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**STRATEGIES
AND STRUCTURES
IN THE AGRO-FOOD
INDUSTRIES**

ISBN 90 232 3264X

1997

Van Gorcum & Comp. B.V., P.O. Box 43, 9400 Assen,
The Netherlands

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Preface

The origin of this book is rooted in a seminar held in April 1995 at EIASM (European Institute for Advanced Studies in Management), in Brussels. Under the theme of 'Institutional Changes in the Globalized Food Sector', the seminar gathered academics studying the pattern and nature of changes in food production and marketing, the causes of these changes and their implications.

As can be seen from the chapters of this book, the changes which are currently occurring are being studied by a wide range of disciplines and with an equally wide range of methods. The book not only gives an overview of current trends in the agro-food industries, but also the theories and methods that are used to make our knowledge consistent and testable.

Change in the industries which ensure us of our daily bread is truly fundamental. Today we are confronted with BSE, or Mad Cow Disease. This shows us how sensitive consumers are and the volatility of consumption patterns - in the UK alone more than one million people have excluded beef from their daily diet. This is a massive change in a short period of time. No such dramatic developments are analysed in this book. However, forces of change are taken into consideration in many of the contributions. Related to the BSE case, there is the emphasis on food safety, health and well-being. Consumer sensitivity to such quality dimensions has stimulated many innovations in production systems and production chain management. These developments have encouraged the application of information technology, and quality measurement and monitoring. Apart from the hardware and control methodology, it has also led to institutional and structural changes. Among examples of such changes is the diversification of farm production for specific market segments, creating links between products and firms throughout the processing and distribution chain.

Research on institutional change in the agro-food industries enjoys the growing interest of academics. They not only attempt to explain the dynamics and causal relationships; sometimes they also want to make predictions on the basis of extrapolations of present patterns. In view of these aims (explanation and prediction) perhaps the most exiting observation about this book is that the academic disciplines are changing as well. Especially the attention given to the transaction cost and agency theories is striking. The growing interest seems to signify that food industries are moving from hierarchically organised structures to more

'loosely-knit' networks. This has implications for the organisation of research and innovation, for risk sharing and for the role of distribution and marketing throughout the chain.

This theoretical development has not, however, resulted in one dominant theoretical perspective – neo-classical, neo-institutional and institutional paradigms exist side by side, also in this volume. The neo-classical approach of deducting hypotheses from theory and then applying econometric techniques to a sample of data is less dominant today than it used to be. The transaction cost theory and other neo-institutional approaches are more often used as an heuristic model of thought than as a theory in the strict meaning of the word. Institutional studies are traditionally wide in scope and ambition. So, if a common denominator for the current research on the agro-food industries should be identified, this is rather an observation that modern researchers tend to relate to practice and choose their economic tools accordingly. By combining observations from cases with statistical evidence they try to develop a new 'language'. This 'language' will help other researchers and, in due time, also practitioners so that they can streamline their work into 'normal business'. However, this language of today's 'normal business' is not yet available, and current developments are not 'normal business'. 'Normal business' is by definition understood by 'normal science'. The future will tell us what the paradigm of change in the food industries in the late 1990s was and what 'normal science' is in the 2000s.

A few trends can already be discerned. Economists are now in the process of collecting empirical information to develop a new selection of hypotheses. First, transaction cost theory is telling us that various types of loosely organised systems, open to continuous innovation and new business entities, are gaining ground in the market place. Even large monolithic companies, usually multinational enterprises that control a wide range of activities, integrating or surpassing markets at will, have to adapt to this operational mode.

Second, farmer-businesses, often structured as co-operatives, are forced to change to maintain their market position and preserve their significance for their farmer-members. Questions arise about whether they can maintain their co-operative identity, and if they will still be able to reduce the farmers' transaction costs irrespective of varying governmental policies. Perhaps we will see a split between consumer-oriented businesses and co-operatives that do the initial processing of raw produce. At least this is plausible when considering business conduct based on traditional co-operative principles, as these are restrictive when, for instance, doing business in the branded foods sector. However, co-operatives are efficient in creating a market structure that offers farmers the opportunity to focus their professional ability on producing quality products that can be processed into new products with added value. Anyhow, the way agricultural co-operatives will operate in the future will be mainly decided by their ability to develop new financial models with new forms of equity.

