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# **Theorizing “Producer-led” versus “Investor led” Dairy Cooperatives: A Regulationist Perspective**

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## **Abstract**

Agricultural producer cooperatives, especially dairy cooperatives, have been dominant in the agri-food sector, especially in Northern Europe. Recently there has been significant concentration and internationalization amongst dairy cooperatives as many have been transformed into large international growth orientated organizations. In this article, the development of dairy cooperatives in Ireland and Denmark is explored from a regulationist perspective. In particular, the Mode of Social Regulation (MSR) is explored using empirical evidence from the Irish and Danish processing industries. Marden's (1992) understanding of the MSR – based on five interrelated elements (monetary and credit relationships, the type of competition, the wage-labor relation, the mode of adhesion to the global regime, and the form of state intervention) – is employed. The research has found that the type of accumulation has a significant influence on national MSRs and a distinction is drawn between producer-led accumulation and investor-led accumulation in the dairy processing industry. As the national MSRs have evolved, hegemony has shifted from a group or coalition of national organizations and dairy processing companies to globally-orientated and integrated companies. There is evidence of increasing global adhesion in the MSRs of both national industries, although the changing MSRs do not represent a clean break with the past. Rather, contemporary MSRs build upon and are contingent on past MSRs; indeed elements of past MSRs co-exist alongside elements of new MSRs.

## **Introduction**

The regulationist literature, which has emerged over the past two decades, has provided a framework for understanding the complexities of capitalist growth, crisis and

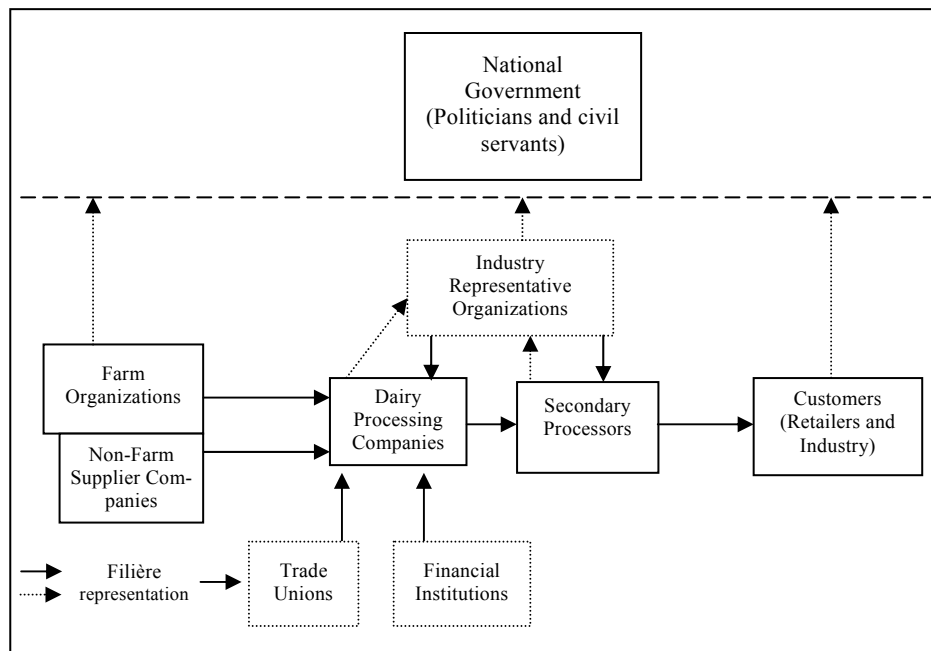
reproduction, in particular the transition from Fordism to post-Fordism (for example, Boyer, 2000; Dunford, 1990; Goodwin, 2001). Regulation theory has been particularly useful to economic geographers for it provides theoretical insights, through variations in regulation between different national and local contexts, into the process of uneven development both through time and over space. Many summaries of the two central concepts of regulation theory – “regime of accumulation” (RA) and “mode of (social) regulation” (MSR) – have been provided (for example, Jessop, 1990; Tickell and Peck, 1992) and they are not repeated here. However, we follow Dunford in taking RA to be “a relatively equilibrated development of the different departments of production and sectors of economic activity” (1988:354). In this interpretation, a particular regime is associated with regularity in the decisions of individual and collective actors in which a certain outcome is expected. We interpret MSR, with Tickell and Peck, as “a complex ensemble of social norms and habits; state forms, structures and practices; customs and networks; and institutionalized compromises, rules of conduct and enforceable laws” (1995:360). In this view, institutional arrangements and rules of behavior facilitate the reproduction of capitalism, together with mechanisms connected with the governing of the wage relation, monetary mechanisms and competition (Dunford, 1988:355). So as to simplify these abstract concepts for concrete research, attention is drawn to the five interrelated elements of the MSR summarized by Marden (1992), namely: (1) monetary and credit relationships, (2) the type of competition, (3) the wage-labor relation, (4) the mode of adhesion to the global regime; and (5) the form of state intervention. These elements are employed later in the article.

