Agricultural Co-operatives and the Rationale behind Their Existence: Australian Perspective
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Abstract
Though modern co-operatives have long history in contributing to low income group workers, producers and consumers, they are overlooked by the mainstream economic literature. The rationality of these business organizations had been questioned especially during the deregulation of the economy. On the other hand, there has been renewed interest on the co-operative business model since the Global Financial Crisis (GFC). Desktop review approach is used to collect both quantitative and qualitative data from Australian dairy industry and analyze the rationality of the co-operative business model in the industry. Whilst global picture of dairy industry shows a strong involvement of co-operatives in the market, the Australian situation is different. The dairy co-operatives in Australia have lost its dominance in the market to just about 5% since the deregulation of the market in the 1990s. This confirms the rationality of co-operatives is misunderstood in the industry. However, experiences from Murray Goulburn co-operative indicates that co-operatives have the rationality to exist in the business. For instance Murray Goulburn’s farmgate milk price has been 17.7% above the Victorian average milk prices between 2006 and 2012 which indicates that co-operatives can still have enough space in the dairy industry. This is on top of the dividend distribution made by the co-operative, supply of farm inputs to members at competitive price and supply of milk without quota.

Keywords: Co-operatives, business model, rationality, Murray Goulburn, Australia

1. Introduction
The concept and application of co-operation goes back as early as human history. Modern co-operation, however, emerged during the industrial revolution with Rochdale consumer co-operatives in England (Ryder & Chambers, 2009); (Mazzarol, Limnios, & Reboud, 2011) to help workers from the exploitation of capitalists. Since then, it has been difficult to convince mainstream economists that co-operatives can be viable alternative to investor owned business model. On the other hand, co-operatives have contributed to low income groups, workers, and fragmented producers, and the business model is gaining grounds during the last two decades especially after the Global Financial Crisis (GFC) (Ryder & Chambers, 2009); (Mckinsey, 2013); (Wilson & MacLean, 2012). Though co-operatives are believed to be created and strengthened during economic crisis to correct market failure, the co-operative economy is getting better ahead of expectations (Mckinsey, 2013); (Ryder & Chambers, 2009) with more business activities such as takeovers, acquisitions and expansions taking place.

Contrary to the dominant business model, co-operatives are owned and controlled by users for users, which enable the institutions to foster healthy competition through “stakeholder economy” than “shareholder economy” (Bajo & Roelants, 2011). Their contribution to equitable distribution of wealth and business decision makings is immense. Though mainstream economics and management literature overlooked (Novkovic, 2008); (Hill, 2000); (Mazzarol et al., 2011), co-operation is seen as an alternative economic and social concept that could give better solutions to the existing global economic and social challenges.

Whilst the rationality of the business model has been debated, there is lack of empirical evidence on the literature to support either argument. Bajo and Roelants (2011) stated that the “underlying rationality of co-operatives remains largely misunderstood”. Understanding the rationality of the co-operatives business model in the Australian agriculture particularly in the dairy industry is the main issue of this paper. The ‘rationality’ of business organizations is the reason behind their existence in the market. Customer value proposition (CVP) which defines the purpose of the business and profit formula which enables to survive and compete in the market are the two major components to explain the success of a co-operative business model (Michelsen, 1994); (Mazzarol et al., 2011).

As noted in (Bajo & Roelants, 2011) that the ‘rationality’ of co-operative business is largely ‘misunderstood’; and the legitimacy of the business concept had been questioned (Nilsson, 1996). Thus, through assessing how the
co-operative business model been working in Australian agriculture, this research will test the widely available assumption in the mainstream economics literature that the business model is 'miss-understood'. At the time of the declining power of co-operatives in some industries in Agriculture, this research is timely. Dairy industry is taken as a case study to investigate the issue and thereby fill the gap in the literature through empirical evidences from the industry.