Third, it is striking how little attention business academics pay to issues of public policy on farming and food production. The role of government is mainly restricted to legislation and regulations on minimum standards of quality and safety. Raising the competitive pressure in the various industries is often considered to be a sufficient condition for this to happen. Still, we know that a host of governmental regulations are of profound importance to the agro-food sector, not only antitrust legislation but also the broad area of agricultural policies.

Fourth, as always, final demand is best understood by confronting the consumer with new products and applying new marketing techniques. Today, however, there is also new information technology to facilitate in measuring the consumers' response. Again, this can be viewed as transaction cost reduction, having repercussions throughout the chain of production, distribution and marketing. The firms - farmers, processing enterprises, retailers and others - are through these new technologies more closely linked to consumer demand and, thereby, also to one another.

In conclusion, agro-food business is in a state of flux that demands attention. Businessmen have a good understanding of market trends in their own industries, but for a deeper understanding economic analyses are required. The research presented in this book describes interesting new developments and even indicates some new paradigms. However, no clear prospects can be expressed yet. More research must be done and more academics have to participate in the ongoing debate.

Wageningen and Uppsala, November 1, 1996

Gert van Dijk and Jerker Nilsson

Abstracts

Institutional and Organisational Change in the European Food Sector: A Meso-Level Perspective

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Since 1980 the European agro-food sector has experienced profound restructuring. Mergers and cross-border investments have been the daily order.

While macro-level theory tends to understand agro-food restructuring deterministically as a result of techno-economic change spreading gradually downwards from global level, the European process should rather be understood as a complex and open-ended process which not only flows top-down but also down-top, deserving to be labelled Europeanisation rather than Globalisation. Doubtless there are some universal trends in the agro-food sectors world-wide, but socio-political processes – or to be more precise, institutional and organisational processes at national and European level – are also important, and call for a meso-level perspective.

The article supports this basic argument by empirical analysis of developments in the European retail and food production sectors since 1980, and by application of neo-institutional organisation theory to the issue of why agricultural co-operatives increasingly convert into hybrid organisations and limited companies.

The International Cooperative as a Partnership: Legal Aspects

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The paper seeks to answer the question whether the cooperative structure as such forms an obstruction in participating in the process of internationalization. Which legal instruments are available? The new European Cooperative Society as proposed by the European Commission is assessed. Discussing the internationalization of the cooperative business is not possible without paying attention to the anti-trust law implications.

**Creeping Privatisation of Irish Co-operatives:
A Transaction Cost Explanation**

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Although presented as a funding mechanism, the transformation of some leading Irish co-operatives into public companies with farmers' co-operatives as controlling shareholders has established a means by which these enterprises can be progressively changed into ordinary for profit corporations. In this paper a transaction cost approach is used to argue that this organisational change is the result of a diminished need for vertical integration (especially vertical ownership) in the Irish agricultural sector, limitations of the co-operative organisation form, and a shift in favour of market mechanisms in business and the economy generally. Based on an assessment of the current competitive structure of the Irish milk market, it is reasoned that this change away from co-operatives is an efficiency enhancing development.

**The Saskatchewan Wheat Pool in the Globalized Food Sector:
Can They Remain True to Their Roots?**

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This paper poses the question: what will be the implications for the Saskatchewan Wheat Pool as it makes the transition from a co-operative, owned and controlled by its 78,000 farmer members, to a publicly traded co-operative, owned by its members and investors, controlled by whom? The paper starts with a review of relevant literature on ownership structure, goal setting, and decision-making. The case of Saskatchewan Wheat Pool is then presented. The paper closes with some very preliminary conclusions regarding the potential impact of conversion. Observations and conclusions are drawn from an analysis of interviews with key informants, organization documents, and secondary sources.

**Organizational Structure and Globalization:
The Case of User Oriented Firms**

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Leaders of U.S. agricultural cooperatives face two overriding strategic questions as they plan for the 21st century: can their organizations compete in an increasingly *global* market place, *and* can their organizations compete in an increasingly *industrialized* food and fiber sector. The answers to these questions are, of course, complex and multifaceted. Trade and agricultural policy factors, economic endowments, human resource, financial and market strategy all influence the answer. But, perhaps as important an element for cooperative leaders to consider is the organizational structure factor. Is the traditional organizational form of a

user owned, user controlled, user benefited cooperative the most effective in achieving producer objectives in an increasingly industrialized and globalized food and fiber market place?

