Swedish University of Agricultural Sciences
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Development of Dairy Co-operatives in the UK

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Summary

The purpose of this study is to investigate why dairy co-operatives in the UK are weak or have had problems historically. The thesis contains necessary background information about the dairy co-operatives and their current scenario. The Milk Marketing Boards (MMBs) were set up in 1933 to ensure the fair milk price to dairy farmers. These boards purchased all milk from farmers and paid an equal milk price. In 1994 these boards were disbanded and Milk Marque came into existence. However, in 2000 Milk Marque was divided into three co-operatives. Two of the successors of Milk Marque in the later stages merged with other dairy co-operatives. One of the successors of Milk Marque, Zenith Milk merged with Milk group to form the Dairy Farmers of Britain (DFOB). However, DFOB collapsed in June 2009.

A number of studies on co-operative failures have been carried out worldwide. Each one of these studies raises particular points or reasons. When these reasons emerge it makes the future of any co-operative uncertain or most likely to collapse. However, the reasons mentioned in these studies apply only limitedly to the UK dairy co-operatives. Some unique features have been found which contributed to the demise of the UK dairy co-operatives. Most of the data for this study was collected during a visit to the UK in October and November 2009. The data for empirical findings and analyses was collected through interviews.

If looking into the factors behind the weak position of dairy co-operatives in the UK it turns out that the ideal time to form and develop the co-operatives through merger and vertical integration has been lost due to MMBs. Capital constrains restricted the co-operatives from vertical integration. Consequently, dairy co-operatives could not reduce the high transaction costs of farmers. Therefore, these co-operatives perform inefficiently to add value in the business for farmers. Hence, all the dairy co-operatives are comparatively small and weak than dairy plcs in the UK. The marketing mechanism is also not functioning well in the UK. A small number of very large retail chains are enjoying enormous power and making the maximum profit due to poor competition among supermarket in the UK. High value added products are rarely seen in the portfolio of dairy co-operatives. Cultural values have also contributed negatively towards co-operative formation. Divergence of interest between members and management also appears especially on short and long term objectives.

Abbreviations

DFOB	Dairy Farmers of Britain
IOF	Investor Owned Firms
MBBs	Milk Marketing Boards
MBBEW	Milk Marketing Boards for England and Wales
MMC	Monopolies and Merger Commission
PLCs	Public Limited Companies
PPL	Pence per Litre
VDPR	Vaguely Defined Property Rights

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1. Introduction

1.1 Background

In the 19th century the first formally organised co-operative in the history of England was established with the status of consumer co-operative. Subsequently farmers' co-operatives came into existence (Agricultural, 1997). The pace of agricultural co-operative development until 1920 was slow but after the collapse of federal Agricultural Wholesale Society the co-operatives expanded fast in structure and operations (ibid). Many co-operatives were subsidised by the British Government until 1980 but after that a liberalised policy was adopted (ibid).

The governmental organisations, The Milk Marketing Boards (MMBs), were set up in 1933. These purchased all milk from farmers and sent it for processing and sales. Equal price was paid to farmers irrespective of their delivery volumes (Wikipedia). This policy prevented the development of more efficient milk production in the UK. As MMBs were violating the European Community's rules of competition protection therefore, these Boards were dissolved in 1994 (Nilsson & Ollila, 2006, 142). Then the dairy farmers established a co-operative Milk Marque with almost all the dairy farmers were members (ibid). Franks (2001) described that initially farmers were happy with the price of milk paid to them by Milk Marque but in the later stages farmers became unhappy because the other processors were paying higher milk price than Milk Marque. He added that therefore, farmers started to delink themselves form Milk Marque and some of the farmers joined the other processors.

To control the loss of membership Milk Marque invested heavily in processing capacity and also initiated to export raw milk for processing in other EU countries (Franks, 2001). This aggressive policy of Milk Marque created serious reservation among other processors therefore, other processors argued that Milk Marque will act as monopolist with the ability to influence the milk price alone (Franks, 2001). Because of these allegations the matter was referred to Monopolies and Merger Commissions (MMC), now Competition Commission, after investigation they found Milk Marque as 49.6 % monopolist (MMC, 1999). Subsequently, receiving the recommendations from MMC, Milk Marque was break-up (Franks, 2001, 11). Hence, Milk Marque did, however, not survive very long and on April 1st 2000 it was substituted by three co-operatives, i.e. Zenith, Axis and Milk Link.

Axis Milk, one of the three successors of Milk Marque merged with First Milk (Nilsson & Ollila, 2006, 144). Dairy Farmers of Britain came into existence with the mergers of Zenith Milk and Milk Group (Wikipedia). The Dairy farmers of Britain (DFOB) could not survive for a long time and collapsed in June 2009 (House of Commons Report on DFOB, March 2010). Some large retail chains have their own brands with favourable prices to the consumers. The low prices have constituted a threat especially for the small co-operatives (Nilsson & Ollila, 2006, 144). So therefore the tough times have not yet passed for the UK dairy farmers.

1.2 Problem, Problem Analysis and Aim

A co-operative is a “Private business owned and controlled by users and operated principally to provide benefits to users” (Barton, 1989, 1). Members pool their resources to form co-operatives for economic objects. If the co-operative businesses are unable to provide economic benefits they will need to liquidate or reorganize (Barton, 1989, 16). Hence, Milk Marque was split into three co-operatives because of price dictation to farmers and two of the successors to Milk Marque merged (Frank, 2001; MMC, 1999)

The study’s aim is to empirically investigate and <u>explain through theoretical reasoning</u> why <u>dairy</u> <u>co-operatives</u> in <u>the UK</u> have had <u>problems</u> <u>historically</u>. Each of the underlined concepts is explained below so as to provide a precise understanding of the aim of the study.

The findings can be useful for other co-operatives, especially in European countries, so that they can avoid similar unforeseen situations and to take the pre-emptive measures.

Time period (historically)

The dairy co-operative movement in the UK has a very short history. It can be said to start when the Milk Marketing Board was abolished and converted into Milk Marque in 1994. This process is of interest to this study, and so are the dissolution of Milk Marque and the creation of some successors. Nevertheless, the focus of this study is not on these events as they took place more than ten years ago. Rather this study is focusing on the development during the last five till ten years, whereas the events in earlier years are analysed only to the extent that these may explain the latter years’ development.

Geography (the UK)

Considering that the various parts of the UK are well integrated in terms of business activities, this study comprises all the UK, i.e. England, Scotland, Wales and Northern Ireland.

Business form (co-operatives)

In some parts of the world also so-called Farmer Controlled Businesses (FCBs) are considered to be co-operatives. The concept FCBs means that the firms are controlled by farmers but not in a ways that corresponds to what is generally meant by co-operatives. The farmers may own shares not in proportion to the extent that they make use of their trading partner, or external financiers may have minority ownership. These firms may be labelled FCBs but they are not co-operatives. The UK is one of those countries where FCSs are fairly widespread.

To the extent that some of the UK dairy processors are actually FCBs, they should be taken into account anyhow. The very fact that firms are organized as FCBs may carry a strong explanation to the problems that these firms have had.

Business activities (dairy)

In most developed countries the co-operatives are so-called single-purpose, i.e. they operate within one singly industry such as dairy, grain, cotton or wine. The alternative is multi-purpose co-operatives, which work with two or more types of businesses. This can be found, for instance, in Ireland where DairyGold has business operations not only in dairying but also in slaughtering and feed plus some completely unrelated operations. Furthermore, Fonterra has operations in a wide variety of countries, not only in New Zealand. To the extent that the UK dairy co-operatives have or have had other operations except for dairying, also these operations should be included in the study but only briefly so. The reason is that firms with diversified business operations are often more difficult to govern, i.e. an eventual diversification might explain the problems that the co-operatives have and have had.

Vertical integration (dairy co-operative)

Another aspect of a dairy co-operative's business operations is the extent of vertical integration. In this respect co-operatives may differ considerably. Some dairy co-operatives (for example in Belgium, Germany and the US) serve as bargaining co-operatives, i.e. they do not have any processing of the members' milk but they only sell it in bulk to other dairy processing firms. Other dairy co-operatives have far-reaching processing of the members' milk, developing it into advance products. Arla Foods, Valio and Campina-Friesland are examples. In between are those dairy co-operatives which process the milk into consumer products but only simple products without much added value. The German dairy co-operatives Humana Milchunion and Nordmilch (about to merge with each other) may serve as examples. Related to what is mentioned above is the dairy co-operatives' eventual production of private label products for the retail chains. These products are often standard products with a low per-unit value, i.e. not value-added.

All the above mentioned types of business operations are included in this study. The co-operatives' choice of strategy may have a strong influence on their degree of success or failure.

Outcomes (problems)

The study concerns co-operatives, which have or have had problems. There are many ways of interpreting the word "problem", though partly interrelated. In the end, problem means that the co-operative does not survive, but prior to that there are bad financial results. These are normally connected to the co-operative paying a low milk price to the farmer members (this too is a problem), whereby the co-operative will lose milk volumes and have idle capacity (a problem). Furthermore, a co-operative may have a problem with a weak management as well as with an underfinanced balance sheet.

The study has a focus on problems in financial terms, while the other problems are regarded as subordinate to the financial problems. All the other problems could sooner or later result in financial problems. The ultimate financial problem is that of a bankruptcy, dissolution or forced merger.

Theoretical choices (explain through theoretical reasoning)

The problem at hand may be attacked through a variety of theoretical approaches. It may be analysed as a market strategy problem, a financial problem, an agricultural policy problem, etc. Considering, however, that the co-operative business form is essential in this study, none of the just mentioned approaches are in the focus of this investigation. The study explores if the co-operative business form may have a role to play in the problems of the UK dairy co-operatives. Hence, the theoretical basis chosen consists of theories, which deal specifically with the threats that co-operative firms sometimes face. There are a number of such studies. Some of them comprise theoretical analyses, and these are the core theoretical basis. The ones referred to here are Cook (1995), Fulton (1995), Bager (1996), Harte (1997) and Hogeland (2007).

