digital traceability more challenging. But there are plans to make changes at the Bruneck plant in the near future.

4 Quota System and South Tyrol

A quota system in Europe was created based on the annual production of milk per country, establishing three different categories. Under certain categories, farmers were subject to penalties if they overproduced, and fines were calculated based on the production of an entire region, not just per producers. Some regions were immune to penalties, since production was deemed more challenging due to unfavorable weather patterns or logistical hindrances. In South Tyrol's case, farmers in the region were not penalized, given the unique topography of the region. As a result, these farmers were never exposed to the pressure of complying with production quotas (Valleé and Charlebois, 2015). However, even if South Tyrolian dairy farmers resisted the lifting of quotas, Italy offered a united voice that supported the end of the quota system, since most dairy farmers were against the accompanying penalties and administration fees.

However, when "Bergmilch Südtirol" receives too much milk, it has to sell it on international markets. Given that milk prices at farmgate are severely depressed, the company is required to sell its overstock at a much lower price.

5 Methodology

This paper presents an exploratory, single case study including several actors at "Bergmilch Südtirol", a well-known cooperative in Italy, chosen as the focal company for this study. The case study was chosen as

a research strategy in accordance with Yin (1994). This allows for an in-depth understanding of the contemporary phenomena under examination in the selected food system (Charlebois, 2011). It is a preferred strategy when the study is exploratory in nature insofar as it attempts to appreciate the complexities of food systems. The study was conducted at "Bergmilch Südtirol's" offices in Bruneck in Italy in October, 2015. Data were collected through semi-structured interviews, and a review of internal documents and observations of the production facility in Bruneck. Interviews were conducted with management, and with individuals representing farmers within the organization. The observations followed the flow of products through the process, and were conducted to achieve a clear picture of the process (Charlebois, Von Massow and Pinto, 2015). This is in line with Yin's approach (2003), who argues that the data in a case study can come from many different sources. To support the case study from a conceptual perspective, the structure–conduct–performance paradigm was used to identify structure-focused and conduct-focused attributes. The collected data from the interviews were analyzed by coding the interview material into different thematic groups related to "Bergmilch Südtirol's" current situation. Observations were used to gain deeper insights and an overall understanding of the actual physical flow and the related flow of production and information within the company. A final draft of this paper will be presented for review by "Bergmilch Südtirol" for internal validity (Charlebois et al. 2014).

The dairy cooperative has unique characteristics. The geographical location of "Bergmilch Südtirol" is of particular interest for this study. The focal company has a long and strong tradition of using traditional ingredients. Trust and personal relations are also of great importance when choosing partners. The vision of the focal company is to communicate South Tyrolian product attributes, such as origin and production history, to the consumer through their web page and packaging (Labrecque and Charlebois, 2011). As mentioned before, South Tyrol was exempt from the production restrictions issued by the European system, and was very much against any reform. With the end of the EU quota system, "Bergmilch Südtirol" is exposed to new market pressures. Managerially, "Bergmilch Südtirol" seemed to be at the cross roads of its existence, despite being well-positioned in the marketplace. This newly found system uncertainty is not only due to the end of quotas, but also due to Russian embargos on dairy products. In addition to consumer trends that are also a source of concern, "Bergmilch Südtirol" is revisiting its strategy on both supply and demand sides. This research aims to gain knowledge of how a South Tyrolian-based dairy cooperative interacts with its farmer-member in times of uncertainty. The issues examined are described and elaborated from the characteristics of the whole food system, using "Bergmilch Südtirol" as the centre point of analysis, since the knowledge is dependent on the entire system.

6 Findings

Supply management challenges

"Bergmilch Südtirol" faces a number of challenges, starting with supply management. The issue of milk prices at farmgate is becoming a source of great concern. Currently, "Bergmilch Südtirol" pays 0,52 c. per litre of milk to farmers. At this price point, "Bergmilch Südtirol" believes that most farmers do not make a profit without government support. The pressure to increase milk prices at farmgate is constant, despite very low world prices.

"We are getting too much milk from our producers. Since we pay our members 0,52 c., we lose a lot of money these days for dumping milk we do not need."

Joachim Reinalter, Bergmilch Südtirol's Chairman

The cost to produce milk in the mountains, due to the specialized practices and equipment required, is much higher. However, the pressure to decrease prices is real, given that "Bergmilch Südtirol's" competitors are paying less for inputs. The competition is paying 0,15 c. to 0,20 c. less per litre, which is putting pressure on finished products "Bergmilch Südtirol" is selling to distributors. Milk prices in Italy is at 0,37 c per litre (see Table 1). Elsewhere, milk prices are lower. In Holland, for example, milk prices is currently set at 0,23 c. per litre. These prices are a result of an oversupply of milk across Europe. It has been described as a euphoric behavior, due to the end of quotas over the last few years. Large investments were made by many, and exiting the industry has become more difficult as a result.