This paper addresses the globalization issue although the causes and implications of industrialization and globalization are not mutually exclusive. However, before exploring the globalization challenge and its implications for U.S. agricultural cooperatives, a brief review of the strategic and structural evolution of rural collective action is presented.

**Implementing the Sixth Reason for Co-operation:
New Generation Co-operatives in Agribusiness**

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This paper discusses the reasons for the formation and existence of co-operatives in agribusiness. Firstly, the five historical reasons, that is, countervailing power, scale economies, risk management, income improvement, and access to capital markets on favourable terms for the formation of co-operatives are presented. The Sixth Reason for co-operatives restates their *raison-d'être* in the context of a globalised economy, technological development, concentration in the food processing and retailing sectors, and heterogeneous consumer behaviour.

The response of co-operatives to these trends is twofold. The birth of New Generation Co-operatives in North America, which are investor-driven and focusing on value-added activities, reflect the need to revive the rural communities. Re-engineering occurs within existing co-operatives where membership and equity are redefined.

Marketing Cooperatives as a System of Attributes

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The marketing cooperative is analyzed with an emphasis on incomplete contracts and system complementarities. It is argued that the disappearance of shortage markets in agricultural and horticultural markets poses a serious threat to the survival of the marketing cooperative.

The Position of Agricultural Cooperatives in the Changing Food Industry of Europe

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If cooperatives have a role to play in the future agrofood industry, which types of cooperative will prosper, and in which types of business? These questions are topical in an era of European integration, an agricultural policy under attack, changing consumer preferences and rapid technological change.

The enlarging markets mean that the prevailing ways of organizing the food industry, especially cooperatives, face increasing challenges. In many areas of production multinationals are able to use economies of scale, complex manufacturing processes, and advanced management. Cooperatives, where member control is connected with the interests in a single raw material, and the division of results is according to deliveries, have difficulties to compete with the multinationals.

However, cooperatives may be superior in coordinating the supply and demand between the producers and the first stage of processing. Hence, the first processing, i.e., getting the products into a non-perishable form, will be maintained inside the cooperatives, while part of the further processing will be separated into investor owned firms. The largest cooperatives will grow in order to gain competitiveness. Other cooperatives appeal to local markets. Still others take a role as suppliers of unprocessed products to processing firms or as suppliers of processed products to retail chains.

Impact of Mergers and Acquisitions on Structure and Performance in U.S. Food Industries in the 1980s

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Articles in business magazines allege excessive premiums paid to acquire food companies – a premium is the difference between a target firm's takeover value and pretakeover value. These firms operate in industries characterized by a high level of concentration. Acquirers may pay a higher premium because they expect higher profits. However, such a theme has not been studied yet.

The objective of the paper is to estimate whether premiums are high in the food sector, especially for companies in sectors with a high level of concentration taking into account the food industries specificities. The paper is organized as follows. First, theoretical and empirical considerations through several specificities of food industries will be presented, because they may explain firms' behavior in mergers and acquisitions. The following section provides methodology, and data are then presented. Results are given and conclusions are drawn.

Economic and Financial Performance of Cooperatives and Investor-Owned Firms: An Empirical Study

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This study examines empirically the financial and economic performance of dairy cooperatives and investor owned firms in Canada for the period 1986-1991 and compares the results to the ones obtained in comparable European studies. The aim is to verify whether the traditional cooperative principles give rise to differences in economic and financial performance between cooperatives and IOFs.

For the sample and period examined, it is found that performance, as measured by profitability, productivity and the use of new technologies, is not significantly different between these two types of organizations. However, performance differs in terms of liquidity and working capital management. These findings corroborate the growing recognition that financial differences in performance between cooperatives and IOFs are not significant despite their differences in their organizational structure. These results differ, however, from the ones obtained in some European studies.