1.3 Method

The thesis entails the historical development and current situation in UK dairy co-operatives and their weak position in the market. The main information about dairy co-operatives in the UK was collected through various journals, reports, publications and internet. The main source of information for the empirical findings of the UK dairy co-operatives and the analysis through theoretical frame work were personal interviews. These interviews were conducted during a visit to the UK in October/November 2009 and also telephonically in April 2010.

1.4 Structure of the study

The chapter 2 contains the essential background information of the UK dairy co-operatives. An effort has been made to provide the reader with necessary background information from the perspective of historical development and current scenario. So, the reader can understand the UK dairy co-operatives and its position in a better way.

The theoretical framework is presented in chapter 3. Here different studies on co-operative failures are discussed. Each of these studies raises specific reasons why co-operatives over the time confronted with problems or faced the unforeseen situation. Chapter 3 is based on five theories and presents the theoretical framework of this study. Chapter 4 presents the approach of this study.

In chapter 5 the empirical data collected through interviews and literature is discussed, highlighting several weak areas in the UK dairy co-operatives. All the empirical findings are explained through different theories which results in the analysis and discussion in chapter 6. Finally, in chapter 7conclusions from the empirical findings and analyses are drawn.

2. Dairy Co-operatives in the UK

2.1 Historical development

The time between the two world wars was difficult for the UK dairy farmers because dairy companies dictated the prices of milk (Alcock, 1994, 5). Farmers had no options except to accept the low prices otherwise they had to pour away the milk and bear a total loss due to its perishable nature (ibid). Alcock (1994) described that the fall in milk prices in the world market reduced the prices paid to farmers from 1929 to 1931 and the economic crisis of the 1930s further worsened the situation. He added that in 1932 the ministry of agriculture set up a “Reorganisation Committee” to prepare a milk marketing scheme. Resultantly, the Milk Marketing Boards for England and Wales (MMBEW) were established in October 1933. Farmers were not bound to sell the milk to the board but if they agreed they had to sign an agreement with the board and in return received a “pool” price (Alcock, 1994, 5). The price paid to farmers varied from region to region after taking into consideration factors like transportation, administrative and haulage cost (ibid). Larger producers close to factories subsidized the smaller ones who lived in distance (Franks, 2001). Eventually, the formation of boards solved the problem of low prices but created others, like farmers did not show interest in other value added dairy products and the huge supply of milk went to the board often sold at loss (Alcock, 1994).

Franks (2001) explaind that the Milk Marketing Boards (MMBs) were disbanded in 1994 and the role was assigned to 100 licensed milk purchasers. For the first time over the last 60 years farmers were free to choose their purchasers (Franks, 2001, 3). These purchasers can be divided into three categories: farmers who joined milk groups, those who sold direct to milk processors and member co-operatives; Milk Marque being the largest one with approximately 65 % of the farmers and 60 % of the milk (Bates, 1996; MMC, 1999). As Milk Marque had no processing capacity, it had to sell all the milk of members. So it did by an auction system (Fearne and Ray, 1996). Franks (2001) ascribes that the auction system increased the farmer’s complaints even though it was revised several times. He further argued that since, farmers were offered a higher farm-gate milk price from processors and manufacturers than paid by Milk Marque; members showed dissatisfaction over the price paid by Milk Marque. The changing marketing conditions and the preference of the farmers reduced their commitment to Milk Marque and faded their faith in co-operatives. Farmers started to delink themselves from Milk Marque (Franks, 2001, 10)

In response to loss of membership Milk Marque modernised its payment system and invested in processing capacity in order to provide better milk price to farmers. Milk Marque acquired 15,000 tons processing capacity of cheese and started to export raw milk for processing in other EU countries (Franks, 2001, 10). Other processors raised their concern by arguing that Milk Marque will influence the milk price individually and the matter was referred to Monopolies and Merger Commission (Franks, 2001, 11). The Monopolies and Merger Commission (MMC), now Competition Commission, declared Milk Marque as 49.6% monopolist in supply of milk in Great Britain in 1997/1998 and proposed to divide it (Franks, 2001). These recommendations were rejected by the Industry Minister but after intense debate Milk Marque voluntarily accepted the break-up and in April 2000 Milk Marque was divided into three regional co-operatives Axis, Milk Link and Zenith (Franks, 2001; Pattisson and Lindgreen, 2004; LTO Nederland). One of the successors of Milk Marque, Axis Milk, merged with First Milk of Scotland (Nilsson & Ollila, 2006, 144). Dairy Farmers of Britain is the result of mergers between Zenith Milk and Milk Group (Wikipedia). The Dairy farmers of Britain (DFoB) have collapsed and went into receivership on 3rd June 2009(Wikipedia).

2.2 The Dairy co-operatives currently operating in the UK

Presently three large and a large number of small dairy co-operatives are operating in the UK. The three large dairy co-operatives are explained below. In the same time some foreign diary co-operatives are also operating in the UK.

First Milk

First Milk is the result of merger between Axis Milk, and Scottish Milk. Subsequently it became the largest farmer owned dairy co-operative in the UK. Two thousand six hundred (2600) farmers from different regions like central Scotland, southern England, western Wales and eastern Anglia are members. The main activities of First Milk are marketing of milk and manufacturing and sales of dairy products. The subsidiary companies in First Milk group are The First Milk Cheese Company Ltd, Scottish Milk Products Ltd and Scottish Milk Dairies Ltd. First Milk has also invested in Robert Wiseman Dairies plc and has a joint venture with Westbury Dairies Ltd. First Milk every year handles approximately 1.75 billion litres of milk out of which 60% is used in liquid supply, 28% utilised in cheese, and the remainder is used in powder and other markets. Two contracts are generally offered by First Milk; one for liquid milk and one for manufacturing. The return to members is a combination of milk price to members and return on investment. For processing First Milk has a joint venture with Westbury Dairies. Financially; First Milk is relatively sound with enough reserves in hand. Recently, it has released reserves and sold the shares to enhance the investment and sustain the members' return.

Milk Link

The farmer owned co-operative Milk Link is one of the three successors of Milk Marque. Basically it served as milk broker but is now processing one billion litres of milk from its 1600 farmer members. Milk Link is handling more than 1.35 billion litres of milk, out of which the lion's share is processed in eight processing units all across the UK. Milk Link has successfully restructured its processing business and has removed the underperforming areas. The Milk Link has invested in processing assets to improve the technology over the last three years. It is the supplier of milk, cheese and creams to major food retail stores, processors and food services organisations. It also has one third share in the modern butter and production facility of Westbury Dairies. Milk Link creameries are Devon, Taw Valley Creamery, Tuxford, Tebbutt Creamery, Leicestershire, Cheshire, Llandyrnog Creamery, North Wales, Reece's Creamery and Lockerbie Creamery Scotland. The Milk Link in 2009 opened a new plant to develop new dairy brands, products and improved packaging formats. It also produces retail own brands for main retailers like Tesco, Marks and Spencer, Waitrose, Sainsbury's, the co-operatives, Morrisons and Iceland. Milk Link is now focusing on value added products to enhance the return of members. It has vertically integrated well to add value in the business.

United Dairy Farmers

United Dairy Farmers is owned by 2200 farmer members who supply 1 billion litres of milk annually. It was formed in 1995 when the MMBs for Northern Ireland were disbanded. It acquired Dale Farm Dairies in 2001. Dale Farm Ltd is the result of a merger between Dale Farm Dairies and Dromona Quality Foods. Dale Farm Ltd has five processing unit all across the UK and manufactures various dairy products. The United Dairy Farmers includes United Tankcare, United Milk Records, United Quotas, United Feeds, Dale Farm, Dale Farm Ingredients, Dale Farm Ice Cream, Dale Farm GB and Rowan Glen. (Home page, United Dairy Farmers)

2.3 The dairy farm statistics in the UK[1]

Figure 2.1 expresses that the number of dairy farms in the UK continues to fall during many years. There were 17,060 dairy farms in 2008 against 31,753 in 1998. In Scotland the number of dairy farms has fallen by 31 % and 32 % in Northern Ireland, while England and Wales have fallen approximately 50 % since the last decade. In January 2010 the dairy producers in England and Wales have further reduced to 11 448 from 11 885 in 2009.

In 2008/2009 the dairy farm income in England and Wales has increased by32.1 % and 21.6 % while in Northern Ireland it decreased by 13.6 %. The dairy farm business income in England, Wales and Northern Ireland fell from 2008/09 to 2009/10 but the fall rate was higher in Northern Ireland as compared to England and Wales. The reduction was due to lower milk price in the respective regions (Home Page Dairy Co).

The average milk yield (milk litre per cow per annum) increased until 2005 but since then it has been falling. The average milk yield in 2008 stood at 6885 litre, which is 1.5 % less than that in 2005 (Dairy statistics, 2009).

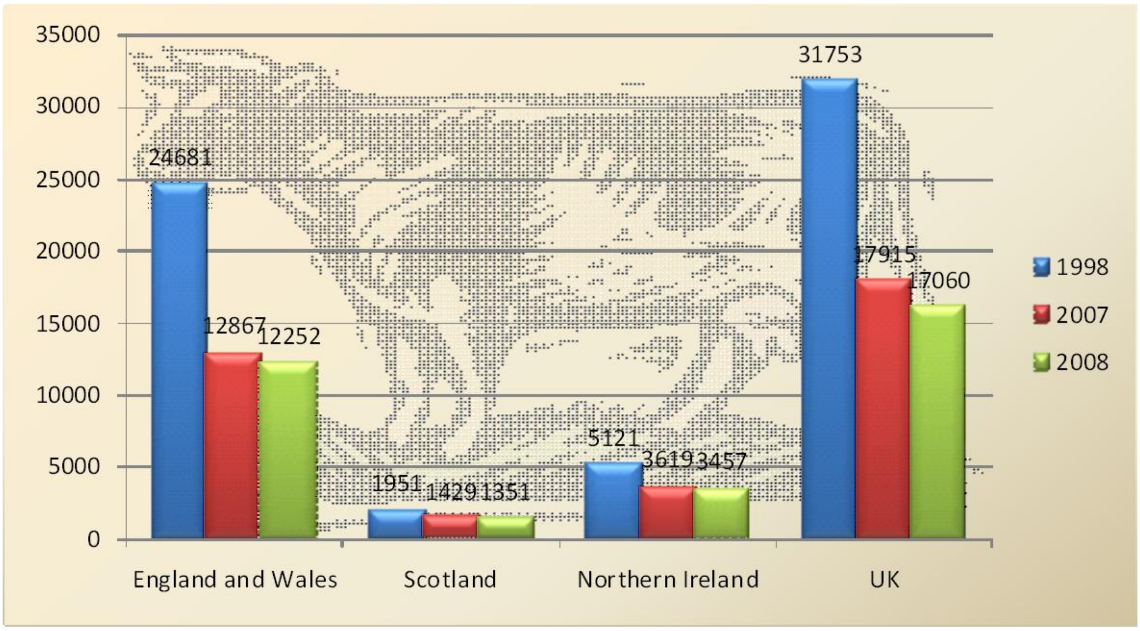

Figure 2.1 the UK dairy farm numbers

[1] *The information contained in section 2.3 and 2.4 is derived from the website of DairyCo. Since all the tables and figures mentioned in chapter no. two (2) are taken from the "Dairy Statistics 2009" except the table 2.1 and 2.2 and section 2.2 which are taken from the "Company Strategy and Performance Report" 2010. Both reports are issued by DairyCo in UK. Any information other than these is referred seperately.*

The numbers of dairy cows have also reduced like dairy farms in the UK. These numbers have dropped down to 1906 (figures are in 000's) from 2458 since 1998 to 2008. Hence, the downward trend still continues all over the UK.