2. Literature Review

Though the experience differs depending on the business environment, it is noted that co-operatives play significant role in poverty reduction and attaining development goals in developing countries (Majee & Hoyt, 2011); and contribute to substantial portion of developed nations’ Gross Domestic Product (GDP) (Bajo & Roelants, 2011). This helps us understand the role of co-operatives in modern economies. Even during global economic uncertainties, co-operatives are progressing well ahead of the private and public sector which could enable them to be seen as a ‘third alternative’ in the economy. For instance, (Wilson & MacLean, 2012) note that whilst the UK economy contracted by 4.9%, the co-operative economy grew by 15.8% and been resilient to the 2008 GFC (Bajo & Roelants, 2011); (Mckinsey, 2013). The question arises why co-operatives are performing well whilst Investor Owned Firms (IOF) are still struggling to recover from the GFC? Organizational, social and economic reasons might explain this, as the basic difference lays on organizational and social setting of the business models. The principles and values in which co-operatives exist are critical to the sectors’ success. The fairness in the business in terms of price and cost, ‘ethical’ products, and participatory nature of the organizations could be the reasons behind the recent resurgent of the business model which investor owned business lacks see (Novkovic, 2008).

The dehumanizing nature of corporate firms could also contribute to the revival of co-operatives which give more space to its service users than ‘external’ investors. Bernardi (2007) pointed out that another economic significant of co-operatives to consumers is decreasing the uncertainties over information asymmetry which turns to be competitive advantage to the business model. Moreover, transaction cost for members is reduced in their interactions with the co-operatives (Nilsson, 1996). Some authors also associate the success of co-operatives with the growing interest on sustainability business (Mayo, 2011); (Maughan, 2012). Co-operatives have been active in developing and measuring sustainability issues, and informing stakeholders about their reports and internalize market externalities (Novkovic, 2008). Given the increasing social consciousness of consumers, this practice will ultimately pay off.

Contrary to the argument that co-operative can be an alternative business model; there are who argue that co-operative cannot be an alternative to the dominant corporate business model (Bernardi, 2007); (Kispal-vitai, Regnard, Kovesi, & Guillotte, 2012) as the market is characterized with high flexibility and stiff competition. The legitimacy of co-operative business concept had been questioned (Nilsson, 1996). The lack of specific economic behaviour associated with the dominant economic theories, limitations in property rights, and lack of efficiency are some of the reasons given in defence (Bernardi, 2007); (Soboh, Oude Lansink, & Van Dijk, 2012). In addition, issues of free rider (Petz, 2005); (Soboh et al., 2012); (Mazzarol et al., 2011) and horizon problem (Novkovic, 2008); (Soboh et al., 2012) complicate the viability of the business model in the highly competitive business environment. Free rider and horizon problems arise due to the collective ownership of co-operatives in which some members use services which they did not pay for, and lack of members’ investment on assets as members cannot withdraw their investment when leaving their membership. However, the limitations of the co-operative business model can be managed by changing the organizational setting as has been in the ‘New Generation of Co-operatives (NGC) Mazzarol et al., 2011); (Plunkett & Kingwell, 2011). At times, the arguments against the business model were convincing especially during the deregulation of the markets in which many co-operatives were unable to compete with the new wave of competition. The competition was tough which required high internal flexibility and large capital which many co-operatives could not afford. As a result, many co-operatives in USA and Canada have undergone structural changes such as mergers and acquisitions (Fulton & Hueth, 2009). Australasian experience is not different. The deregulation of the economy in the 1990s has changed the landscape of competition for co-operatives which affected their position in the market until their recent revival to the market. In the 2000s, with some co-operatives being lost on the way, newly restructured co-operatives emerged with strong desire for expansion, diversification and internalisation (Mazzarol, 2012).