Mergers and Structural Reorganization of Agricultural Co-operatives in Japan

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In Japan, multi-purpose agricultural co-operatives have held a dominant position. They have covered almost all farmers in their districts, and carried out a wide range of business. They have been exclusively located in the government's control system for rice as a collection agency, under the recently abolished Staple Food Control Law. Under this system control, during the three decades from the 1950s, mergers of agricultural co-operatives had been aimed at reaching the size of a municipality.

Under the recent import-liberalized process for farm products, agricultural co-operatives decided again to promote mergers and structural reorganization. The model of mergers which is presented is based on one as reasonable as a financial company's model. Therefore we have a new stage of mergers. As the primary co-operative societies are enlarged by mergers, their affiliated organizations are going to be reorganized by being reduced from three tiers to two tiers.

Diversification, Vertical Integration and Profitability in the Greek Food Manufacturing Industries

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This article seeks to analyse the effects of diversification and vertical integration strategies on firm profitability in the Greek food manufacturing industries. The analysis is conducted using a set of 540 firms observed annually over the period 1986–1992.

The findings reveal that concentric and conglomerate diversification strategies are a potential source of competitive advantage in the local market. Firms that are vertically integrated seem to experience a significantly lower rate of return on capital, but firms that combine vertical integration and diversification strategies manage to reverse such a trend. Larger food manufacturing companies enjoy higher rates of return via conglomerate diversification strategies and combined conglomerate diversification and vertical integration strategies. Smaller companies raise their profitability via concentric diversification strategies. A concentric diversification strategy can also be beneficial to smaller companies with a vertically integrated structure.

Intense Competition, Revised Strategies and Financial Performance in the U.K. Food Retailing Sector

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A major impact on the E.U. food retailing industry is the internationalisation of previously domestic markets. It is increasingly important for domestic food retailers to appraise their performance, not only against historic domestic competitors, but also against potential future competitors from the E.U. and U.S.

The U.K.-based retailers have been forced to revise their competitive strategies in the face of these international threats. The change in competitive climate and strategies are likely to have a dramatic effect on future financial performance and hence on shareholder wealth. This paper demonstrates how CORE, an integrated financial appraisal framework, can be utilised, not just to explain the effects of historic strategies, but also to predict the effect of revised strategies on future financial performance.

**Internal and External Coordination and Organizational Structures:
The Case of a Leading European Company in the Canned and Frozen
Vegetable Market**

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European food industries are confronted with large technological, organizational and commercial changes. Among the present problems, those concerning product quality are important. Indeed, the gap between the quality of agricultural raw materials and the quality of required food products may be great, whereas the maintenance of competitive advantages may reduce this gap. Moreover, food industries have to face an unstable and heterogeneous demand of quality, varying according to country and consumer market.

The search for more flexible systems of production and management can contribute to solving these problems, but they are difficult to design and carry out due to the nature of agricultural supply: instability of raw produce, a great number of suppliers and variability in supplier skills. Hence, the supply function is getting more complex in the food industries and cannot be boiled down to a simple action of purchase and sales.

To get a better understanding of the evolution of the supplying function, the authors have set up a research program with a firm. They present some results in the paper. They show that the evolution of the economical context leads to deep changes at two levels: (1) the internal coordination within the company between processing plants, and between commercial and agro-industrial actors; and (2) the external coordination between farmers and processing plants.

**Strategic Behavior and Interrelationships in the Food Chain:
The Case of the Finnish Market**

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University of Helsinki, Viikki, Finland*

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The opening and internationalization of the food markets have stressed the importance to examine the relationships in the entire food chain as a source of competitiveness. Our study aims at analyzing cluster structures, interrelationships and the competitive strategies of firms in the food chain. The paper is devoted to two issues concerning interrelationships within the food chain. The structure and interrelationships are described at the industry level. Based on survey data collected from food manufacturing firms, we examine competitive advantages, bargaining power and organizational performance in the intermediate sector of the food chain. The field study might be characterized as firm level analysis rather than industry level analysis.

Quality Certification as a Key Success Factor in International Marketing of Food Products

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The paper deals with the importance of quality control certificates among suppliers of processed pork, and their importance when large customers from Sweden, Britain and Germany choose/reject suppliers. Important groups of purchasers of processed meat were interviewed about their criteria for their choice of supplier and their opinion of the significance of the ISO 9000 certificates in this connection.