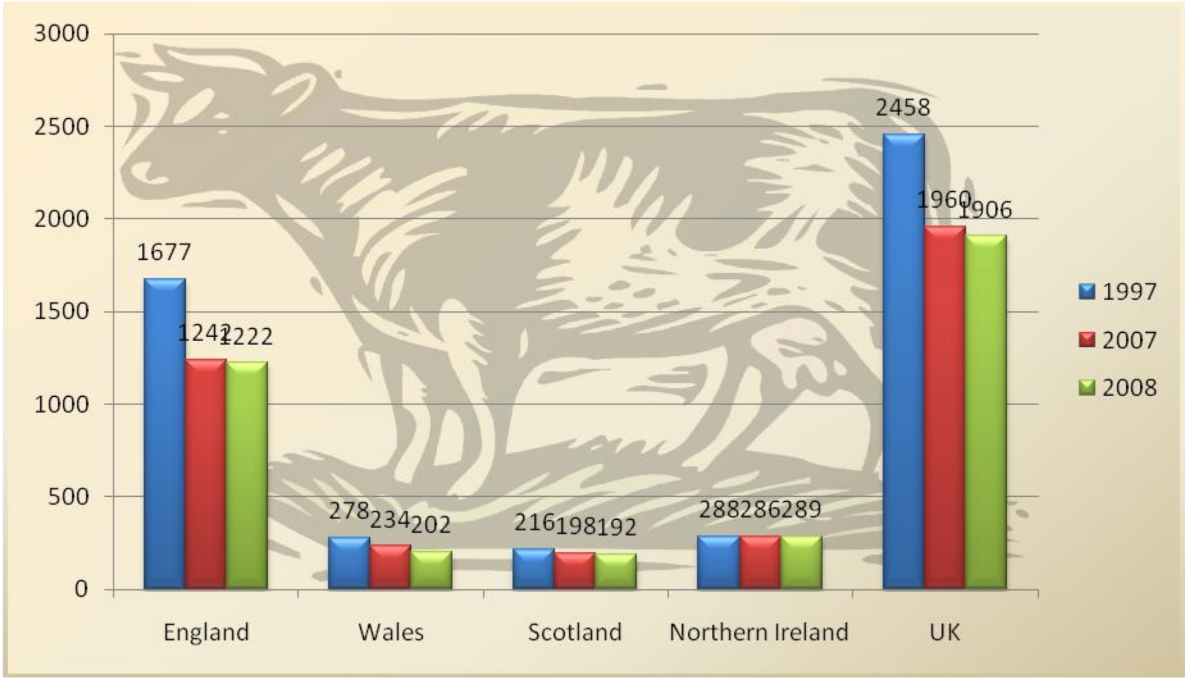

Figure 2.2 UK dairy cow numbers

The average herd size is expanding even though the dairy farms and dairy cows are shrinking in numbers. In the UK the average herd size in 2008 was 114 against 79 in 1998. England, Wales, Northern Ireland and Scotland all showed an upward trend.

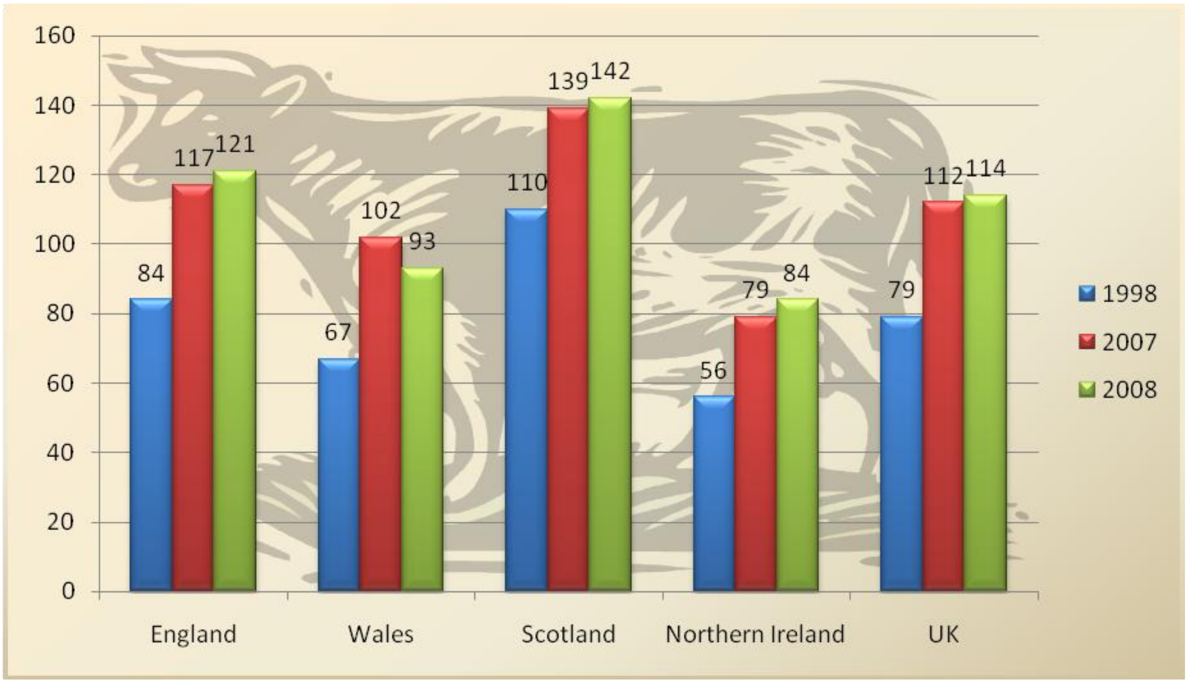

Figure 2.3 UK average herd size

2.4 The position of the dairy market in the UK.

Figure 2.4 describes that in 2008/09 half of the raw milk was used for liquid milk production, 26 % utilised in cheese, and 11 % went into condensed milk and powder while yoghurt, cream, butter and other products each consumed 2 % of milk.

Processors' gross margin has remained the same (46 %) on liquid milk but drop down in mild cheddar (15 % to 12 %). The retailer's gross margin on liquid milk has increased from 15 % to 26 % and in mild cheddar 47 % from 38 % since 1998/09 till 2008/09. The trend indicated that most of the profit is concentrated with retailers and is not fairly shared with processors and farmers. The average annual consumption of whole milk decreased by 39.7 % while the consumption of semi skimmed milk, skimmed milk, yoghurt, butter and cheese has been increased between 1997 to2007. The average retail price for liquid milk increased by 7.2 ppl and doorstep 10 ppl from March 2008 to March 2009. The retail price of branded liquid milk stood 11.1 ppl higher over private labelled liquid milk from March 2008 till March 2009.

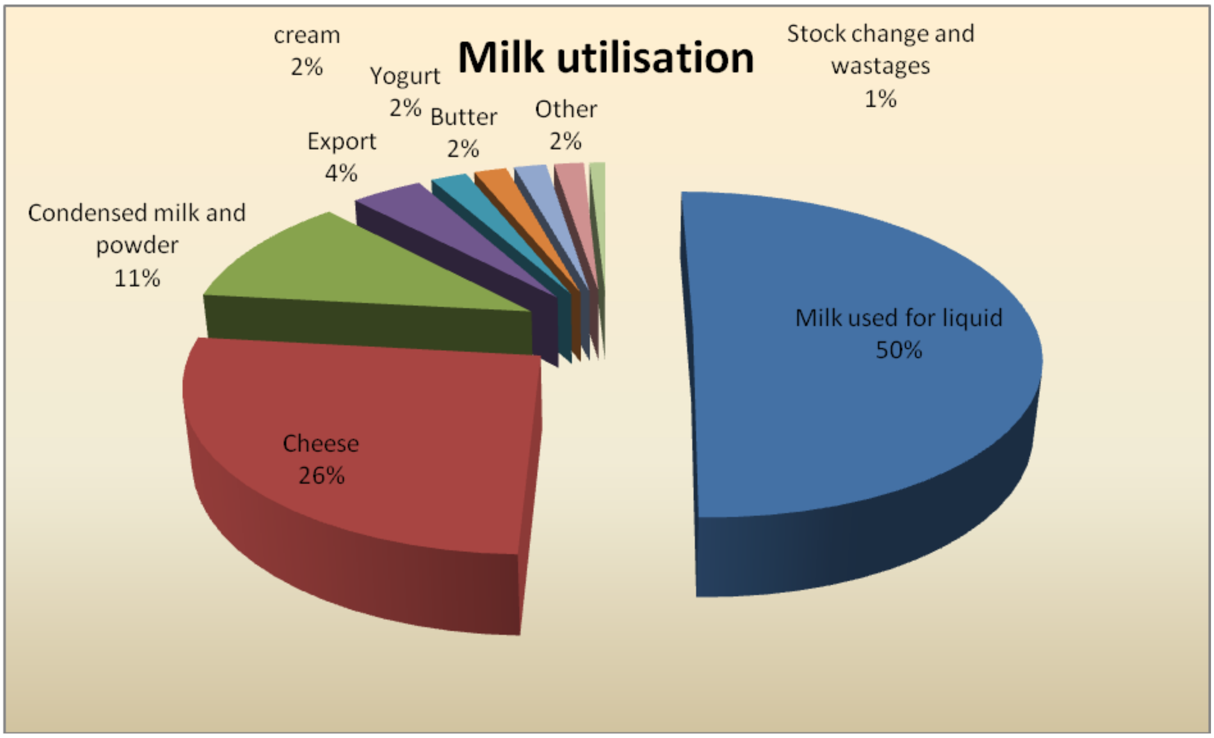

Figure 2.4 Utilisation of milk by the UK dairies in 2008/09

The milk production in the UK has been reduced by 2.7 % in 2008/09 a lowest level in almost last 40 years but milk deliveries approximately remain the same with slight ups and downs over the last decade which ended in 2008 (Figure 2.5)

Table 2.1 indicates the major producer number and volume of milk data for the year ended March 2009. The figures mentioned below clearly depict the picture of dairy co-operatives and their position in the market. The information contained in below mentioned table clearly states that dairy co-operatives are operating at very basic level in the supply chain. First Milk is the only dairy co-operatives in the top three buyers while the main positions are dominated by plcs.