Within economic geography, the regulationist literature has focussed mainly on the demise of “rust belt” industries and regions (*e.g.*, Gertler, 1992; MacLeod and Jones, 1999) and on the growth of new industrial sectors and spaces (*e.g.*, Amin, 1989; Moulaert and Swyngedouw, 1989; Scott, 1988). Concepts such as flexible accumulation, innovative milieu, industrial district, transformation rules and accumulation system have been developed to address the varied socio-economic experiences of different industrial sectors and regions (*e.g.*, Amin and Robins, 1990; Kratke, 1999). Rather less attention, however, has been directed to understanding, from a regulationist perspective, those industrial sectors and regions that have been able to restructure and reproduce themselves in the transition from Fordism to post-Fordism. This article addresses the deficit by examining the food processing sector within the context of Marden’s five interrelated elements that comprise the MSR. However, the article advances an understanding of the MSR for an industrial sector by developing the concept of “hegemonic type of accumulation” (HTA), that is to say the dominant type of capital ownership in an industrial sector. In particular a distinction is drawn between “producer-led” and “investor-led” HTA and interpreted to form part of what Wrigley terms “the complex relationships between market regulation, investment regimes, corporate strategies and spatial outcomes within contemporary economic geography” (1999:287). This article shows how the HTA has developed within the MSR for food processing and its significance for under-

standing the sector’s variable national response to globalization under post-Fordism.

This article also addresses the repeated call for more comparative, theoretically informed, concrete research within the regulationist tradition (for example, Bowler, 1994; Goodwin, 2001; Kratke, 1999; Painter and Goodwin, 1995; Pickvance and Preteceille, 1991). Such research has the capacity to illuminate commonalities and differences in the structure and transition of the RA and MSR through time and over space. Here dairy processing within the food sector is examined comparatively for Ireland and Denmark<sup>1</sup>, drawing upon 69 intensive interviews with a range of key actors in both countries from the dairy processing industries, representational organizations, financial institutions, suppliers, customers, and government and political representatives (see Fig. 1). Such a methodology reveals the socially contested nature of the MSR. The qualitative data are supported by secondary data from each country drawn from company reports, industry reports, industrial censuses and EU publications.

**Fig 1. Dairy supply system: actor groups included in the interview process**



<sup>1</sup> For this study, the dairy processing industry is used to refer to companies that engage in processing milk (for example, drinking milk, cultured milks or cream) or manufacturing milk products (for example, cheese, butter, yogurts, milk and whey powders, etc).

### **Some indicators of comparative structural change in the dairy processing sector**

For both Ireland and Denmark, the dairy processing sector has been, and continues to be, an important part of national economic, social and cultural development. The sector has existed in both countries for well over a century, so that the development of each national MSR can be examined over a long time period. Moreover, both countries joined the EU at the same time (1973) when their dairy processing industries became subject to the market organization of the Common Agricultural Policy (CAP). Therefore, since 1973, both food processing industries have been subject to the same supranational and global regulation, but have followed markedly different development paths.

Both national dairy processing industries emerged in the late 19<sup>th</sup> century following the diffusion of the new technology (the mechanical separator which facilitated the industrialization of formerly farm based dairy production) and the rapid growth of cooperatively (*i.e.*, farmer) owned dairies. In Ireland, the development of farmer cooperatives was driven from the top-down by wealthy and energetic cooperative enthusiasts. Later, after independence, cooperative dominance of the industry was secured by the state and the state became directly involved in ownership and management of some dairies that had encountered financial difficulties. In comparison, in Denmark cooperative dairies grew as a result of local grassroots initiative with little state involvement. Diffusion of cooperative ownership was rapid and complete and farmer involvement was therefore more deeply rooted in the Danish industry; in Ireland the state had ensured that farmer-ownership would be dominant within the industry.