There are differences between the countries. The Germans attach more importance to quality certification than the British and the Swedes. There are also differences between the customer groups and within the various customer groups.

A clear picture emerges of the importance large purchasers attach to the suppliers' quality certification. Quality control is of crucial importance and control is checked closely. Inferior quality in one or more dimensions will make the customer change supplier. This could be with regards to hygiene, variations in quality, delivery service or ability to supply. A certification can be a means of securing the desired quality level.

For marketing reasons, international suppliers of processed meat will be compelled to get certification as soon as possible if they are not to lose market shares.

Part I

Conditions for Cooperative Business

1 Institutional and Organisational Change in the European Food Sector: A Meso-Level Perspective

Torben Bager

Since 1980 the European food industry has moved rapidly towards a more concentrated and internationalised structure. Some countries and food branches have felt this trend more strongly than others, but no country or branch has remained unaffected.

This trend raises a number of profound questions. Does it imply that we are near the final victory of the transnational companies (TNCs) in the food sector, with small and medium-sized firms vanishing? Will food regulatory bodies weaken and be transferred from national to international levels? Will the limited company form become increasingly dominant, pushing other organisational forms such as family units and co-operatives into marginal positions? In other words, are we moving towards true globalisation, or is it a more modest phenomenon which should be labelled Europeanisation rather than Globalisation?

The answer to these questions relates to theoretical perspectives. The rich neo-Marxist literature on globalisation, food regimes, post-Fordism and state regulation – sometimes labelled Agricultural Sociology – suggests that the changes seen in Europe and other regions of the world must be understood through macro-level analysis of global patterns (Friedmann and McMichael, 1989; Friedland et al., 1991; Goodman et al., 1987). By contrast, the literature on business economics usually departs from the micro-level, assuming that structural changes occurring are the aggregated outcome of individual actions.

Neither of these approaches appears convincing vis-à-vis the European process. Micro-level economic theory tends to be blind to structural perspectives as well as to the socio-political aspects of the process. Macro-level analysis of agro-food restructuring tends to neglect the fact that new global challenges within technology and economy more often than not meet with inertia on the part of institutions and organisations as well as collective action which may hinder or reshape them, or formulate new agendas to which techno-economic structures have to respond. Neglecting such social, organisational and institutional responses and challenges creates a 'missing link' in social research on agro-food restructuring and a risk of false generalisations being based on techno-economic determinism.

Rather than viewing agro-food restructuring as a result of techno-economic change flowing gradually downwards from global level, it should be seen as a complex, open-ended process with flows up as well as down,

and with meso-level socio-political structures sometimes acting and macro-level techno-economic structures reacting rather than the other way round. The 'greening' of agricultural politics and the rise of the organic farming movement during the 1980s illustrate such upward-moving processes.

To understand the process better we need to bring institutional and organisational change within nation states and Europe into the analysis, focusing on the meso-level rather than the micro- and macro-levels. In other words, to grasp the European reality we need to understand the dynamics of 'in between' institutions and organisations better.

The aim of this contribution is to demonstrate the importance of meso-level analysis by outlining how the European agro-food sector has been restructured in recent years. It points to the fact that retailing, as well as food production, remain heterogeneous in Europe and predominantly national or European in orientation. Further it explores the issue of the present and likely future roles played by European co-operatives, bearing in mind that they were historically able to oppose, or at least weaken, the expansion of TNCs which are often claimed to be the 'winners' in agro-food restructuring. Based on neo-institutional organisation theory, it focuses particularly on the question of conversion of co-operatives into limited companies, which seems to be a fairly open-ended process rather than the one-way one it is often assumed to be.

Restructuring of the European Retail Sector

The retail structure of Europe is currently undergoing rapid change. The old pattern dominated by local outlets, predominantly organised as independent family stores, is disappearing in favour of company-owned chains operating large numbers of integrated, or at least closely co-ordinated, outlets.