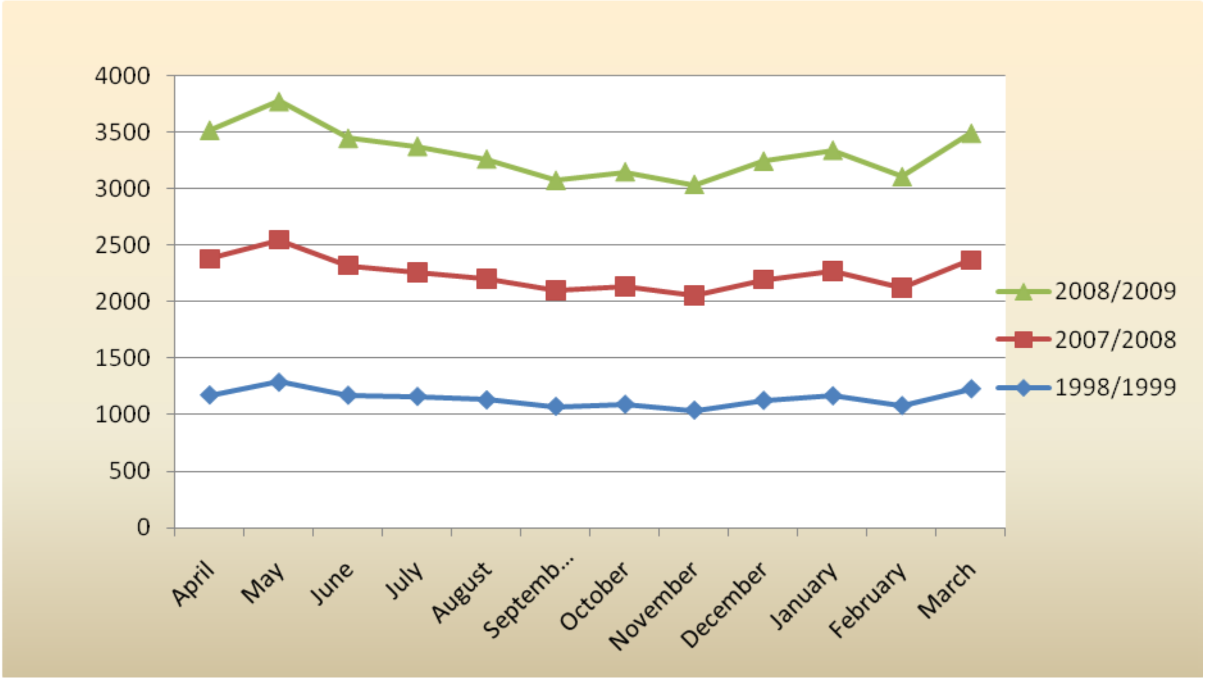

Figure 2.5 UK whole sale milk deliveries

Table 2.1 UK Producer numbers and volumes by buyer2008/09

	Producer Numbers	**Deliveries (million litres)**	**Average Producer Size2008/2009 Year (million litres)**
Arla Foods UK	1400	1600	1.1
Dairy Crest	1400	1500	1.1
First Milk	2600	1750	0.7
Meadow Foods (Holdings) Limited	520	430	0.8
Milk Link	1600	1000	0.6
Muller	150	200	1.3
Robert Wiseman and Sons	830	970	1.2
Total Great Britain Producers/Deliveries	**13041**	**10979**	**0.8**

The information in Table 2.2 demonstrates major retail stores and their power in the UK. Few retail stores in the UK are enjoying enormous power. Main suppliers of retail stores are plcs.

Table 2.3 presents a brief summary of the dairy market in the UK. The production, import and domestic use of raw milk over time have decreased while the export has increased significantly. The production and export of milk powder have decreased. To fulfil the demand import has increased. The domestic use of cheese increased more than the local production.

Table 2.2 UK supply base of major retailers

Retailers	Main Suppliers
Tesco	45% Robert Wiseman Dairies/55% Arla Foods UK
Asda	100 % Arla Foods UK
J. Sainsbury plc	50% Robert Wiseman Dairies/50% Dairy Crest
Morisson	50 % Dairy Crest/50 % Arla Foods UK
Co-op (including Somerfield)	69% Robert Wiseman Dairies/16% Dairy Crest/15% Arla Foods UK
Waitrose	100 % Dairy Crest
Marks and Spencer	100 % Dairy Crest

Table 2.4 entails that the annual average milk farm gate prices had remained below 20 ppl since the last decade but it raised up to 25.9 ppl in 2008. The rise was due to high prices of dairy products worldwide. The problem of low price returned back in 2009 therefore, First Milk and Arla Foods cut the prices paid to farmers' by 1.25 ppl and 2 ppl respectively. (Milk Prices March 2010).

Table 2.3 UK dairy balance sheet

	Production	Import	Export	Domestic use
Raw milk (a) (million litres)				
1998	14220	129	373	13975
2007	13632	57	538	13151
2008	13332	26	504	12853
Butter (b) (000 tones)				
1998	137	105	66	177 (c)
2007	120	103	32	195 (c)
2008	113	80	22	171 (c)
Cheeses (c) (000 tones)				
1998	367	257	55	569
2007	378	403	97	684
2008	378	409	89	697
Cream (d)(000 tones)				
1998	237	10	102	146
2007	291	43	78	256
2008	258	50	59	248

Milk powder (e) (tones)				
1998	204	21	142	52 (c)
2007	117	61	105	72 (c)
2008	92	64	96	60 (c)

Table 2.4 UK annual farm gate price

Year	Average price ppl	Year-on-year price difference ppl
1998	19.26	-2.70
1999	18.31	-0.95
2000	16.92	-1.39
2001	19.25	2.33
2002	17.05	-2.20
2003	18.01	0.96
2004	18.45	0.44
2005	18.46	0.01
2006	17.94	-0.52
2007	20.66	2.72
2008	25.91	5.25

3. Theoretical Framework

3.1 Introduction

Several studies have been conducted on the failure of co-operatives. Every one focused on a particular problem or raised a particular issue within specific area. Authors argued why co-operatives have had problems historically. All the theoretical work is based upon a number of theoretical assumptions, ranging from domestic culture, institutional isomorphism (culture), insecure property rights, huge capital demand and life cycle span to high transaction cost. These factors constituted real threats to co-operatives. The theories are explained below.

3.2 The Economic Culture of US Agricultural Co-operatives[1]

Hogeland (2006) described development in terms of economic culture among farmers and their communities. She argued "how the co-operative philosophies initiated in the early 20th century created contradictions for later co-operative development". Co-operatives changed their traditions to gain economic incentives of industrialisation and globalisation through expansion. Since, this expansion strategy of co-operatives e.g. by attracting and accepting the external capital constituted real threats to traditional supportive culture of co-operatives. Initially co-operatives safeguarded farmers' interest from external economic forces. Later the co-operatives also became the part of these economic forces through integration and big investment. Farmers joined co-operatives for economic benefits but co-operatives wanted to make them dependent.

Industrialization segregated agriculture and classified farmers as factor of production for economic efficiency, while initially the co-operatives preferred farmers well being over economic efficiency. As the pendulum of importance for co-operatives shifted from members benefit to economic efficiency, and concept of vertical integration was emerged. Hence, the co-operatives as organisations started to segregate themselves in terms of goals and identities from members. Therefore, e.g. the importance of capital further enhanced. Because co-operatives need huge amount of capital to compete but disinvestment behaviour of farmers had left no option for co-operatives other than to attract external capital (funding from non farmers). Such investment creates membership heterogeneity which results into various objective conflicts. Consequently, co-operatives have changed themselves in structure, operations and scope from industrialization and globalization view point. Therefore, the traditional supportive culture of co-operatives is replaced by the culture of IOF. Resultantly strong relationship, spirit of belonging, trust and identity disappeared from members.

3.3 Life Cycle Model for Development of Agricultural Co-operatives[2]

Life cycle model for co-operative is developed by Cook (1995) and is divided in five stages: (1) Birth (2) Early development (3) Growth and consolidation (4) Problems and (5)

[1] This section is based on Hogeland (2006) unless something else is mentioned
[2] This section is based on Cook (1995) unless something else is mentioned

Reorganizations. Initially co-operatives were launched to increase competition and mitigate market failure. In later stages when co-operatives faced tough competition from investor owned firms, they needed efficient management and huge capital. The members who could not get enough benefits showed reluctance to investment more and preferred to act as free riders. Consequently, vaguely defined property rights and agency problem emerged in co-operatives.