In the 20<sup>th</sup> century, entry to the EU proved an important step for both national dairy processing industries. For the Irish industry, it resulted in a rapid growth of milk supply (Table 1A). However, the number of dairy cooperatives declined sharply from 158 in 1970 to 57 in 1975. It was during these years that much of the amalgamation leading to the emergence of the “big 6” dairy cooperatives occurred (*i.e.*, Avonmore, Ballyclough, Golden Vale, Kerry, Mitchelstown, and Waterford). Capital had begun to concentrate in more significant blocks and foreign direct investment, especially by UK and US companies, became important for the industry either in partnerships or joint ventures, or as customers using Irish dairy processor’s products. The state had returned the industry from state control to cooperative ownership and An Bord Bainne (later known as the Irish Dairy Board – IDB) was also placed under cooperative ownership. However, by the mid-1980s, with the introduction of milk quotas, the industry came to the end of a phase of two decades of growth and change.

Faced with a contracting milk supply base and limited potential for growth domestically, Kerry, followed by Avonmore, Waterford and Golden Vale, changed from cooperative to public liability company (PLC) ownership and adopted internationalization strategies. From being Irish-based and cooperatively owned, a significant segment of the Irish industry, by the mid-1990s, was increasingly interna-

tionally orientated, and driven by the growth and profit concerns of the stock market. Concentration within the Irish industry has continued and scale has increased, but the industry lags behind international levels (see Table 1B,C). A significant proportion of foreign investment which had taken place in the 1960s and 1970s in the Irish industry had been enveloped by the indigenous industry.

For the Danish industry, the early development of dairy cooperatives was successful: cooperatives quickly grew in number; Danish products were successful in export markets; and a strong organizational infrastructure developed around the industry. It was not until later in the 20<sup>th</sup> century that the Danish industry experienced significant structural change. A contributing factor to structural change in the industry was the deregulation of the milk market for Copenhagen and other cities and towns after entry to the EU. From 1940 to 1971, individual dairy companies had a legislated monopoly to supply milk to particular towns and cities in Denmark. As a result, there was little structural development in liquid milk dairies in this period. In preparation for entry into the EU, this system was abolished in 1971 and it was now open for other dairies to enter these markets, in particular the lucrative Copenhagen market.

**Table 1. Indicators of structural change in the Irish and Danish dairy processing industries**

<b>[A] Milk deliveries</b>		<b>1975</b>	<b>1995</b>	<b>% change 1975-1995</b>
Ireland (m galls)		625	1,027	+ 62
Denmark (m kg)		4,414	4,495	+ 2
<b>[B] Dairies (number)</b>		<b>1973</b>	<b>1994</b>	<b>% change 1973-1994</b>
Ireland		118	71	– 40
Denmark		324	42	– 87
<b>[C] Companies (number)</b>		<b>1951/55</b>	<b>1995/96</b>	<b>% change 1951/55-1995/96</b>
Ireland	Cooperative	193	35	– 82
Denmark	Cooperative	1,256	19	– 98
	Private	224	29	– 87
<b>[D] Scale and Concentration (1997)</b>				
Ireland				
Scale of 4 largest processors – 3.7 million tons of milk processed				
Concentration – 4 largest processors account for 70% of milk supply				
Denmark				
Scale of largest processor – 4.4 million tons of milk processed				
Concentration – Largest processor accounts for 90% of milk supply				

Sources: European Commission 1997; ICOS, 2000; Danish Dairy Board, 1997; Keane 1995; Knapp, 1964.

Out of this struggle for control of the milk market and continuing mergers of the smaller dairies, Dairy Company Denmark emerged as the dominant company in the industry. In 1988, Dairy Company Denmark was renamed MD Foods and began to internationalize its activities. By the mid-1990s, MD Foods had emerged as the dominant company in the Danish dairy industry. It controlled almost 75 percent of milk supply and, apart from one other small private company, dominated Danish dairy exports. Accompanying the concentration of the industry had been the rationalization of the production facilities of the industry. From 1988 to 1997, the number of butter processing plants declined from 148 to 20 and the number of cheese plants declined from 168 to 63. By late 1990s, 80 percent of Denmark's cheese was produced by MD Foods: 50 percent of this was produced at 4 large modern specialist cheese plants (Danish Dairy Board).