Supermarkets emerged in Europe in the 1950s, but only in recent decades an oligopolistic retail structure has appeared. In most countries a few national retail chains dominate the retail sector, increasingly competing with each other on the basis of positional logic. In such a structure, profiling is a must for retailers. Each of them elaborates his specific business strategy and attempts to create chain loyalty among customers, e.g. by using retailer brands or by pursuing a low cost strategy (Porter, 1985).

In addition to this old tendency towards concentration, Europeanisation became a marked trend in the 1980s. It deserves to be labelled Europeanisation rather than Globalisation because cross-continental investments remain few, and because trade bloc building characterised the European economy more during the 1980s and 1990s than did true globalisation (Hirst and Thompson, 1992). Most European retailers remain national (or local) operators only, and those investing abroad have predominantly invested in other European countries. Few European retailers

have more than 50% of their activities abroad. Some European retailers have invested outside Europe, particularly in the USA, and some US retailers in Europe, but such moves are the exception rather than the rule.

The Europeanisation trend, which can be perceived as the next logical step for large national companies operating in saturated national markets, can be observed in two ways: (1) through increasing cross border investments and (2) through increasing cross border collaboration between retailers, particularly in the form of joint buying.

Cross border investment is no new phenomenon, but it certainly intensified during the 1980s and 1990s: French corporations such as Carrefour and Promodès have invested in Spain, Portugal and Italy; the German company ALDI, which is the leading discount retailer in Europe, has invested in a number of neighbouring countries; the Danish company NETTO has invested in the UK and Germany, etc.

Some observers have tended to exaggerate this process, arguing that a truly de-nationalised European retail structure is likely to occur within a few years. In fact it is not, since most food is still distributed by national retailers and since significant variations in consumer demands and retailing traditions persist from one country to another. On the other hand it is certainly a marked trend, and the retail structure seems ripe for formation of true European companies.

The 1980s and 1990s have also been characterised by intensified cross-border collaboration in the form of joint buying and marketing. Numbers of European associations of grocers and retailers were formed during the late 1980s, such as Associated Marketing Distribution, European Marketing Distribution, and European Retail Alliance. Joint buying is no new phenomenon (Nordic consumer co-operatives have organised joint buying since the 1920s), but it has intensified and is now the normal situation for large-scale retailers in Europe rather than the exception. The European associations mentioned above control an impressive potential buying power but they are fairly loose associations of national grocers and retailers, not integrated companies. They may evolve into that, just as integrated retail companies have emerged at national level through increasing integration of once federative associations, but this is not the present situation and not the only option for federative organisations (Søgaard, 1994a).

In spite of the Single Market and the trend towards Europeanisation mentioned, wide variations still exist between retailing methods in the EU member states. Retailers remain influenced by national trajectories in addition to the trends towards concentration and Europeanisation mentioned. An illustration is the way UK and German retailers developed during the 1980s. The leading and rapidly expanding UK food retailers (Sainsbury, Safeway, Tesco, Marks & Spencers) pursued a quality strategy, emphasising high quality and a high proportion of own label products, whereas the leading German retailers (particularly ALDI) pursued a low price strategy for standard goods.

The difference between British and German retailing not only influenced the way it developed but also the shaping of the relationship between retailers and food suppliers. Low-cost retailers generally prefer pure competitive relations with many suppliers, while high-quality retailers tend to develop dependencies and institutional relations with only few suppliers.

High-quality retailers in the UK illustrate this point in that they tend to interact with a limited number of fairly large, innovative suppliers over long periods of time (Shaw et al., 1992). This process leads UK retailers to employ large staffs in special departments, as do the innovative producers. Over the years 'sticky knowledge' therefore tends to build up on both sides concerning technology, products and organisational 'secrets' which create dependencies between the parties and contribute to their positioning as unique firms: the retailer can profile himself as selling unique products of guaranteed quality, and the supplier can benefit from improving his innovative abilities and from the prestige flowing from interaction with the advanced UK retailers (which in the terminology of innovation theory can be characterised as lead users or lead distributors (Von Hippel, 1988)).

Restructuring of the European Food Industry

The structure of the European food industry remains heterogeneous. On the one hand, Europe contains some of the world food production's giants. On the other, the number and market share of small and medium-sized producers is still very high, particularly in Southern Europe.