(1) Birth

Two economic justifications persist behind co-operative formation. (a) When excess supply reduces prices, individual needs institutional/organizational mechanism to gain economic balance. (b) When market fails, producers need better functioning market to secure their interest. The business partner counteracts opportunistically and holds up the situation. Low prices and market failure provide logical reasoning for combination; individuals react collectively for their financial benefits.

(2) Early Development

A co-operative formed to create economic balance produced little effect on members and generally short lived. While a co-operative founded to correct market or to counteract failed market through delivering inputs at favourable prices passed through the infant stage

(3) Growth and Consolidation

After surviving the previous stage co-operative is be able to correct or at least to wipe out the negative effect of market failure. Resultantly competitors think and start to reduce price difference between co-operative and investor owned firm. Members start analyzing the short run transaction cost which is mainly due to vaguely defined property rights. This produces conflicts over residual claim and decision control especially when the co-operative becomes large and complex in structure and operations.

Vaguely defined property rights appeared in traditional co-operatives in the later stages of their life cycle these are free rider, horizon problems and portfolio problems on the other hand control and influence cost are agency problems. These problems are due to conflict over residual claim and decision control and are explained below.

The free rider problems appear when property rights are non-tradable and unassigned. Members and non members use resources without paying the full cost of use or receive the same benefits. When new members receive the same benefit of residual claim and decision control parallel to that of existing members, this leads towards intergenerational conflicts therefore existing members show reluctance to invest further.

The horizon problem emerges when residual claims generated from net income of an asset are less to its productive life. This problem arises mainly due to lack of secondary market for transferability of co-operative shares and restricted residual claim rights. This is disincentive for members for further investment. Therefore members escalate pressure on board of directors for redemptions of shares from residual earnings and to enhance return on their investment. In the end long term investment plans e.g., research and development will affect severely by horizon problem.

Portfolio problem occurs when members' personal risk preferences differ from co-operative investment portfolio because of transferability restrictions, inadequate liquidity and lack of appreciation method for exchange of residual claim. Hence, members hold suboptimal portfolio, they will tend to pressurise the decision maker to restructure investment plan/portfolio, even though it may results in low return because of less risk preferences.

Control problem is associated with agency cost which tries to mitigate the interest difference between principal and agent. The problem intensifies due to lack of transferability of shares and management incentives. A co-operative is unable to use share ownership as management incentives so the members are unable to judge the management performance even though it may harm the co-operative.

In influence cost problem members try/attempt to influence decisions in their favour regarding distributions of wealth because they prefer to stay over quit. Members engaged in damaging influence actions in diversified co-operative lead to high transaction cost.

(4) Problem

Problem stage has strategic importance. Co-operative directors understand the VDPR issues. They compare VDPR hindrances and available opportunities which guide them to decide with the following three options (1) exit (2) continue (3) transit

(5) Reorganization

1. Exit. Within this strategy two options are available a) to liquidate b) to restructure as an investors owned firm (IOF). Exit or merge is better for low performing co-operatives while high performing should restructure it as an IOF.
2. Continuation. When VDPR problem emerges, members attempt to under capitalize the co-operatives. At this stage co-operatives need capital, it can be from following two ways (a) external capital without restructuring into an IOF and (b) proportional capital strategy within the co-operative because the financial responsibility is shared proportionally.
3. Shifting. An option to convert into a new generation co-operative with closed membership and individual ownership. Property rights hindrances are being solved by different strategies e.g., undercapitalization and free rider problems are solved by tradable shares; none members can purchase shares and become members.

3.4 The Future of Canadian Agricultural Co-operatives[3]

Property rights of individuals over assets are as follows "the rights, or the powers, to consume, obtain income from, and alienate the assets" (Barzel 1989, cited in Fulton 1995). Fulton (1995) explains collective ownership equipped with secure property rights create maintains and improves co-operative assets and its productive life. It is mandatory for members to maintain, secure property rights for individual and collective benefits. In case property rights are insecure, unassigned and non-transferable this will emerge in vaguely defined property rights problems. Members will receive less benefit from what they invest therefore, reluctant to investment more, hence co-operative is undercapitalized and cannot compete with giant investor owned firms within the industry and resultantly, collapse. Fulton (1995) is of the view that secure property rights are life blood for a co-operative.

Asset possesses various attributes and incomplete separation/division results in underutilization and affects the net income generated from it. The greater the ability to affect, the higher the returns are (Barzel, cited in Fulton 1995). Members are residual claimant of

[3] This section is based on Fulton (1995) unless something else is mentioned

generated income (Holyoake, LeVay), higher the chances of co-operative success and vice versa.

The probability of co-operatives success enhances if the input provided by the members is highly variable and unpredictable. Since, to produce huge quantity of high quality products has been crucial in the production process during the last century. Therefore, co-operatives were formed and accelerated. Fulton also argued that most critical part in the production process has been changed overtime. Hence the strongest actor will be who have command on most critical part.

Now with industrialization high quality and huge quantity does not remain an issue, for which once co-operative were developed and accelerated. Thus, the power locus in the value chain has moved upstream and downstream, i.e. to genetics firms and to retailers. Hence, the firms in the middle (processing firms, often co-operatives) have lost power. This is so because farming has become less problematic due to technological and economic trends.

3.5 Creeping Privatization of Irish Co-operatives: A Transaction Cost Explanation[4]

Market failures are less frequent, as markets are better functioning and more competitive now than ever. Harte (1997) claims that co-operatives were developed to reduce transaction cost. He exemplifies with Irish co-operative sector where traditional co-operatives are replaced by co-operative public limited companies with farmer co-operative as major shareholders. In case of DairyGold Plc its members individually and DairyGold as co-operative both are shareholders (Home page DairyGold). Therefore farmers do not need co-operatives further, to lower transaction cost.

In vertical integration two or more echelons in production and marketing of goods and services are carried out in one firm. This strategy is to mitigate the market failure, to reduce high transaction cost and to condense the cost of negotiating and carrying out the transaction. These costs are search and information cost, bargaining and decision cost and policing and implementation cost. These costs are mainly due to vaguely defined property rights, incomplete contracts, and opportunistic actions. Generally co-operative is known as partially integrated.

In transaction cost theory there are three cost attributes which create the need of integration. First, the transaction frequency (how often transactions occur) gives the notion to combine business especially with those players who are frequently involved in transaction with each other. Secondly, future transactions are highly uncertain therefore future contracts are insufficient to secure interest of all the parties. Especially if the uncertainty is not distributed equally among partners because holder of better information will act opportunistically and can exploit others hence, integration will benefit equally. Thirdly, certain transactions are asset specific which can result in high transaction cost for a particular asset owner, but vertical integration will reduce transaction cost.

Now market failures are less frequent, transaction and agency cost in highly integrated organizations is less but high in partially integrated organizations like co-operatives due to

[4] This section is based on Harte (1997) unless something else is mentioned

agency and VDPR problems. Hence low market failure in frequency, once for which the co-operatives were formed and high transaction cost of co-operative in competitive business environment leaves no space for traditional co-operatives resultantly they deteriorate.

3.6 Organizations in Sectors[5]

The theory focuses on organizational homogenisation within same organizational sector. Homogeneity is based on competitive and institutional isomorphism. Organisations are homogenised by external factors like political and social processes, while initially organisations having isomorphism in technology and market tend to homogenise themselves. Institutional isomorphism is based on three pillars a) coercive isomorphism b) mimetic isomorphism c) and normative isomorphism. Coercive isomorphism is based on political and legitimacy problems. It may be result of social and cultural pressures directed by government intervention and formal rules. Mimetic isomorphism is due to uncertainty on goals (other organizations can be benchmarked in terms of goals). Common educational backgrounds, informal business requirements, increasing trend of professionalism may result in normative isomorphism. Members are in strong relationship in terms of norms, values and culture within co-operatives. As a co-operative is diversified it results in heterogeneous membership which leads to complex management, uncertainty of goals and decision making. Therefore agency and influence cost problems do appear and co-operatives tend to involve in normative and mimetic isomorphism.

Today large and complex co-operatives are operating. So, now non congruent isomorphism exists among small number of big co-operatives. Initially these were small in size but large in numbers having relationship and close network among them therefore, Mimetic isomorphism occurred between them.

3.7 Theoretical conclusions

It is not necessary that all the above mentioned theoretical assumptions apply in their full context to the UK dairy co-operative. In Ireland transaction costs have diminished because co-operatives have operated efficiently at all levels also like co-operative plc (Harte, 1997). Still the transaction costs in the UK dairy co-operatives are high. Therefore they still need co-operatives to lower the transaction costs.

Keeping in mind the theoretical assumptions it may be hypothesized that co-operatives in the UK could not succeed to integrate and hence lower the high transaction costs. Co-operatives in the UK most of the time remained undercapitalised. Therefore they operated at low levels and could not succeed to compete with investor-owned firms. They are unable to deliver high value added products. Co-operative needed a strong culture of relationship which may not be instrumental in the UK. There can be some other reasons like low milk prices to dairy farmers reduced their commitment for co-operative. The emerging trend of corporate dairy farming is creating obstacles for co-operatives in the UK.

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[5] This section is based on Bager (1997) unless something else is mentioned

On the basis of the above mentioned theories a number of propositions can be stated.

1. The cultural values among the UK dairy farmers are not instrumental for dairy co-operatives and those values might never have been strong.
2. The UK dairy co-operatives have not succeeded to reduce the transaction cost for the farmers to a sufficient level at least not for most farmers.
3. Different stages of operations and services within co-operative are not properly integrated, whereby high transaction costs appear within the co-operative organisations.
4. The locus of power in the UK dairy industry has shifted from farmers and processors to the retailers.
5. The farmers think that they do not get maximum benefits from the cooperatives' assets due to insecure property rights.
6. The members think that the gap between the co-operatives' members (principal) and management (agent) could not be bridged up to a sufficient level.
7. Due to lacking financial resources the co-operatives' products are sold without much value added whereby the product prices become low and the members are poorly paid.
8. Low milk price reduce members' commitment toward co-operative.
9. The emerging trend of corporate dairy farming is replacing co-operatives.
10. Co-operative lifecycle in the UK was comparatively short and has completed.