Table 1.
Milk Prices at Farmgate

€/100 kg	ITALY, LOMBARDY Farm-gate raw Milk									FRANCE, RHONE- Farm-gate raw Milk			GERMANY, BAVARIA Farm-gate raw Milk
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	***% on prev. month***	***% on 2014***	**2015**	***% on prev. month***	***% on 2014***	**2015**
January	34,94	32,16	37,83	39,48	38,8	40,74	**35,89 (e)**	*-2,63%*	*-11,90%*	**30,4**	*-5,31%*	*-17,43%*	**32,18**
February	33,82	32,16	37,83	39,48	38,8	43,16	**35,40 (e)**	*-1,35%*	*-17,98%*	**30,09**	*-1,02%*	*-16,08%*	**31,81**
March	33,5	32,16	37,83	39,48	38,8	43,16	**35,40 (e)**	*0,00%*	*-17,98%*	**30,22**	*0,44%*	*-14,12%*	**31,77**
April	30,71	32,16	37,83	34,92	38,8	43,16	**34,92 (e)**	*-1,37%*	*-19,10%*	**28,84**	*-4,59%*	*-14,46%*	**31,6**
May	30,71	32,16	37,83	34,92	38,8	43,16	**34,92 (e)**	*0,00%*	*-19,10%*	**29**	*0,57%*	*-11,10%*	**30,74**
June	30,71	32,16	37,83	36,86	38,8	43,16	**34,92 (e)**	*0,00%*	*-19,10%*	**29,97**	*3,34%*	*-12,55%*	**30,09**
July	29,52	35,5	38,99	36,86	38,8	40,74 (e)	**34,92 (e)**	*0,00%*	*-14,29%*	**30,41**	*1,46%*	*-15,77%*	**29,84**
August	29,53	35,89	38,99	36,86	40,74	40,74 (e)	**34,92 (e)**	*0,00%*	*-14,29%*	**33,05**	*8,69%*	*-14,10%*	**29,64**
September	29,81	35,89	38,99	36,86	40,74	37,83 (e)							
October	30,87	35,89	39,09	36,86	40,74	37,83 (e)							
November	30,97	36,37	39,09	36,86	40,74	37,34 (e)							
December	30,82	36,86	39,09	38,31	40,74	36,86 (e)							
Arithmetic average	**31,33**	**34,11**	**38,43**	**37,31**	**39,61**	**40,66**	**35,16**			**30,25**			**30,96**
± on previous year 1		*8,90%*	*12,67%*	*-2,92%*	*6,15%*	*2,65%*	*-16,79%*			*-14,51%*			*-21,22%*

One issue that came up during interviews was Italian milk consumption. As a market, Italy consumes more milk than its produces, which is why milk prices in Italy are often higher than prices elsewhere in Europe. However, in 2015, milk prices have dropped by more than 16%, and are likely to drop further in years to come. About 40% of the milk consumed in Italy is imported; for example, "Bergmilch Südtirol" only buys butterfat from outside Italy, but not milk. Due to oversupply, imported milk into Italy is much cheaper, making competition stronger. Getting to pay less for milk from farmer-members will likely become "Bergmilch Südtirol's" most crucial issue in years to come. To remain competitive, "Bergmilch Südtirol's" input costs will need to drop by as much as 40% over the next few years. Given cost structures, many farmer-members will fall away.

Exports

"Bergmilch Südtirol" is aware that export markets should be developed further in order to grow the business. However, the Russian embargoes and the restrictive nature of the Chinese market increased supplies on the European market. In particular, Italy has been severely affected by Russian embargoes with hard cheeses. A shipment of mascarpone from "Bergmilch Südtirol" was rejected at the border last year. Despite the embargoes, many companies, including "Bergmilch Südtirol", have continued to sell products to Russia, using Belarus as a brokering nation. Employees of "Bergmilch Südtirol" admitted during interviews that some Italian products mutate into Belarus-made products before being shipped to Russia.

"Bergmilch Südtirol" exports mainly cutting cheeses to Germany, Austria, Switzerland, France and Poland. Some speciality stores in the United States are buying "Bergmilch Südtirol" products, and sales are increasing. "Bergmilch Südtirol" is also in Japan, South Korea, Japan and Australia. They do not export to Canada at this time, but Bergmilch Südtirol has had discussions with some distributors. With an increase in trade, the landscape is slowly changing. The EU trade agreement with Canada may allow for dairy products from Italy to enter the Canadian market, but it may take some time to allow smaller players like "Bergmilch Südtirol" to export to Canada. But a potential agreement with the United States would also help "Bergmilch Südtirol" develop the North American market. "Bergmilch Südtirol" believes it has a strong, stable market position as a company.