Many observers have predicted that European food production will become dominated by a few giants. Doubtless the concentration and Europeanisation process will tend in this direction, but it is likely to be fairly slow. A heterogeneous industry structure will probably persist for many years to come, as most food in the EU still is produced by local, regional and national producers for their own local, regional and national markets.

Italy may serve as an illustration. In 1981 Italian food companies employed an average of only nine persons each, 42% of all employees working in food companies with less than 20 employees. The dairy sector consisted of some 3000 production units in 1985, handling on average only 1% of the milk processed by an average dairy unit in the Netherlands; and the price paid to an Italian farmer for a litre of milk was, and still is, substantially higher than that paid to other EU farmers, in spite of the common regulatory framework (Galizzi, 1990).

With such a fragmented industry structure, one might expect Italian producers to have been outcompeted by or merged with foreign food companies since 1980. Generally speaking, this has not been the case. The process of concentration in Italy was rapid during the 1980s, but no more rapid than in the northern EU countries. Some Italian companies have been bought up by foreign companies but the asymmetry in foreign in-

vestments in Italy compared to Italian investment abroad is quite small, and smaller than in some other EU countries (Table 1).

Table 1 Cross Country Mergers and Acquisitions in the Food Industry, 1987-89

	Acquisitions	Sales
Belgium	7	15
Denmark	12	7
Germany (West)	8	45
Greece	0	8
France	160	113
Ireland	8	7
Italy	42	56
Netherlands	75	51
Portugal	0	7
United Kingdom	299	255

Source: Panorama of EC Industry, 1991/92

The 'secret' of the Italian food companies seems to be their innovative character, paired with a fragmented retail structure and the international popularity of Italian food which has enabled medium-sized Italian food companies to become more international.

This suggests that the process of concentration and Europeanisation in the EU, particularly marked since the Single Market was agreed on, is not likely to imply that small and medium-sized food companies will wither away, for which there are at least three good reasons.

Firstly, not only large enterprises can become international. Small and medium-sized firms not only frequently succeed in exporting their goods; many succeed in establishing subsidiaries abroad. According to a survey, almost half of Danish companies with subsidiaries abroad have less than 500 employees (Pedersen et al., 1993: 20).

Secondly, the food sector differs from other economic sectors in that a lot of food is highly perishable and difficult to transport over long distances without impairment of quality. Combined with consumer worries over additives, industrial production methods etc., this gives local producers an advantage over foreign ones.

Thirdly, food companies may follow different basic strategies with different implications for their optimal size and their need to internationalise. The basic strategic options for food companies seem to be (1) standard producer, (2) brand label producer, and (3) speciality producer (Bager and Sørensen, 1992).

Standard producers are characterised by low R&D expenditure and low marketing costs. Their export rate may be high but they rarely have substantial production activities in other countries. Brand label producers are typically big companies with high R&D costs, high marketing costs, and exports and production abroad. Speciality producers are often neglected in the discussion of strategic options for food firms. Such producers may be quite small, e.g. wine or cheese producers in a limited dis-

trict, but they may nevertheless sell their produce to high-price markets abroad, or they may be advanced subcontractors to retailers or brand label producers.

This does not, of course, mean that the trends towards concentration and Europeanisation are an illusion. Both trends can be observed in all EU countries. It is also a fact that a significant proportion of the small companies are heavily dependent on bigger ones. The trends should not, however, be exaggerated to give an unrealistic picture of the likely food industry structure. The conclusion is not that a few giants are likely to produce most food in the EU in a few years but rather that the food industry will continue to be heterogeneous and that national or local orientation will continue to play an important role.

Agricultural Co-operatives and the Trends Towards Europeanisation and Concentration

The heterogeneity of European food production also relates to organisational forms: limited companies, co-operatives and family enterprises all play important roles.

Variations in European agricultural co-operatives among branches and countries are enormous. In some countries agricultural co-operatives play but a marginal role while in others, such as the Nordic countries, Ireland, France, Germany, Belgium and the Netherlands, they control high market shares; furthermore, agricultural co-operatives are nearly absent in some agricultural branches while they are highly significant in others, particularly in dairying, in which market shares for co-operatives exceed 50% in a number of European countries. Table 2 illustrates these variations.