4. Approach

4.1 Visit to the UK

Most of the data used in this study was collected during a visit to the UK in October and November 2009. One interview was conducted in Scotland whereas another was carried out telephonically to Dublin Ireland while sitting in London. The last two interviews were conducted telephonically by sitting in Uppsala, Sweden, in the beginning of April 2010.

As the UK is the head of many business actions and MNCs, various parts in the UK are well integrated in terms of business activities. Hence, the UK has a diversified culture as inhabitants belong to different cultures, ethnic background and regions. Also the market of the UK is somehow different from other EU countries, since dairy co-operatives are relatively young. These multiple factors make a visit necessary. Meanwhile the trip also provided a chance to visit the retail stores like Tesco, Asda, and Marks and Spencer in order to gain information about the dairy products in their shelves. This helps to understand the dairy co-operatives' position in the market against the other dairy companies. The visit to the UK also provided an opportunity to visit the library of Plunket Foundation which has literature about co-operatives.

4.2 Selection of interviewees.

Different persons within the dairy industry were contacted for interviews by sending them the research proposal. Two persons showed interest to discuss the matter. The second attempt was carried out in late March 2010 for the telephonic interviews which also resulted fruitfully. As this study is about dairy co-operatives in the whole UK therefore, a trip was arranged from London to Edinburgh. The aim of this trip was to get information from other parts as well. So, the point of view of others living away from London may also be given proper space and taken into consideration for a comprehensive view.

4.3 The interviews

All the interviews were semi-structured. A copy of the research proposal and a question guide was send in advance to every interviewee so that everyone could understand the study purpose in advance and prepare his mind to discuss the matter in an efficient way. Two interviews lasted about an hour each while the other two were continued for about 45 minutes. One interview was carried out at the cafeteria of Edinburgh Airport and the remaining three were conducted telephonically.

Table 4.1 List of Interviewees

Name	Position	Organisation
James Graham	Chief Executive	Scottish Agricultural Organisation Society (SAOS)
Peter Dawson	Policy Director	DairyCo UK
Duncan Rawson	Assistant Director, Business Development Services	English Food and Farming Partnership (EFFP)
John Tyrrell	Director General	Irish Co-operative Organisation Society (ICOS)

5 Empirical Findings

5.1 Introduction

This chapter is structured roughly like the question guide and depicts the different prospect of the interviewed persons. The chapter contains information acquired through interviews and influence by the interviewees' views. The emphasis is centralised to find out the rationale behind dairy co-operatives' failure and their dismal position in the UK. An effort has been made to select well-informed persons in the industry for interviews in order to acquire current, comprehensive and meticulous information. The information from other sources than interviews is referenced separately.

5.2 Historical development

Milk Marketing Boards for England and Wales (MMBEW) and subsequently Milk Marque was a very strong platform for the farmers to supply milk for a good price. These organisations had operations for a long time. The Board used to purchase and collect all the milk from farmers. During that period the farmers were not worried about the collection and the price of milk. They were able to sell milk at favourable prices whatever quantity they produced. These boards were replaced by Milk Marque in 1994. Milk Marque succeeded to attract most of the suppliers.

This was the period when some large public limited companies started to be active in the dairy industry. These plcs launched a huge campaign to attract milk suppliers at favourable prices and started to pay higher milk prices than Milk Marque. Some sophisticated players realised the potential in paying an attractive milk price to farmers in order to make the Milk Marque dismantled. So, public limited companies were the main drivers behind the scene. Farmers could not understand why some plcs processors offered higher prices than Milk Marque. Some of farmers preferred the short term higher prices and started to delink themselves from Milk Marque. The farmers could not foresee the long term consequences. Therefore, when the Milk Marketing Boards and Milk Marque were dismantled and the market deregulated it left the farmers exposed. The farmers had neither seen such a situation before nor were they aware of upcoming tough times. They had no experience of open market and especially a situation when their position was extremely weaker than big players in the market.

The three successor co-operatives of Milk Marque were far behind and on back foot. These co-operatives tried to find ways in the market but the market was now very competitive and dominated by large retailers and big plc players. During the period of MMBs farmers neither had nor they felt a need for dairy co-operatives. Farmers had no opportunity to co-operate and they did not even came together to collaborate. The time which was lost in MMBs could not be regained. The competition which the dairy co-operatives faced since their very young age is one of the reasons behind their dismal position. According to the saying "a stitch in time saves nine" the UK dairy co-operatives have missed their opportunities. The time which could have been the ideal to form and grow the co-operatives was lost.

> "Over the last fifty years MMBs have had monopoly powers on the supply of milk; our farmers did not form, understand and invest in co-operatives. We lost fifty years while in

Ireland, Sweden, Denmark, Holland, Germany, USA and New Zealand they formed co-operatives and amalgamated them, brought together the capital, and now they are able to grow them into very big global level businesses. When MMBs were disbanded our farmers were left in a very weak position with no processing capacity. We are trying to catch out fifty years of gap when farmers didn't understand co-operatives" (pers. comm. Graham)

"Milk Marketing Boards and Milk Marque were very stable and strong and attractive world for the farmer to supply milk because the price was good and stable and resultantly, farmers did not co-operate. There was no incentive for farmers to come together. The drivers behind the dismantling of Milk Marque were the processing business, which means public limited companies" (pers. comm. Rawson)

Historically the cultural values in the UK farmers have had hindrances for co-operative formation. The habit of co-operation and relationships could not develop over the time among UK farmers.

"The cultural values are probably more hindrance for the formation of co-operatives if you compare around the world. UK farmers have very independent mind-sets and the natural reaction is that they did not co-operate with the fellow farmers. This has made it harder to persuade our farmers to come together" (pers. comm. Rawson)

"You could say that cultural values were hindrance but that is history. Now our farmers like other farmers around the world can co-operate if there is an economic benefit in it" (pers. comm. Graham).

5.3 Marketing mechanism and power centres

In the presence of perfect competition and potential profit there should be easy entry of new supermarket players but in fact it's almost impossible to establish supermarkets in the UK. Hence, due to absence of perfect competition, the market is functioning inappropriately. There are few supermarket players and they have tried to understand each other. Therefore the market mechanism is not working properly which leads to imperfect competition. Resultantly, it has imbalanced the power relationships. This gives the retailers power over processors, co-operatives and farmers. Fair practices are becoming rare. That's why farmers are calling for more fair practices in market to prevent their exploitation. Now supermarkets are able to amend the supply line as per their own discretion and can influence the price in their own way. They are doing so to raise their profits and the profits are escalating every year. Farmers and dairy co-operatives are suffering from this imbalance position because they are receiving a discounted price due to excessive milk supply in the market. Meanwhile commodity price fluctuations over the last few years have benefitted the supermarkets because they continued to accumulate the profits with them and did not pass on to both farmers and consumers. Therefore, it has further worsened the situation. The imperfect market mechanism and the imbalanced power led to concentration of profit with the retailers. This has affected the UK dairy co-operatives negatively.

"We have four major supermarket players and the fact is that they began to understand and follow each other. In order to get higher profitability they are operating in the same way. The market is not functioning properly. If the market functions in a proper way there should be a genuine competition and ability for new entrances to come in and penetrate into market when there are good profit potentials. It is almost impossible to enter into the retailing industry in the UK because of the power that the supermarkets are enjoying. We don't have a proper market mechanism working and for that reason the imbalance in power is becoming more and more concentrated" (pers. comm. Graham).

In the UK supermarkets are the most powerful, whereas processors and farmers are weaker and co-operatives are lying somewhere in between. They are not powerful because neither they are be able to influence the price of what they produce. The same is the case with dairy co-operatives.

> "It makes more challenging because retailers give dairy co-operatives or any other company as part of the business. Dairy co-operatives in the UK are comparatively young and their financial balance sheets are weaker as compared to Plcs therefore, it is more difficult for them to compete with the market players" (pers. comm. Rawson).

5.4 Price, confidence and commitment

Farmers join co-operatives if they may get a better price of what they produce. When the co-operatives are unable to pay better prices to farmers there is no reason for farmers to join or to remain in the co-operatives.

It certainly varies among co-operatives but most often the members of the UK dairy co-operatives have shown dissatisfaction with the milk price paid to them. An inquiry of Dairy Farmers of Britain (DFOB) tells that in 2007 the weather resulted in a milk shortage. The processors paid the premium milk price but the DFOB could not pass the money on to the member suppliers due to shortage of capital reserves. This created concerns among members, and the concerns raised by the end of 2008 and in the beginning of 2009, which showed a sign of underperformance within the business of DFOB. Members started to resign. Only in December 2008 three hundred and twenty three members supplying 259.81 million litres of milk resigned from their membership because on the 28th of November 2008 DFOB announced to cut the price paid to members by 2 pence per litre. One of the reasons behind the collapse of DFOB was that farmer members, other suppliers and customers lost confidence in it. (House of Commons report on DFOB March, 2010, p, 12-13)

> "By late 2008, DFOB was caught in a vicious circle in which lost confidence led to resignation, which in turn led to a further loss of confidence and more resignations". (House of Commons report on DFOB March, 2010, p, 13-14).

5.5 Consolidation and vertical integration

In today's competitive business world vertical integration and consolidation plays an indispensable role to condense transaction cost which results in economic efficiency and ultimately business success. Dairy co-operatives in the UK could not be integrated vertically and consolidated up to sufficient level. One of the consequences of MMBs was consolidation that did not happened in the UK dairy co-operatives and therefore could not cross the demise line. Many small players in the world become bigger through consolidation and integration.

Among other reasons behind not to be integrated well, the dairy co-operatives were comparatively young and could not raise capital up to sufficient level to consolidate and to add value in the business for members.

> “The dairy co-operatives in the UK have not yet been vertically integrated in the same way as the other European co-operatives are” (pers. comm. Graham).