A significant trend is the success of the Italian kitchen, which is growing and gaining momentum in North America and Asia. For "Bergmilch Südtirol", the South Tyrolian aspect of their brands has no meaning outside the region. The company often would take time to explain the location of their plants, if some recognise the German names.

The export manager was interviewed and made this interesting comment:

"We do not mention that we are a cooperative, never"

Christian Oberdörfer, Senior Export Manager, Bergmilch Südtirol

An interesting point which came out during interviews was that "Bergmilch Südtirol" is not marketed as a cooperative on international markets. In fact, not once during interviews was the word 'cooperative' used by respondents. In Europe, cooperatives are often associated with communism and communist bloc countries, and such products have been viewed historically by consumers as being of lower quality.

Market demand

Consumer demand seems robust and represents a positive force for "Bergmilch Südtirol's" future. The company constantly develops new products for certain markets, employing five people dedicated to research and development. Bergmilch Südtirol can be considered as a nimble organization, allowing them to execute quickly on new product launches. In fact, Bergmilch Südtirol has countless products, and it was not clear as to how many they carry. It was difficult to understand how portfolios of products were actually managed.

„Bergmilch Südtirol" produces a host of milk products, which is why their portfolio of products is so deep. The company did report that it intends to reduce the number of products at some point.

Dairy products in South Tyrol is in high demand, and many consumers are willing to pay a premium for these products. More than 34% of „Bergmilch Südtirol's" sales are within South Tyrol. Also, 35%-40% of products are sold in the rest of Italy. The South Tyrolian brand is very strong in the region, and many consumers are willing to pay a premium for it. This trend extends beyond Tyrol to Austria and parts of Germany and Italy, but not much further. Many parts of Europe, like southern Italy and Germany, would consider price as a very import variable, above and beyond the origin of the food. In recent years, more consumers are looking for organically produced dairy products and lactose free products, which is consistent with „Bergmilch Südtirol's" mission and focus. It was reported that many consumers self-diagnose their dietary condition to be more fashionable. As such, demand for lactose-free products has increased.

Despite the positives, there are some significant market pressures in the domestic market that affect „Bergmilch Südtirol". The European market is showing signs of weakness in recent years, coupled with drops in food prices in the region (Labrecque and Charlebois, 2006). This makes for a very difficult macroeconomic environment for „Bergmilch Südtirol" to deal with, since its raw materials are more expensive than its competitors. „Bergmilch Südtirol" has been able to keep prices at stable levels, but some expect the company's wholesale prices to drop. Consumers generally appreciate how „Bergmilch Südtirol" support farmers and how it helps them to survive, but it is uncertain how long this good will can act as a buffer against economic pressures, in which many consumers of dairy products are trading down. Overall consumption of Italian dairy products has been dropping in recent years, while demand for dairy products across Europe is increasing (Terazono, 2015).

The population in South Tyrol is also increasing due to immigration. The economy is South Tyrol is also very strong, compared to the economy in Italy. It is a unique region with a strong economic culture. It has been argued that the German economic mindset seems to dominate the region, which has helped „Bergmilch Südtirol". The economy as a whole is much more disciplined that in other regions in Italy. It was argued that cooperatives would not function in other parts of Italy, due to the fact that some farmers may be tempted to breach policies and regulations imposed by a cooperative. This is a model which has been effective, thanks to committed group of dairy farmers.

"A cooperative would never work in southern Italy, the mindset is different. In South Tyrol, the German-business mindset is much more dominant."

Reinhard Schuster, Farmer Relations, Bergmilch Südtirol

„Bergmilch Südtirol" has been successful in developing new products in the past when relying on internal capacity. For organic products it has been more difficult. Demand for organic dairy products is increasing, but „Bergmilch Südtirol" has struggled to align more farmers to adopt a strict code of practice related to organic farming. „Bergmilch Südtirol" has recognized a challenge to convert farmer-members to organic production. Most farmers are not well-versed in preparing reports to support a strict code of practice. In the past few years „Bergmilch Südtirol" have encouraged farmers to convert, but so far have been unsuccessful. It was reported that animal welfare is starting to become an issue, but „Bergmilch Südtirol" believes it is well positioned. Food fraud is also a concern for many consumers, including „Bergmilch Südtirol" customers.