3. Research methods

The research is mainly desktop review. It employed a case study approach to investigate whether the rationality of co-operative business model in the agricultural sector is misunderstood by taking the dairy industry as a specific target study. As the largest dairy co-operative in the industry with longest tradition of member ownership, Murray Goulburn dairy co-operative (MGC) is taken as a point of reference for analysing the dairy
industry. Case study can be used to collect thorough and in depth information from a particular person or social setting (Berg, 2001). It enables researchers to understand how it operates or functions (2001) which makes appropriate to this project. (Yin, 1994) notes that there are three case study types. These are exploratory, explanatory and descriptive. Exploratory case studies are used in field work and are useful for pilot study; explanatory case studies are important for casual studies, and descriptive case study establishes framework to be followed through out the study (1994). This research followed Yin’s explanatory and descriptive case studies so as to describe the nature of the co-operative business model and explain its rationality.

Quantitative and qualitative data are collected from different regions such as USA, EU and Australia so as to compare the situation of dairy co-operative movement in the countries and draw insights to the Australian dairy industry. Quantitative data such as price of milk, dividend, market share, and number of farmers were collected and analysed to test the rationality of co-operatives. Michelsen (1994) and Mazzarol et al. (2011) gave their view on how the co-operative business model works. Accordingly two main important aspects relevant to this study can be extracted from their views; Customer Value Proposition (CVP) and profit formula. The profit formula can be measured in terms of the co-operative’s contribution to the farmer’s income. This in turn can be measured by using the farmgate milk prices paid by their co-operative against the average industry farmgate price. Dividend paid by the co-operative also helps us understand to what extent is members of a co-operative better off than non-members. ABS (2004) associate the ‘rationalisation’ of dairy industry with efficiency and market response which is not the focus of this research. Further, lack of data on cost of production and transaction cost in the industry and MGC has hindered important comparison to test the rationality of the co-operatives.

Cross country comparison on market share of agricultural co-operatives is also sought to give justification to the rationality of co-operatives in the sector. If agricultural co-operatives have larger share in the market than IOF, it can be argued that the co-operatives are widely accepted by the farmers as a rational tool to market their produce. This is based on the conventional ‘economic rationale’ that individuals make transaction with those who they think get better returns. Likewise, CVP can be measured in terms of the services that co-operatives give to their members. Since it is more social issue than economic, it is difficult to measure quantitatively. However, there are some variables such as the ‘milk quota’ and extension services that are helpful to give insights on the rationality of co-operatives.

4. Result presentation

4.1 Agricultural co-operatives in global perspective

Generally speaking, there are over one billion members of co-operatives worldwide far greater than the 328 million shareholders in the publicly listed companies (ABS, 2012b); employ more than 100 million people which is 20% more than those employed in IOF. The United States is larger both in membership and number of co-operatives available in the co-operative sector with 120 million members and 30,000 co-operatives respectively (Maughan, 2012). These 30,000 co-operatives generate over US $500 billion every year and owns over US $3 trillion assets (ABS, 2012b). Though there is no clear and updated data on the number of co-operatives in Australia, a research by (ACPNS, 2010) reports that in 2002, there were 1400 co-operatives with 1013 located in Victoria. The availability of current co-operative statistics in Australia has been a major limitation to this paper.

Agricultural co-operatives play important role in the daily lives of many farmers and contribute to the market stability of developed and developing economies. These co-operatives which can be producers/marketing/processing or multipurpose play the dominant role in the agricultural sector even in the developed nations; see (Pascucci, Gardebroek, & Dries, 2012) for European, (Fulton & Hueth, 2009) for North American and (Plunkett & Kingwell, 2011) and (Bahnve & Patmore, 2012) for the Australasian experience. However, the figures and trends are quite different for many countries which could be explained on the difference in policy and business environment.

Figure 1 shows the market share of agricultural co-operatives in EU countries. Some countries have strong co-operative movement and others have less visible or are dominated by IOF. The total share of agricultural co-operatives in EU is around 40% with some countries enjoying up to 80% (Bijman et al., 2012). On the other end, UK is home to relatively large co-operative bank and co-operative stores. However, the agricultural co-operatives are dominated by private farms. Consequently, the share of agricultural co-operatives in the UK is below 10% which is the lowest in Europe.