Vertical integration and consolidation is inevitable to add value in business but at the same time certain factors must be considered; great care, well thought approach, suitability, and current financial strength etc. to make the vertical integration process successful. Absence of these during the integration process can demise the existing structure. This happened with DFOB. DFOB decided to integrate it’s vertically business to add value to its members and purchased Associated Co-operative Creameries Group in 2004. This action had long lasting effects and made the future success unlikely (House of common report on DFOB p, 1 & 6)

5.6 Government policies and support

Government policies and national approach has multiplier effects in any sector. Competition has benefitted the co-operatives in terms of merger and consolidation with governmental support, The Government of New Zealand facilitated the formation of Fonterra with the merger of two dairy co-operatives. In contrast Milk Marque, a farmer owned co-operative, voluntarily accepted break up after recommendations from the monopolies and merger commission. There is a difference of national approach in the UK as compared to some other countries. The co-operatives grew themselves up and merged with the government encouragement that what we see the modern co-operatives today (House of Commons report on DFOB page 16-17). The governmental policies and national approach have not been instrumental for co-operative consolidation in the UK.

> “In the liquids market, intense competition is provided at retail level. The dairy industry as a whole operates in a European and in some cases a global market. Restricting consolidations in the UK makes it more difficult for the UK dairy industry to compete with these other players on both a European and Global scale” (House of Commons report on DFOB p, 41).

5.7 Communication and consensus

The communication between members and management differs from one unit to another but it has not been ideal in the UK dairy sector. The co-operatives have been consuming significant time and financial resources for smooth communication between members and management through brochures, meetings, seminars and general discussion but it is extremely difficult to maintain the balance when the information is commercially sensitive. The co-operatives, which succeeded to attain the confidence of members were successful and vice versa. DFOB failed to maintain the balance in providing and retaining the commercially sensitive information. It did not pass on the deserved information to its members which led to speculation about the future of business and contributed to business difficulties (House of Commons report on DFOB p, 24).

The level of consensus or contradictions of opinions, preferences and attitudes differs in every co-operative. Generally big dairy co-operatives in the UK with sound financial positions have greater alignment within their members and management compared to small ones. Dairy co-operatives in the UK had confronted with short term pain. Therefore members showed reservation over it while the management preferred to emphasise long term objectives. The diversification of short-run expectations emerged as a big challenge to keep everybody within the frame; members had high expectations whereas management had the same but with commercial realities.

5.8 Capital

The dairy co-operatives in the UK are still young businesses and therefore operating at initial levels. Most of the co-operatives are supplying milk to investor-owned dairies, supplying fresh milk to retail stores or making cheese. For several reasons the dairy co-operatives have not taken sufficient steps in forward integration. During the last few years the milk price remained volatile and sometimes even below the breakeven point. This affects the farmers and the dairy co-operatives. The dairy co-operatives in the UK do not have the same products breadth and depth as other European co-operatives have so the most profitable segment is absent from their value chain. The value of the dairy co-operatives' products are weaker than the branded products.

The financial condition of farmers had not been the ideal in the UK. They had not been in a position to invest huge amount in dairy co-operatives. The milk price has remained volatile therefore profit margin had squeezed over the years and resultantly the farmers were confronted with financial constraints and unable to make big investment in dairy co-operatives. The co-operatives deduct some amount from the payment in terms of levy but that seems insufficient to add value in business. When the co-operatives are unable to add value in business they cannot give better return to their members so both members and co-operatives have not been able to cross that barrier. The dairy co-operatives in the UK had not got rid of the financial obstacles and therefore undercapitalised.

> "When farming is good returns are good and farmers are happy to invest more in co-operatives. Generally they are ready to invest small amounts but they don't like to ask for big investment in short term period because many of them don't find the cash to do that" (pers. comm. Graham).

The difference between the UK and European dairy co-operatives is the amount of capital reserves at their disposal. Co-operatives like Fonterra in New Zealand and Arla Foods in Sweden and Denmark had the time to build up substantial capital reserves. Capital rising has always been an issue for dairy co-operatives in the UK. The current ceiling of members' capital is £20,000 excess of it treated as debt which makes it difficult to take bank loans. DFOB was always challenged of financial resources and could not break that circle (House of Commons report on DFOB p, 14-15).

6. Analysis and Discussion

6.1 Introduction

The aim of this study is to investigate why dairy co-operatives in the UK have had problems historically. For example, dairy co-operatives in the UK could not succeed to sufficiently integrate vertically and to reduce the high transaction cost for the farmers. Shifting of powers towards retailers in the UK market has imbalanced the power chain, which affects negatively the other players including the dairy co-operatives. The dairy co-operatives in the UK are of young age and striving hard to stay in the market. Hence, dairy co-operatives have not yet approached their retrenchment stage. An attempt has been undertaken to answer the questions theoretically through analysis of specificities like cultural values, transaction cost, property rights, the life cycle and institutional homogeneity among the UK diary co-operatives.

6.2 The Cultural values and the UK dairy co-operatives

The cultural values among the UK dairy farmers have posed some hindrances towards co-operative formation. However, these values do not happen to be the sole cause of dairy co-operatives' weakness in the UK. Co-operatives around the world expanded to gain economic incentives of industrialisation and globalisation e.g. through attracting external capital, which created membership heterogeneity besides posing real threats to the typical supportive culture of co-operatives (Hogeland, 2006). This concept does not apply to dairy cooperatives in the UK because capital of dairy co-operatives in the UK is only contributed by members. Consequently; external capital option has not been tested in the UK. In fact MMBs had operated since 1933 and continued until 1994. During this period dairy farmers in the UK had not been asked to co-operate. Therefore, such platform was not available where dairy farmers could come together and strive for mutual economic benefits.

Initially when the co-operatives were small they safeguarded farmers' interest from external economic forces (Hogeland, 2006). This notion of Hogeland is relevant to dairy co-operatives in the UK because they are small as compared to dairy plcs and retailers and are trying their best to safeguard the interest of members. Hogeland added that in the later stages the co-operatives became the part of economic forces through vertical integration and by intensive investments, which led to change in their operational level and culture (Hogeland, 2006). This concept of Hogeland is not relevant to dairy co-operatives in the UK because these co-operatives have not enjoyed big investments and have not integrated sufficiently, i.e. they are operating at initial level. Hence, dairy co-operatives are still very young in business and have not attained the high operational level as suggested by Hogeland.

Another point to be considered is the difference between past and present. Historically culture appeared to be a hindrance but the current scenario is different in the UK. A survey commissioned by Scottish Agricultural Organisation Society (SAOS) during February and March 2009 indicates that 85% of the farmers will co-operate on the same level or more in the next five years, 71% consider co-operatives as cost saving and 70% of the dairy farms co-operate (Annual Report SAOS, 2009). An emerging individualistic trend in the world has posed serious threats for co-operatives (Fulton, 1995). Farmers in UK have individualistic mind-sets but perhaps now they have started to learn from their experience. They understand that individual efforts cannot safeguard their interest against the big players in the market.

The study reveals that there has always been a stipulated time period to establish and prosper in any specific sector. The time which was lost during the era of the MMBs would have been ideal for co-operative formation and growth. The dairy co-operatives across the world formed and emerged as big players almost within this time span. Moreover, the cultural values had a negative influence on the formation of dairy co-operatives in the UK. Although, it is difficult to measure how much cultural values have added to the demise the dairy co-operatives.

6.3 Transaction cost perspective in the UK dairy co-operatives

Harte (1997) asserts that co-operatives across the world were developed to reduce high transaction costs of farmers. By applying this concept to the UK dairy co-operatives we came to know that dairy co-operatives have performed inefficiently to reduce transaction costs for the farmers. Harte (1997) also claims that organisational costs among co-operatives increase when co-operatives are in later stages. This is irrelevant to dairy co-operatives in the UK because these are operating at initial stages and have not attained that high operational level and stage where according to Harte organisational cost among partially integrated organisation like co-operatives is higher. Harte quotes the example of Irish co-operatives which have performed inefficiently to reduce the cost and converted into hybrid structure like co-operative plcs. The dairy co-operatives in UK are still operating at an initial level and are struggling to reduce high transaction cost of the farmers. Therefore dairy farmers still need co-operatives to lower the cost up to an appropriate level. The player who has better information and power in the supply chain can act opportunistically to exploit others in order to gain benefit (Harte, 1997). This phenomenon applies to dairy co-operatives in the UK because retailers and processors have better information and power. Thus they are acting opportunistically and exploiting the dairy co-operatives and others to gain benefits. Excess milk available in the market further enhances negotiation cost for dairy co-operatives.

According to Harte (1997) three cost attributes create a need for vertical integration; a) transaction frequency b) uncertainty of future transactions c) transaction specific assets. The selling of milk is a daily routine of dairy farmers. Secondly, transactions of dairy industry are uncertain because farmers have to balance the market on daily basis. Thirdly, the processors and retailers have better information and power, therefore acting opportunistically to gain benefits. Dairy co-operatives since their formation have been confronted with capital constraint. Thus; they are unable to make high capital intensive investment. In fact they sternly need the integration at various levels. The dairy co-operatives could not gain maximum benefits due to their inability to reduce the high transaction cost of farmers. Owing to the MMBs, consolidation and vertical integration could not happen in the dairy co-operatives. Meanwhile, many co-operatives across the world consolidated, integrated vertically and became strong players. “The dairy co-operatives in the UK have not yet been vertically integrated in the same way as the European co-operatives are” (pers. comm. Graham).

When the co-operatives do not address the members’ concerns the co-operatives loose the trust and commitment of members (Harte, 1997). This was relevant to DFOB; one of the dairy co-operatives in the UK which collapsed in 2009. According to the report on DFOB, management did not pass on the increased milk price to members. Resultantly, members showed serious reservation and started to quit from their position which led to series of resignations from DFOB. Members, customers and suppliers lost confidence in the DFOB.

The role of government is always vital and long lasting behind the strength of any sector while policy making and implementation. The UK government's role has not been supportive. Rather, it discouraged consolidation. Therefore, dairy co-operatives could not be consolidated at sufficient level. Resultantly, lack of vertical integration within dairy co-operatives is one of the reasons in their weak position.

6.4 The UK dairy co-operatives; a property rights approach

The power locus in the value chain has moved both upstream and downstream, i.e. to genetics firms and retailers. Hence, the firms in the middle (processing firms, often co-operatives) have lost power (Fulton, 1995). A similar phenomenon occurred in the UK where the market mechanisms have been functioning improperly. This led to an imbalance of power in favour of the retailers. These retailers are very few in number but are able to amend the supply line and prices in their own favour. Such practices in the market have concentrated power and profit with one particular segment, i.e. the retailers. Other players in the supply chain become weaker as compared to retailers. The dairy co-operatives in the UK has no exception and unable to overcome their feeble position. "It makes more challenging undoubtedly because retailers give dairy co-operatives or any other company as part of the business" (pers. comm. Rawson).