The increasing concentration of capital in the Danish industry has been important in enabling MD Foods to have the necessary economies of scale to gain a significant presence in foreign markets. The importance of economies of scale is illustrated by the following extract from the transcripts of the research interviews:

It is in order to protect their own situation – if they don't expand, they will die. They have to compete against the other European dairy companies. If they don't succeed, they will disappear (*A Danish trade union official*).

As a result, the industry has become more integrated in the global dairy industry through various internationalization strategies. However, a dilution of cooperative ownership was required to finance internationalization activities, while the dilution was confined to international activities only. During this phase, MD Foods emerged as the main agent in the concentration of capital in the Danish industry, transforming the industry from a scattering of locally-based organizations to a large conglomerate dominating the industry. This was not a smooth transition, as conflicts with other dairies have emerged along the way. Despite the concentration of capital, cooperative ownership continues to dominate. The state has a relatively minor role to play in the regulation of dairy markets as the EU framework has superseded the role of the nation state.

Thus concentration of capital in Ireland has occurred but, relative to similar industries in other countries, the industry remains more fragmented (Table 1D). Rather than concentrate capital domestically, the industry has focused on international investment strategies. In contrast, the Danish industry has almost achieved complete concentration, while remaining in cooperative ownership, but has modified part of its ownership to pursue international accumulation strategies.

**Table 2. The Changing MSR of the Irish and Danish Industry**

<b>MSR Element</b>	<b>Irish Industry</b>	<b>Danish Industry</b>
Market and Competition	Indirect Links through Irish Dairy Board ↓ Dairy Companies respond to retail influence. Direct relations with international customers	Export orientated, little domestic competition ↓ Dairy industry dominant domestically. Close relations with international customers
Labor Relations	Traditional, job losses, rationalization ↓ Traditional, job losses, change resisted, local regulation important	Positive, local focus ↓ Positive, change facilitated, larger, fewer units
Financial Relations	Domestic orientation ↓ Globally integrated	Domestic orientation ↓ Globally integrated
Global Links	Trade links through Irish Dairy Board ↓ Global integration through market, financial, intra-company links	Trade links through exports ↓ Global integration through market, financial, intra-company links
State Intervention	Supranational dominant ↓ Supranational dominant	Supranational dominant ↓ Supranational and global regulation dominant
Hegemony	Producer-led accumulation. Irish Dairy Board and others hegemonic ↓ Investor-led accumulation. Kerry hegemonic	Producer-led accumulation. Coalition of dairies hegemonic ↓ Producer-led accumulation. MD Foods hegemonic



## The MSR for the dairy processing sector

We now turn to placing this empirical narrative within regulation theory. To begin with, Marden's (1992) five elements are used as the framework for differentiating the MSR for the dairy processing sector between Ireland and Denmark, particularly in relation to the transition of the sector from Fordism to post-Fordism (Table 2).

### *Market and competition*

One of the most significant developments for the dairy processing sector has been the growing influence of retailers. Increasing concentration of capital within the retail sector has raised the importance of branding, product range and product presence in the consumer market. Internationally, direct trading relationships with commodity and food ingredients customer companies to satisfy specialized needs have become more important. For the Irish industry, the result has been a closer interactive partnership between supplier and customer: this is part of the wider response to a gradual shift from institutional to market regulation. The necessity for a more interactive relationship was described in the interviews as follows:

We have to gear ourselves to be able to supply their requirements not saying to them, we have this – do you want it? ..... Marketing is only part of it, you have to have a lot of technical back up. They come round and see the plant and get confidence in your systems and ability to deliver their requirements on a regular basis. It is a whole relationship that builds up .... it is not just selling (*A senior executive in an Irish dairy company*).

By comparison, and despite a parallel concentration of capital in retailing, the Danish dairy processing industry has remained powerful and has resisted the introduction of own-label products in the domestic market, while maintaining high profit margins. Internationally, the industry has reoriented its exports towards the European Union (EU) in anticipation of unfavorable global trading regulations. Nevertheless, the major dairy company – MD Foods<sup>2</sup> – has developed closer links with key retail chains in Europe: continuing concentration in European retailing has reinforced the need to achieve countervailing power through economies of scale within the Danish dairy processing sector.