Dairy co-operatives are one of the agricultural co-operatives with large number of member owned and controlled milk processing plants (Soboh et al., 2012) as the producers want to minimize the risk along the supply chain. Bijman et al. (2012) and USDA (2009) reveal that dairy co-operatives control substantial market share in USA and EU respectively. In Europe, specific evidence in the agricultural sector shows that the dairy industry more than any other industry is dominated by dairy co-operatives. Bijman et al. (2012) reports that in 2010 dairy co-
operatives had over 50% share of the dairy market in European countries. Fruit and vegetable, and wine industries follow the dairy industry each having around 40% of the market (2012). This could be an indication that dairy farmers are keener to organize themselves into co-operatives.

The dairy co-operative in the USA has stronger market position than in any other country. They have long history in dominating the market starting from 1950s where the co-operatives had around 60% of the dairy market. With steady growth, the dairy co-operatives reached over 80% of the market share in 2007 which shows the need for dairy farmers to increase their bargaining power.

4.2 Agricultural Co-operatives in Australia

In the Asia-Pacific, Japan’s agricultural co-operatives have a turnover of over USD $90 billion having 91% of farmers under their membership. New Zealand is a leading beneficiary of Agricultural co-operatives in the Australasian region with its 3% of GDP generated through co-operatives which are also responsible for the 95% of the dairy market (ABS, 2012b). While the top 100 Australian co-operatives and credit unions have a turn over of over AS $17 billion in 2012 up from AS 14.7 billion in 2011, the agricultural sector is limited to around AS7 billion which is 14.5% of gross Australian agriculture output (Co-operativeAustralia, 2012); (ABS, 2012b). The top 100 Australian co-operatives and credit unions have around 12 million members and 30,000 employees (Co-operativeAustralia, 2012).

Co-operatives aim at protecting individual producers against aggressive competitors which exploit the vulnerability of the farmers (Kispal-vitai et al., 2012). Traditional producers are smallholder farmers with limited market power, access to capital, and information. These farmers use co-operatives as a means to get the goods and services at a cost they cannot get from alternative firms. Until recently, dairy farmers in Australia used to organize themselves in to co-operatives to alleviate the problems associated with the risk of milk supply. Milk is one of the most perishable products that need extra care in production and logistics facility. This is difficult for individual farmers to keep its hygiene without big investments in logistics, processing and quality control. If it is for the individual farmer, he/she will be exposed to the market power of few but larger processing and retailing firms. By organizing into co-operatives, farmers in most part of the developed countries including Australia, stabilize the fluctuating market for milk, invest in the necessary equipment and control the supply chain.

However, dairy farms in Australia have substantially decreased from 21,994 in 1990 to 6883 in 2011 (DairyAustralia, 2011). They account around 8% of Australian farmers (ABS, 2012a) which is relatively smaller compared with other sub-sectors in agriculture such as livestock, and beef farming. With technology adoption and efficient management of diaries, productivity growth was 1.6 percent against the 1 percent of the rest broadacre industries in the last 30 years. The size of small dairy farms has decreased by 45% in the last two decades (ABARES, 2013). In 2012, only two dairy co-operatives made on the list of the top 100 co-operatives and credit unions in Australia see (Co-operativeAustralia, 2012). This is driven by ownership changes of the dairy co-operatives over the last two decades. The acquisition of Bonlac dairy co-operatives by Fonterra and the demutualization of Bega cheese can be seen as evidence of the decreasing share of dairy co-operatives in the industry. As a result, the dairy co-operatives controls only 33% of the dairy industry of which 30% of the national milk output is Murray Goulburn’s share (DairyAustralia, 2012). The decreasing share of co-operatives in the dairy industry can be partly explained by the high farm debt which has been common syndrome to the co-operatives during the deregulation of the industry. MGC is the largest co-op which is still 100% owned by farmers. The second largest, dairy farmers’ milk co-operative is not clear with its structure as it has attachments with Lion Foods. Due to these reasons, MGC is taken to be the point of analysis.

Data on comparing some variables between MGC and the dairy industry is presented below.