7 Discussion

Interviews with leading managers at „Bergmilch Südtirol", the largest dairy cooperative in South Tyrol, seem to strengthen the arguments that the organizational characteristics of cooperatives considerably affect the focus of their consolidation and collaboration activities (Labrecque, Charlebois and Spiers, 2007). There is a significant disconnect between their supply management strategy and their market development focus. Some conduct-focus and structure focus element sought to be considered for „Bergmilch Südtirol" (see Figure 2).

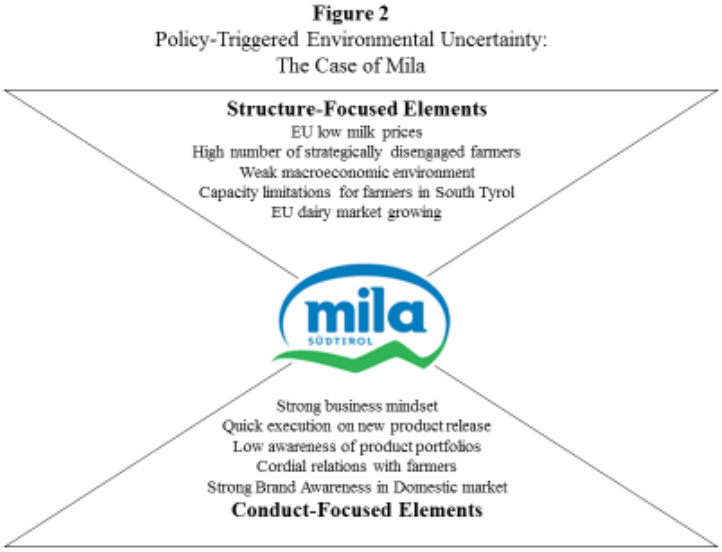

Figure 2. Policy-Triggered Environmental Uncertainty: The case of Mila

Structure-focused elements are direct influences on "Bergmilch Südtirol's" economic conduct and market performance. While European reforms and region-based regulations cannot be changed, conduct-focused elements, affected by structure, are variables which can be controlled by the firm, and would also influence market performance.

On the one hand, their relationship with farmers seemed to be cordial and transparent; "Bergmilch Südtirol's" cooperative model is justified by its advocacy role for farmers in the region. The core values of the cooperative appear to be consistent with what consumers are looking for, at least for now. The economic realities of the region, however, are as such that „Bergmilch Südtirol" may need to review its pricing strategy at retail. Subsequently, this may impact milk prices given to members over the next few years. Based on interviews conducted at the company, it was very difficult to access when a possible revision of payments made to farmers would occur.

It seems that the exit of farmer-members has become the centre of discussions at „Bergmilch Südtirol". Loyalty and commitment are paramount importance in the context of agricultural value chains, particularly so in the case of cooperatives. The aim for any cooperative is to build and sustain relationships with farmers (Charlebois, 2013). In a cooperative, readily available side-selling opportunities in informal markets will enhance their exit options; this is what seems to be occurring at „Bergmilch Südtirol". In addition, lower levels of education and mistrust lessen members' faith in their ability to exercise voice in their organizations (McRoberts et al., 2013). This may explain why many farmers have expressed indifference towards "Bergmilch Südtirol's" business commitments in the market place. They may not have the capacity to understand "Bergmilch Südtirol's" managerial reality.

These problems commonly surface in the analysis of cooperatives. To prevent inefficient exits, cooperatives try to impose institutional restrictions (Dernburg et al., 2007). In "Bergmilch Südtirol's" case, however, exits were desirable as having smaller farmers was costly for their enterprise. More exists are likely desirable for the future as well. It has been known that a significant obstacle to the viability of cooperative institutional forms has been the unwillingness to enforce graduated sanctions against defecting members. But that was not the case at "Bergmilch Südtirol's" (Patil and Dhiman, 2007).

The level of engagement between „Bergmilch Südtirol" and its farmer-members was difficult to assess. It was reported on several occasions that the latter were solely focused on milk prices at farmgate, and have shown little interest with the business side of the company. Knowledge and attitude can often be seen as positive predictors of behavior change, but „Bergmilch Südtirol" was not forthcoming in terms of how they tried to change the farmer's level of engagement with the cooperative. Excluding the larger operations, interest has been stagnant. It can be suggested that „Bergmilch Südtirol" could gain from educating farmers, thereby building a stronger association. This approach merits further attention. There seems to have been very little education about "Bergmilch Südtirol's" new economic reality to farmers. The end of quotas and the Russian embargo may require farmgate price reductions, which would force more farmers to leave. If the objective is to retain all farmers, this would be a worthwhile strategy. Based

on interviews at „Bergmilch Südtirol“, however, it seems that this is not the case.