### *Labor relations*

For the Irish dairy processing industry, labor relations have remained traditional and confrontational, with change in working practices resisted by the workforce. In the context of a decline in employment in the Irish industry, and continuing rationaliza-

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<sup>2</sup> In April 2000 (after the completion of the fieldwork on which this article is based), MD Foods merged with Arla, the largest Swedish dairy company, to form Arla Foods with its headquarters in Aarhus, Denmark.

tion, job losses remain the central issue. However, local regulation has been very influential in modifying the overall context. For example, two neighboring dairy companies in Ireland (examined during the research for this article) have had contrasting experiences of implementing change: one reached agreement with trade unions on productivity in the early 1980s and has been able to implement change relatively easily. In contrast, its neighbor has struggled to implement change and experiences more difficult employee relations. This contrast was elaborated by one interview respondent as:

it's years since I had to face Company A management across the table with a third party, whereas with Company B it's not uncommon to have a third party involved maybe twice or three times a month and that's because of the issues that are surfacing within Company B which have already been catered for by Company A (*An Irish trade union official*).

By comparison, labor relations have been a positive element in the development of the Danish industry, as facilitated by the employment context and the partnership approach to labor relations. Concern with pay and jobs are less significant compared with health, safety and lifestyle issues. As a result of positive labor relations, change and restructuring have been easier to achieve and there has not been resistance by the workforce to concentration in the industry. Asked about difficulties in agreeing technology changes with employees, a Danish interviewee responded:

No, not at all. In some industries yes, but not in the dairy industry. We have, as I mentioned, we are gone down from maybe in twenty years, from 1,000 factories to 100 dairy firms and there have been no problems with that (*A senior employers organization representative*).

### ***Financial relations***

In common with other industrial sectors, dairy processing in both Ireland and Denmark has been subjected to the process of globalization. As a result, the sector has sought access to more competitive sources of finance, not least to internationalize its financial base. Thereby the dairy processing industry in both Ireland and Denmark has become integrated into the global financial (*i.e.*, banking) network and developed significant export and international business links. For example, careful management of currency issues is regarded as an important part of the success of MD Foods. The integration is apparent from the comments made in interviews:

From Ireland, certainly, most of the (dairy) co-operatives would be borrowing outside of Ireland as well, depends where you have different types of business. If you have some of them based overseas, you will more likely borrow overseas. Certainly, the Irish dairy industry would now be global in terms of its sources of finance, in terms of its borrowing (*Irish dairy industry executive*).

They are very active, especially one of the dairy industries, MD Foods is very active abroad, with export. Export is very influenced by currency movements and interest movements and therefore of course they are also interested in hedging possibility, trying to hedge their position, short, long-term hedging possibilities, and also interested in, they have a very big cash-flow of course, so consequently they are also very interested in the best way to optimize the cashflow, the interest on their cashflow. So they are very active in the money market (*Danish banking executive*).

### ***State intervention***

EU-level regulation of dairy products has been very influential in the changing MSR for both the Irish and Danish dairy processing industries and a focus of attention for both industrial managers and national governments. In Ireland, while the EU regulatory system has steered the product and market foci, there has been competition and overlap of interests within the policy network for the dairy industry. For example, the Irish Co-operative Organisation Society (ICOS), an umbrella body for all cooperatives in Ireland, had been prominent in representation and lobbying for the dairy industry (both producer and processor) at national level and European level through COGECA<sup>3</sup>. However, during the 1990s, the Irish Dairy Industries Association (IDIA) has become more prominent at national level and at European level (through the European Dairy Association – EDA) especially with regard to processing industry issues. In Denmark, as in Ireland, the EU support system for dairy products has superseded national state intervention in the dairy industry. But paradoxically, this has increased Danish government interest in the dairy sector, since the Danish government must now represent the industry at EU level. The Irish government, in contrast has always played a prominent role in influencing the development of the industry (see section 3). Representation at the national policy level is provided by the Danish Dairy Board (DDB) – the representative body for the industry – although the dominance of MD Foods within the industry has reduced the influence of the DDB in recent years.

### ***Global adhesion***

A significant feature of the changed structure of the MSR for the dairy processing industry in Ireland, between the Fordist and post-Fordist regimes, has been its increasing global adhesion (integration), as already referred to under *financial relations* and *market and competition*. The internationalization of activities by several of the larger Irish dairy companies has been a major impetus for this increasing integration. However, some barriers to full integration remain. For example, EU support for the dairy sector, the export marketing role (for a significant part of the Irish industry) of the Irish Dairy Board (IDB), and the producer-led focus of a segment of the industry all serve to insulate the domestic sector from the harsher effects of full integration

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<sup>3</sup> Comité Général de la Coopération Agricole de la CEE (COGECA).

into the global regime. Nevertheless, increasing global adhesion has resulted in domestic activities becoming relatively less important compared with international activities. Despite, or because of, this partial internationalization, the Irish industry suffers from scale disadvantages compared with its major competitors.