4.3 Farmgate milk price

Farmgate milk price is one of the critical aspects of dairy farming. Suppliers are sensitive to a fraction change in the farmgate price as it affects their production cost and survival in the industry. MGC as one of the big players in the dairy industry has leverage in setting the price. A 6 year comparative farmgate price between MGC and industry is presented below in Table.1. Obviously, the farmgate milk price in Victoria is lower than the industry average and other states which affected the comparative price set by MGC. Being the largest producer of milk (DairyAustralia, 2012), Victoria’s farmgate milk price is seen as indicative of industry trends. Based on this fact, MGC milk price should be compared with Victoria’s average and its competitors.

4.4 Dividend

Unlike to farmers who supply to the private dairy firms, members of dairy co-operatives usually get dividend depending on their business interaction with the co-operative. The amount of milk supply to the co-operative affects the level of the dividend paid to the suppliers. Figure.4 shows the dividend paid by MGC to its members from 2000 to 2010. The average dividend of MGC over the past 11 years has been 10.8%.
5. Discussion and Analysis

Unlike other developed economies such as the United States and EU countries, the role of co-operatives in Australia is limited. In the agricultural sector where co-operatives play dominant role, 40% of EU market is controlled by co-operatives. In some countries such as Denmark and Finland, the market is predominantly occupied by agricultural co-operatives (Bijman et al., 2012). In the agriculture, dairy farmers tend to join co-operatives than any other farmers. This could be due to the nature of the product in which farmers must regularly supply their relatively small amount of milk to the processor or they should have regular customer who use the milk; and the need to invest large capital into processing plants and logistics. This can be confirmed by the fact that in many countries the dairy co-operatives have larger shares in the market than in any other sector. Moreover, dairy co-operatives dominate the industry even compared with IOFs. For instance in 2010, dairy co-operatives have more than 55% EU dairy market (Bijman et al., 2012) Country specific experiences reveal that there is in deed strong evidence for the role of dairy co-operative play in their respective countries in EU. Dairy co-operatives in the US have stronger position in the market than in any developed economy except New Zealand where Fonterra controls about 90% of the market. The share market of dairy co-operatives in the US has increased from 59% in 1957 to 84% in 2007 (USDA, 2009) which shows the strong dominance of co-operatives over the years.

The experience in Australia is completely different. Though there are some co-operatives such as CBH and MGC which have strong presence in the grain and dairy industry, the over all share of agricultural co-operatives in the market is not comparable with countries of similar standard. For instance, MGC’s share market in the dairy industry is only 4.2% while Kirin Holding, Fonterra co-operative (it is not a co-op in Australia), Groupe Lactalis control around 41% of the dairy market (MarketLine, 2013 which is in contrary to the above evidences. In addition to that, only two dairy co-operatives made to the list of Australia’s top 100 co-operatives, credit unions and mutuals (Co-operative Australia, 2012 #50). Some of the largest co-operatives in the industry was acquired by other firms or demutualized leaving two largest co-operatives in the industry.

As the largest and one of the few remaining co-operatives in the dairy industry, MGC is taken for analysing the rationality of co-operatives in the industry using few but important variables.

5.1 Murray Goulburn Co-operative Co Ltd (MGC)

According to the latest data from Co-operative Australia, MGC is the second largest co-operative next to CBH with a turn over of A$ 2.28 billion, 2580 farmer members and staff members of 2,200 in 2012 (2012). The co-operative controls 4.2% of the dairy market while Fonterra dairy co-operative and Kirin holding company have 14.6% and 17.7% of the market share respectively (MarketLine, 2013). The co-operative’s operations include ingredients, nutrition, retail and farm input supply to the members. The farm input supply unit offers services to members through its stores including “fodder, dairy hygiene needs, seed, fertilizer, farm chemicals, milking machine sales and servicing, and technical advice” (2013).