Being powerful, retailers have their own brands and use processors and dairy co-operatives as their supply line to earn maximum profit (Fulton, 1995). Most of the dairy co-operatives are making cheese, supplying milk to investor owned dairies and fresh milk to retail stores. In terms of value addition, product strength and product portfolio, dairy co-operatives in the UK are operating at very basic levels. Co-operatives need huge amounts of capital to compete but disinvestment behaviour of members due to poor return undercapitalised the co-operatives (Hogeland, 2006). Since, the co-operatives could not attain the amount of capital to add value in the business. Therefore, they had always played the role of raw material supplier and sold their products without much value addition and in return got minimum gain. Some UK dairy co-operatives have succeeded to invest in their own brands but they are weak compared to plcs and retailers.

6.5 Lifecycle for the UK dairy co-operatives

Cook (1995) pointed out that the portfolio problem occurs when members' personal risk preferences differ from the co-operative investment portfolio. He further suggested that members will tend to pressurise the decision maker to restructure investment plan/portfolio, even though it may result in low return because of less risk preferences. This approach of Cook is relevant to the dairy farmers in the UK because dairy farmers in the UK have confronted with short term pain. They are asking to take measures to provide them relief in short run. In contrast the management prefers to emphasize long run gains. Hence, conflicting objectives between management and members emerged as challenge for the co-operatives.

Problems from poor communication also occur in the co-operatives (Cook, 1995). Such a situation happened with DFOB when it passed on little information to members. The management of DFOB failed to share important and deserved information with members. Management could not maintain a balance between providing and retaining the commercially sensitive information. This action further enhanced the gap between management and members which in result, confused the situation and make the future uncertain for DFOB.

The free rider problems appear when property rights are unassigned and non-tradable. Members and non members use resources without paying the full cost of use or receive the same benefits or when the new members receive the benefit parallel to old (Cook, 1995). The approach of Cook is irrelevant to dairy co-operatives in the UK because dairy co-operatives in the UK do not arrive at to that stage, where the free rider problem emerges.

Re-organization is the last stage in the life cycle model developed by Cook (1995). He argues that low performing co-operatives should liquidate at this point. The modern dairy co-operative movement in UK started when the MMBs were dismantled and the market was deregulated. They are comparatively young and have not arrived to their reorganisation or retrenchment stage.

Another unique point in UK co-operatives is that an individual member can maximally contribute £20,000 in terms of capital in a co-operative. Excess of it is treated as debt for the co-operative. This affects the co-operatives negatively. Firstly, co-operatives cannot enhance the capital of potential members' to overcome the capital shortage problems therefore the co-operatives can remain undercapitalised. Secondly, when the co-operatives apply for loans an amount over £20,000 is deducted from their capital. So it reduces the loan limit for the co-operatives (House of Commons report on DFOB, March, 2010, 14-15).

6.6 Institutional homogeneity in the UK dairy co-operatives

Bager (1997) explains that co-operatives at the initial stages were very large in numbers but small in size and also have various common factors. Therefore, they merged with each other and became bigger with the passage of time. This is not relevant to the dairy co-operatives in the UK because these were not many and most of the industry experts suggest that higher operational scale is important than numbers. Bager also added that now small numbers of big co-operatives are none congruent with each other therefore, co-operatives being the institution are disappearing. This notion also not applies to the UK dairy co-operatives because although dairy co-operatives in the UK are few in numbers but these are not very big secondly, dairy farmers in the UK still need the co-operatives to gain benefit.

7. Conclusions

The particular traits of the UK dairy co-operatives mentioned in Section 3.7 entail that the theoretical discussion within this chapter applies partially to the UK dairy co-operatives. Keeping these traits in mind several hypotheses were stated in chapter 3. Here is an attempt to answer the hypotheses.

1. The cultural values among the UK dairy farmers are not instrumental for dairy co-operatives and those values might never have been strong.

In the presence of MBBs a proper platform was unavailable to bring dairy farmers together. The farmers in the UK have individualistic mindsets and therefore it was difficult to persuade them to co-operate. Thus cultural values have contributed to a weak position of dairy co-operative. According to the Scottish survey perhaps farmers have started co-operation to gain economic benefits and to prevent being exploited.

2. The UK dairy co-operatives have not succeeded to reduce the transaction cost for the farmers to a sufficient level, at least not for most farmers.

The necessary steps to reduce high transaction costs have not yet been taken. Hence, the transaction costs experienced by the dairy farmers are still high. The dairy co-operatives have insufficiently benefitted the farmers.

3. Different stages of operations and services within co-operative are not properly integrated, whereby high transaction costs appear within the co-operative organisations.

According to the theory vertical integration is essential to reduce high transaction cost and add value for the members. Dairy co-operatives have not vertically integrated themselves in an adequate manner; therefore, the value addition is insufficient.

4. The locus of power in the UK dairy industry has shifted from farmers and processors to the retailers.

Theory entails that power centres in the supply chain have moved upstream and downstream, meaning thereby they have moved towards genetic firms and retailers. Retailers in the UK being very few in number are enjoying full power and are taking maximum benefits besides holding maximum profit with them. Actually there is no perfect competition in the market. Few retailers have dominated the entire market. Therefore there is no space for new supermarket player. Hence, dairy co-operatives are in a weak position since their formation.

5. The farmers think that they do not accrue maximum benefits from the cooperatives' assets due to insecure property rights.

   From findings it appears that insecure property rights problem does not appeared in the UK dairy co-operatives.

6. The members think that the gap between the co-operatives' members (principal) and management (agent) could not be bridged up to a sufficient level.

It leads to the conclusion that the phenomenon varies from co-operative to co-operative. In some co-operatives, the relationship between members and management is smooth; generally such organisations are performing comparatively better while uneven relationship also exists in other co-operatives. The relationship between members and management within DFOB was found to be far from perfect.

7. Due to lacking financial resources the co-operatives' products are sold without much value added whereby the product prices become low and the members are poorly paid.

Since their young age, the dairy co-operatives in the UK are operating at a basic level. These co-operatives did not get enough capital to integrate and add value in the business. Firstly, farmers are gaining squeezed margin through selling of milk therefore, their financial circle is tight. Hence, farmers are unable to invest huge amount in the co-operatives. Secondly, dairy co-operatives themselves are facing very tough competition therefore; their margin in the market is also very limited. Thirdly, external capital option has not been tested in the UK. All these factors have restricted the area of operation for the co-operatives at very basic level because of financial constraints. Mostly the co-operatives are making cheese or supplying fresh milk to supermarkets. Dairy co-operatives have not invested in their own brands and those who have invested; their positions are very weak in the market. Thus the products of high profit potential are rarely seen in their product portfolio.

8. Low milk price reduce members' commitment toward co-operative.

Farmers join co-operatives if they may get better price of what they produce. Fluctuation in price of milk in the international market has affected the dairy farmers in the UK. Good functioning co-operatives are paying comparatively better price. In case of DFOB they did not share the increased milk price with the members; resultantly it shattered their confidence and commitment towards them.

9. The emerging trend of corporate dairy farming is replacing co-operatives.

Findings indicates that trend of corporate dairy farming has nothing to do with the UK dairy co-operatives.

10. Co-operative lifecycle in UK was comparatively short and has completed.

The modern dairy co-operatives were formed when the MBBs were dismantled and the market became deregulated. Since these had been disbanded in 1994 therefore, dairy co-operatives are young and have not yet attained their retrenchment stage.

It may be surmised that ideal time for co-operative formation and expansion has been lost and the cultural values have not been supportive for co-operative formation. The dairy co-operatives are operating at a basic level and have not been integrated vertically up to sufficient level to reduce the transaction cost. The market mechanism has been functioning inappropriately, so the power centres in the supply chain have been shifted towards retailers. This has adversely affected the dairy co-operatives. In some co-operatives poor payment of milk has reduced member's commitment towards them. Similarly, in some cases there is diversion of interest between members and management. The dairy co-operatives are acting as milk supplier and have not invested adequately in value added goods therefore; the profit margin has squeezed over time for the UK dairy co-operative.

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Appendix

Question Guide

1. Are the cultural values in the UK farming population instrumental for co-operatives or hindrances for co-operatives?
2. Do the co-operatives help the farmer members to reduce their transactions cost, i.e. is it easier to be a supplier to a co-operative than to an investor owned firm?
3. Do the co-operatives have power and control over their production and sale? Have co-operatives just an attractive product mix as competing investor-owned firms, and just as attractive market offers, including prices and other conditions
4. Now the co-operatives' buyers (retailers and non-co-operatives processors) are much powerful. How does this affect the dairy co-operatives in UK?
5. Are the different stages in the vertical processing chain within the dairy co-operatives properly integrated? Is there proper integration between different co-operatives?
6. Are the members satisfied with the co-operatives' investment policies? Are the members satisfied with the capital returns they get from the co-operatives?
7. Have the members and the co-operative managements the same set of opinions, attitudes, preferences, etc?
8. Do the management and members have consensus as concerns the co-operatives objectives?
9. Are the co-operatives' ideas, problems, issues and proposed solutions properly communicated to members?
10. Are there different opinions among members as concerns the co-operatives' way of running business and their objectives? Especially about financial matters?
11. Do the members try to influence decision in their favour?
12. Are the members happy with external capital in co-operatives (would they be)?
13. Are the members ready to invest more in the co-operatives?
14. Is the co-operative style of business able to compete in the UK competitive markets?
15. Today co-operatives are not very many. Would the existing co-operatives benefit if there were more co-operatives so that they could support and influence each other?
16. Price support to milk remained in force for a long time. As it was abolished various organizations got strong and efficient, and they penetrated their products on the markets. Therefore co-operatives were unable to compete with them. Is this the reason why dairy co-operatives are instable in the UK?
17. Every sector and industry is sometimes said to have a life span. Are the co-operatives in UK approaching the retrenchment stage?