Similarly in Denmark, a significant feature of the changing MSR has been the increasing global integration of the dairy processing industry. Economies of scale have been an important factor in driving the process of internationalization and integration of the industry into the global regime. Some problems have arisen, as the process of achieving economies of scale internationally clashes with the needs and ideals of the farmer-owners of most of the processing companies. This concentration of capital domestically has also been an important factor in keeping foreign capital out of the Danish industry.

### **Hegemonic Type of Accumulation (HTA)**

This account of the restructuring of dairy processing in Ireland and Denmark reveals that Marden’s five elements can be interpreted as necessary but not sufficient for a full conceptualization of industrial change. In particular we introduce the concept of *hegemonic type of accumulation* (HTA), drawing on the work of Friedman (2000) and his notion of “microregulation” and Boyer’s observations on the emergence of “a growth regime driven by finance” (2000:319). While Friedman’s notion of “strategies pursued by agents but connected to emergent properties of social structures” (2000:67) was applied by the author to the labor process, our concern is with the capital structure, or financing, of businesses comprising an industrial sector. Thus by “hegemonic type of accumulation” we imply the dominant form of capital ownership and accumulation in an industrial sector and, in the present study, two HTA can be identified, namely “producer-led” and “investor-led” accumulation (Table 3). *Producer-led accumulation* refers to accumulation in which farm (milk) producers are the owners of the processing companies and have a dominant influence on the direction of the accumulation process. In producer-led accumulation, returns are maximized to the producer, through milk price in the case of the dairy industry. Other characteristics of this form of HTA are services and support for producers, cooperation with other dairy cooperatives, and strong links to the local rural communities. The term “cooperative ownership” has been used previously to describe this form of capital ownership (e.g., Moran *et. al.*, 1993). *Investor-led accumulation*, in contrast, refers to accumulation in which non-farm investors of capital own the processing companies and have the dominant influence on the direction of the accumulation process. In investor-led accumulation, returns are maximized to the investor, in the case of PLCs through share-price and dividends. Other characteristics of this form of HTA are a focus on growth, profit, value-added products and reinvestment in R&D. The distinction between these two HTA is highlighted by the following extracts:

It is a different philosophy – a different philosophy between a co-op and a PLC. We try to give our farmers, our shareholders, the best price for their product. Profit is not necessarily the be all and end all. Our shareholders are being well rewarded, they are getting a good price on the product they are supplying into us. When we do this we achieve our aims (*A financial executive in an Irish cooperative*).

There is no doubt that a company that went down the road of PLC would take a somewhat different view of profits than a co-op would take, a co-op would make profits for the purpose of ultimately returning them to the farmer whereas the PLC has two constituencies: the private or institutional shareholders on one side and the farmers on the other side (*A representative of an Irish farm organisation*).

**Table 3. Change in type of accumulation in the Irish and Danish dairy processing industries under Post-Fordism**

Level	Irish Industry	Danish Industry
International	Shift from producer to investor-led accumulation	Shift from producer to investor-led accumulation
National	Significant segment of the industry shifts from producer to investor-led accumulation	Producer-led accumulation remains dominant
Local	Producer-led accumulation replaced by mixture of producer and investor-led accumulation	Producer-led accumulation remains dominant

In Ireland, the HTA in the Fordist regime was characterized by the “big 6” dairy processing cooperatives (see above). But this producer-led HTA has given way, in the post-Fordist regime, to a new investor-led HTA formed in part by a number of dynamic, innovative, globally-orientated companies, in which Kerry is the leading company. The ownership structure of these companies is complex, with a mixture of non-farm and producer investors. Even so, since the mid-1980s, there has been a broad shift from producer to investor-led accumulation by a significant part of the Irish dairy processing industry. As discussed earlier, this in turn has driven growth and internationalization of the industry. However, a significant part, but not all, of the Irish industry has remained in the more traditional producer-led accumulation segment of the industry, which is focused locally and nationally, rather than internationally in its trading objectives and uses the Irish Dairy Board for its export marketing. Thus the new Irish HTA is characterized by flexible ownership structures

in which the development of an accumulation type based on international, corporate capital is partial and incomplete.