5.1.1 Milk Pricing and Dividend

When many producers supply the product to a single buyer in the region, as is often the case in agriculture, a profit-maximizing monopsony buys less output at a lower price than the competitive market would sustain (Novkovic, 2008). However, Australasian experience on milk prices is far different than the conventional theory as discussed in Novkovic. If we take MGC dairy and Fonterra dairy co-operatives, they set the pricing of milk in Australia and New Zealand respectively. These co-operatives give competitive prices. Whilst private dairy firms do not take full supply of milk from farmers, the two co-operatives accept their members’ supply of milk without quota. This would ultimately increase the prices paid to non member suppliers as other private firms are forced to increase the price to compete in the market.

As members of the co-operative, suppliers of MGC have three benefits. First, suppliers are paid competitive prices which sometimes the co-operative sets the price for milk nationally. The suppliers’ shareholding value is also maximized by supplying milk to the co-operative. Second, apart from the long term investments in the co-operative, an important aspect of maximization of shareholders value is the payment of dividend to its suppliers. Suppliers get dividend payments on top of their competitive prices which is not possible for other farmers who supply to private firms. For instance, MGC has paid between 8 and 15% of dividend for its suppliers over the last decade from 2000 to 2010 (MGC, 2010). This show how important is MGC to its members in creating working capital leverage especially during the difficult times in the dairy industry.

Third, unlike to private dairy firms, milk supply to MGC does not have a quota that members can supply their excess milk to the co-operative. Private owned dairy firms do not accept excess milk supply beyond the stated quota. Moreover, MGC gives timely information to its members, curb costs by eliminating intermediaries and
retailers as was signed a contract to supply directly milk to Coles recently. MGC also supply farm and hardware supplies to its members at competitive prices which actually help farmers increase their profitability. Though other private firms also provide similar services to suppliers, Murray Goulburn’s services are relatively aggressive which can be seen as indication of strong relationship with its members.

5.1.2 Based on Farmgate milk prices

From table.1, it can be argued that the average Australia wide milk price is higher than MGC, and WCB. The average milk price has been 4.9% higher than MGC and 9.2% of WCB’s average milk price for the last six and four years respectively. Australia wide milk prices are higher than the Victoria’s milk prices in which both MGC and WCB operates. For instance, milk price in Victoria is far less than in any state. Table.1 confirms this. The domestic market gives better returns than the export market due to the cost and strong AUD. Victorian milk production is export oriented which made it to pay lower milk prices than other states.

MGC and WCB paid more than the average Victorian milk prices for the given years. Given the milk supply base of MGC is in Victoria, MGC’s role in the farmgate milk pricing is critical as it paid 15% and 4.5% higher than the Victorian and WCB average respectively. The difference between MGC and United Dairy Power (UDP) is 1.6% which is relatively lower margin but still MGC’s price is higher.

5.1.3 Based on farmgate milk price plus dividend

In average, MGC has paid 10.8% dividend to suppliers over the past 11 years (see Fig.4). This is on top of the competitive milk prices and the retained earnings the company invests back into the business. The dividend can be added into the milk prices so as to know the exact difference with suppliers who supply to other IOFs. The average farmer has 100, 000 share each @ $A1, the value will be $A 100,000\(^1\). Applying the 10.8% dividend on the share, the farmer will get $A 10,800. Assuming the average farmer has supplied 100, 000kg of solid milk, the dividend per kg milk supplied will be $A 0.108/kg or 10.8%. Thus, the farmer’s value per each solid milk supplied increases to $A5.371 which can be a justification for supplying milk to MGC than IOFs.

The co-operatives in the dairy industry have been hit by the deregulation in the 2000s which lead us to conclude that the co-operative business model is no longer dominant in the industry. The number and size of the dairy co-operatives has decreased to minority. This confirms the rationality of the co-operatives in the industry is misunderstood as (Bajo & Roelants, 2011) pointed out. This is in contrary to the experience of other developed nations where dairy co-operatives still dominate the market. However, MGC’s success in the industry and its increasing stake in other privately held firms such as WCB gives insight how farmers owned co-operatives can still be ‘rational’ in the business. This, however, needs further research to see why the dairy co-operatives lost its dominance in the dairy industry.