To some extent, farmer-members, compared with the stereotypical characteristics of entrepreneurs, seem to demonstrate acute profit-maximising drive, but also assigned great importance to land, mountains, topography and community values. As a result, maintaining flexibility in their various income-generating activities, with a view to enhancing resilience, remains key for many of them. However, based on the narratives, farmer-members seem unaware and may not appreciate the significant opportunities available in a deregulated dairy industry, since „Bergmilch Südtirol“ has protected them from market uncertainty and price fluctuations. Unprofitable and/or underperforming farms remain supported by this clear sense of personal and also socially-oriented motivation that was expressed by „Bergmilch Südtirol“ during interviews.

That said, based on the evidence gathered, „Bergmilch Südtirol“ remains a financially successful enterprise with a potential for growth in the future. It is worth noting that a transition to a larger operation tends to decrease the diversity of member farm sizes and structures, as well as of member ages and financial incentives. Lesser heterogeneity may create its own strains on cooperative efficiency and accountability towards farmers who will have different interests. „Bergmilch Südtirol“ will need to be more sensitive to that issue moving forward.

“Bergmilch Südtirol’s” case supports the belief that cooperatives can remain competitive, provided that they manage their relationships with their farmer-members in a proactive manner. This relationship management requires a shared view that strikes a balance between market orientation and production orientation, which may currently not be the case at „Bergmilch Südtirol“. Working with the dairy farmers through investment in specific assets, increasing safeguards, reducing their behavioural uncertainty and adapting the relationship are, according this case, critical for the dairy cooperative. However, since more dairy farms are set to shut down, it will be critical for „Bergmilch Südtirol“ to recognize the opportune time to act an engage with farmer-members at a different level.

From a policy standpoint, “Bergmilch Südtirol’s” case highlights a few facts. As government economic policy has become more market-oriented, and preferential treatment of cooperatives is curtailed, dairy markets have become increasingly competitive. From a policy point of view, the European market is competitive and complex. “Bergmilch Südtirol’s” governance as a cooperative has been successful in protecting its farmer-members from market fluctuation outside South Tyrol. However, it is only a matter of time before external forces influence the region, and affect “Bergmilch Südtirol’s” financially viability over the longer term.

Some limitations to this case study should be noted. First, only two farmers were interviewed for this case, which is a very small number. A visit to Bruckner did not result in any interviews. In relation to future research projects, more interviews with farmers is warranted, particularly in light of the fact that depressed milk prices will likely remain for an extended period of time. Also, even if „Bergmilch Südtirol“ is the largest dairy cooperative in South Tyrol, this case may not be representative of what is happening in other parts of Italy and Europe; South Tyrol has a unique agricultural environment, but Europe is a continent with numerous unique regions with their own advantages and challenges. For future research, a comparative analysis between „Bergmilch Südtirol“ and other cooperatives in the region, or even outside the region in Europe, would offer a different perspective on how to engage with farmers in times of uncertainty. Further research is needed in order to clarify the impacts of policy measures on the development and performance of cooperatives in the EU dairy sector, particularly in areas where production is a challenge.

8 Conclusion

Studies on cooperatives and cooperative performance have a long empirical tradition. However, the intriguing agricultural landscape of the Southern Tyrol region in Italy in addition to quota reforms in Europe made for a very interesting case. The European Union and its dairy sector has experienced some significant changes over the last few years, and more is coming. This exploratory case study was about „Bergmilch Südtirol“, a farmer-owned coop in South Tyrol, Northern Italy, which is trying to cope with a host of policy-changes that have triggered economic and environmental uncertainty.

As pointed out in the analysis above, the performance and position of a farmer-owned cooperative can vary significantly. It is evident that “Bergmilch Südtirol’s” growth shows a dominant domestic strategy, assisted by an emerging strategy on exports. Branding seems to be a predominant strategy in South Tyrol and Europe. However, with challenges in organics and product portfolio management, it seems “Bergmilch Südtirol’s” strategy does require some changes. As both farmer-members interests and consumer preferences become more diverse, “Bergmilch Südtirol’s” procurement strategy will need to

align with its market strategy to cater to emerging sectors. Some actions ranging from levering better farming within its base to developing new markets through potential acquisitions could be considered, as the current path is not financially sustainable. Successful cooperatives in dairy seem to deviate from the traditional cooperative model in order to adapt to changing needs and wants of the farmer-members, as well as of the consumers and to improve their competitive position in a changing economic environment in Europe and elsewhere.

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