In Denmark, under the Fordist regime, dairy processing capital was also controlled by cooperatively-owned dairies, but operating as a coalition of relatively small businesses, with a strong coordinating role played by the Danish Dairy Board. However, the drive for economies of scale in the post-Fordist regime has resulted in a concentration of capital in the Danish industry, with MD Foods emerging as hegemonic and controlling 90 percent of the Danish milk supply in 1998 (MD Foods, 1998). In response to a query about the dominant company in the Danish industry, an interviewee commented:

It is definitely MD Foods. They form the agenda, that's the case. Some of the others, I ... cruel to these, but some of the others they follow. They respond to what MD does. So the agenda is definitely set by MD Foods (*A representative organisation official*).

Nevertheless, and in contrast with Ireland, the Danish HTA remains almost completely producer-led. There are two exceptions: a small number of privately owned companies, such as Tholstrup Cheese and the international arm of MD Foods, set up in 1989, of which 49 percent is owned by institutional investors. There has been, therefore, only a small dilution of producer-led accumulation, and not to the same extent as in the Irish industry. Ownership and control of the Danish industry remains with domestic producers, who have benefited from the highest milk prices within the EU. Thus the HTA has changed in both national industries, with consequences for the structure and performance of each national sector (Table 1).

### **Cohesion and the interaction of the HTA with other elements of the MSR**

Our argument in this section is that the interaction between the HTA and other elements of the MSR creates variable *levels of cohesion* in the MSR. By cohesion we imply a degree of stability and unity of direction within the MSR and an outcome from the socially contested nature of the MSR. In particular we argue that the cohesiveness of the MSR for dairy processing in Denmark has been greater than in Ireland and offers an understanding of the differential development paths of the two dairy processing sectors.

To elaborate, the Danish dairy milk processing industry has a cohesive MSR as a function of its particular national cultural and political context. Companies cooperate and work together in industry organizations, thereby facilitating the concentration of capital within the industry and resulting in less direct intervention by the state. For instance, in the early development stage of the industry, a network of national organizations to support and promote the industry's interests was quickly developed. A

generic “Lur” butter brand was agreed and launched for the industry as early as 1906 (Ravnkilde, 1989). The industry has been able to successfully adapt to changing circumstances; for example in the early 1990s the industry reoriented its cheese exports from the Middle East to the EU in anticipation of the unfavorable outcome of the global regulation of trade. In turn, the concentration of capital has enabled the largest company – MD Foods – to internationalize and have ambitions to be a significant European dairy company. This has been achieved while largely remaining within a producer-led accumulation framework.

In Ireland, on the other hand, producer-led accumulation has proved not to be as deeply rooted as in the Danish industry; rather, it has developed and changed mainly as a function of *state intervention*. The Irish state ensured cooperative dominance through regulation during the Fordist regime and protected the industry from non-cooperatively owned competition. Later, foreign investment in secondary processing was encouraged and this helped to upgrade the management and technological capabilities of the industry. Integration into the EU dairy regime of the CAP with its first expansionary and later restrictive tendencies (milk quotas) resulted in an increasing emphasis on investor-led accumulation. Rather than concentrating capital domestically, as in the Danish case, the result was increasing growth and internationalization in the industry. Foreign mobile capital was important in supplying technology, knowledge, skills and access to markets, while benefiting from the accumulation opportunities in the relatively underdeveloped Irish dairy sector. Indeed the Irish industry has displayed an inability for collective action at local and at national level and the MSR appears less cohesive than that of the Danish dairy industry. This seems to arise from the cultural and political context within which the Irish processing industry developed and grew; in particular there has been greater competition within the sector compared with Denmark. This has found expression at the local level in the inability of dairy cooperatives to collaborate or rationalize to achieve economies of scale. The inability to develop collective action is evident through the historical lack of coordination with regard to marketing until the state intervened, the difficulty in concentrating capital within the industry, and the intense rivalry for control of milk supply during various development phases (Bolger, 1977; Kennedy, 1983).