6. Conclusion

Since the emergence of modern co-operatives in Rochdale, England, co-operatives have been hailed as a guardian for lower income group and marginalized producers who do not have bargaining power. The collective nature of co-operatives make them important in the agricultural sector where many farmers are smallholder who need timely information, bargaining power, large capital for investment, supply of input and extension services at competitive cost. Given the nature of the product, milk, dairy farmers are the most beneficiaries of being organized in co-operatives as they realize the benefits of economies scale, quality control, and extension services. The dairy industry in most part of the developed economies is controlled by co-operatives. For instance, dairy co-operatives in EU control more than 50% (Bijman et al., 2012), more than 80% in USA (USDA, 2009) and around 95% in New Zealand (ABS, 2012b).

However, the dairy co-operatives in Australia are weaker only represented by two largest co-operatives with less than 5% market share combined. The dairy industry is rather controlled by IOFs such as Kirin (Lion Nathan), Fonterra and Groupe Lactalis. These firms are consolidating the market by acquiring smaller and larger dairy co-operatives. Demutualization and conversion of dairy co-operatives have also been challenging to the farmer controlled model of farming. As a result, the dominance of dairy co-operatives is no longer in the industry. These results confirm the proposition of this paper that the rationality of co-operative business model is misunderstood in the dairy industry. To the exception of this, however, MGC, the largest dairy co-operative in the industry is growing and consolidating its market by giving competitive farmgate milk price, and supplying farm inputs at competitive cost to its members. MGC’s farmgate milk price has been 17.7% and 4.5% higher than the Victorian and WCB average respectively which indicates that the co-operative is leading in price setting. Unlike to other

\(^1\) This can be calculated with the total ordinary shares divided to the total number of members. The 2012 total shares is 225,757,565 valued @$1 each share.
farmers who supply milk to private firms, MGC members actually enjoy dividend each year depending on their business interaction with the co-operative. For instance, MGC paid a dividend of 10.8% in average for the last 11 years. The dividend has increased the average farmgate milk price to $A 5.37/kg solid milk which is above the industry and its competitors. The latest opportunity for member farmers is the deal between MGC and Coles which eliminates intermediaries between the farmers and the giant retailer which ultimately increases farmers’ profitability. This reinforces the belief that dairy co-operatives can be still a viable way of doing business in the highly competitive industry. In addition, experiences of dairy co-operatives in other developed nations indicate that there is still room for co-operatives to dominate the industry.

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**Figure 1**: Weighted market share of agricultural co-operatives per country in EU countries

*Source: Bijman et al. (2012)*

**Figure 2**: Market share of co-operatives per sector in Europe

*Source: (Bijman et al., 2012)*
Figure 3: Dairy Cooperative share market of milk in the United States
Source: USDA (2009) and author’s compilation

Figure 4: MGC’s dividend paid to ordinary shareholder of its suppliers over 11 years
Source: MGC (2010) and author’s compilation

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<td>5.44</td>
<td>5.48</td>
<td>5.3</td>
</tr>
<tr>
<td>2011/12</td>
<td>4.4</td>
<td>6.60</td>
<td>5.46</td>
<td>7.33</td>
<td>5.76</td>
<td>5.97</td>
<td>5.19</td>
<td>4.5</td>
<td>4.5</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>5.535</strong></td>
<td><strong>5.4</strong></td>
<td><strong>4.47</strong></td>
<td><strong>5.87</strong></td>
<td><strong>4.6</strong></td>
<td><strong>4.85</strong></td>
<td><strong>4.48</strong></td>
<td><strong>5.263</strong></td>
<td><strong>5.027</strong></td>
<td><strong>5.18</strong></td>
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</tbody>
</table>

Table 1: Comparative milk price across states in Australia and selected firms
Source: DairyAustralia (2013), DairyAustralia (2012) and author’s compilation
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