Another aspect of cohesion can be traced, since the mid-1980s, through the interaction between the HTA and the *financial relations* element of the MSR. In Ireland, the shift from cooperative to corporate ownership has tied a significant part of the industry to the growth and profit concerns of the stock market. This reflects a wider change in the nature of hegemonic relations – namely, a shift from producer to investor-led accumulation – which in turn, has been important in the rapid internationalization of the industry. This lack of cohesiveness in the MSR helps to explain the weak attachment to producer-led accumulation and its subsequent dilution through the change in status of many of the cooperatives in the late 1980s. In contrast to the argument of Moran *et al.* (1993), cooperative ownership has not been a barrier to subsumption of the producer-owned processing industry; rather, cooperatives have facilitated and enabled the integration of the Irish dairy processing

industry into the global dairy market regime. In Denmark, on the other hand, the industry (principally MD Foods) has also become integrated into the global dairy market regime, but its ability to concentrate capital, develop scale economies, and the strong attachment to producer-led accumulation has prevented full subsumption.

The level of cohesion in the MSR and degree of attachment to the HTA, in conjunction with Marden’s elements of the MSR, help to explain the different national experiences in the dairy processing industries. The HTA, which has close links to financial relations, the level of cohesion in the MSR, state intervention (national and supranational), and global adhesion have emerged as especially influential aspects of the MSR. On the other hand, wage-labor relations appear to be less important: this may be linked to the high capital-intensive and low labor-intensive nature of the dairy processing industry.

## Conclusion

This regulationist interpretation of the “mode of reproduction” (Moulaert and Swynedouw, 1989) for the dairy processing sector confirms one of the conclusions of other researchers, namely the “slow decomposition of the Fordist regime” (Boyer, 2000:319), such that elements of Fordist and post-Fordist MSRs co-exist (*e.g.*, MacLeod and Jones, 1999:577). We have shown how one part of an industry can make a transition to a new MSR, while another part continues under the pre-existing MSR. In other words, new MSRs do not represent a clean break with the past; rather they build upon previous MSRs and are strongly influenced by them. In our case study, the Danish industry, from an early stage, has been more independent and in receipt of little state intervention compared with Ireland. At different stages, the industry has made key transitions and adjusted and adapted to changing regulatory environments. In the Irish dairy processing industry, on the other hand, a distinction is evident between an investor-led, internationally orientated section and a producer-led, domestically focused section, with links to the Irish Dairy Board.

Hegemonic type of accumulation has emerged as an important part of the “social, cultural and political supports which are ... contingently co-present” (Painter and Goodwin 1995:337) in Ireland and Denmark, but closely linked to financial relations. In particular, the HTA reflects the level of integration of an industrial sector into the global financial network. For instance, greater integration occurs in investor-led accumulation than in producer-led accumulation: the former seeks greater accumulation opportunities; the latter is more focused on maximizing returns to producers, therefore accumulation through profits is less of a concern. As a result of integration into the global financial network, and the drive to expand and internationalize, greater adhesion to the global market regime follows integration into the global financial network.

The HTA influences the goals of the dairy processing companies and their willingness to speculate to accumulate internationally. However, national regulations



influence the particular form of the HTA. For example, as well as national variations between accumulation types, there are national variations within a single accumulation type. Moreover, an accumulation type does not guarantee a certain outcome; this also depends on the interaction between the HTA and other elements of the MSR. For example, in the Irish case, a regionally focused industry using a marketing board for global links is evident, whereas a globally and customer-orientated structure is evident in the Danish case.

The attachment or link to HTA is strongly influenced by the particular national framework from which the industry has emerged. Cultural, political, social and economic factors contribute to the development of a national framework that in turn shapes the accumulation type and MSR. The weak attachment to producer-led accumulation in the Irish industry, for instance, arises out of the country's more recent emergence from a colonial past, top-down initiated producer-led accumulation, and the greater dependence on the state and later the EU. The weaker attachment facilitated a shift to investor-led accumulation which, when combined with an inability to act collectively, led to increasing internationalization and integration in the global dairy regime. On the other hand, the more durable attachment to producer-led accumulation in Denmark emerged from a stronger, independent, well-educated farmer class, a greater recognition of the individuals' contribution to the community, bottom-up driven development of the industry, and a greater ability to act collectively. The attachment has remained strong as the industry has repeatedly adapted to changing circumstances and retained its producer-led orientation. As a consequence, almost complete domestic concentration of capital has been possible.

It should be remembered, however, that the HTA is of greater concern in food-related industries than in other industrial sectors. This is due to the traditionally strong role played by producers in setting and influencing the accumulation context in food processing. However, accumulation type is also important in the financial sector, where mutual or cooperative ownership is important. There is scope therefore, for interesting comparative empirical work in this sector.

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