Table 2 indicates that the strength of co-operatives correlates with farm structure in that countries and branches characterised by a high proportion of family farms tend to have the strongest co-operatives: throughout Western Europe and in the USA dairying is characterised both by the dominance of family farming and high market shares for co-operatives, while grain production, for instance, is typically dominated by big farms and estates, with low market shares for co-operatives. Similarly, family farm dominated countries like the Nordic ones and the Netherlands tend to have high market shares for co-operatives while for instance the UK and Spain, with a prevalence of big farms and estates, have lower shares. The probable reason for this structural correlation is that family farmers can overcome the difficulties associated with the formation of co-operatives more easily than differentiated farmers, being many producers who share the same basic interests.¹

Transaction Cost Economics add a cost dimension to the structural argument (Williamson, 1975; 1985). The high share of co-operatives in the dairy sector seems to relate to the high transaction frequency in this industry. Even with cooling techniques, daily delivery of milk is normal.

The farmer cannot hold back if prices are low, and delivery to the nearest dairy was frequently the only realistic option in the old days, due to transport difficulties. This created, and still creates, a particular need for trust between the two parties in this sector in order to keep the flow of milk going and to protect investments (Bonus, 1986).

Table 2 Cooperatives' Shares of Agricultural Marketing Activity in the Late 1980s, Selected Countries and Commodities (%)

	Dairy	Slaughtering	Grain	Poultry	Fruits and vegetables	Country average
Sweden	99	80	80	70	-	82
Finland	97	94	73	60	-	81
Norway	100	74	-	73	40	73
Denmark	87	90	48	55	-	70
Ireland	100	35	-	64	34	58
W. Germany	79	30	55	-	46	53
Netherlands	87	25	-	17	80	52
France	44	37	52	-	28	40
United States	78	37	52	-	17	40
Sector average	86	58	58	50	41	

Source: After Cobia 1989:86

The variations observed cannot, however, be explained solely on the basis of structural and techno-economic factors. Co-operatives are more than merely a special type of business organisation which arises and prospers when certain structural conditions are fulfilled and their organisational advantages outweigh those of other business organisations (Bager, 1996). They are also the result of historical events, heavily influenced by social, political and institutional factors.

The reason these 'soft' factors must be considered has to do with the very reason for the formation of marketing co-operatives: the large numbers of small family farms confronting large corporations in the supply and processing parts of the food chain and in need of protection. Protection can either be achieved through political strength and resulting legislative and regulatory measures, or economic strength achieved by the formation of co-operatives or bargaining associations, i.e. by building up countervailing economic power (Galbraith, 1980).

The building of farmers' political and economic strength is two sides of the same coin in many countries. Agricultural co-operatives add to farmers' political strength by controlling part of the food industry, and farmers' political influence often results in certain economic privileges for agricultural co-operatives, e.g. tax reduction and the right to form monopolies.²

Interrelated structures of this kind are particularly common in small European countries like the Nordic ones and the Netherlands, characterised by family farm dominance, powerful farmer associations and high market shares for co-operatives. In such countries a fairly closed regula-

tory system for the agro-food sector has emerged, with agricultural ministries, farmer associations and agricultural co-operatives collaborating closely under the hegemony of farmers who set the institutional 'rules of the game' (North, 1990; Just, 1990).

These national regulatory systems for the agro-food sector have been increasingly challenged in recent years. As argued below, the fading of agricultural co-operatives add to this development, but there are at least three other important factors influencing it: (1) increasing free trade, (2) a decreasing number of farmers, and (3) the agro-environmental problem. Free trade leads to cross-border trade and investments as well as to decreasing agricultural prices in the protected European countries, unless full compensation is allocated to agriculture – which is not a likely option, not even in home-market oriented countries, because farmers' political strength is weakening. The agro-environmental issue was high on the agenda in most European countries during the 1980s, particularly in the Northern ones, and tended to break up the national regulatory systems in that environmental ministries and organisations became strong players, interfering in decision-making in the agro-food system and to some extent reducing farmers' hegemony over agricultural ministries (Just, 1994).

Agricultural Co-operatives and the International Challenge

Agricultural co-operatives link together farm production, food processing and food marketing. This linkage may in principle be established at all geographical levels, but historically it has only been applied at local, regional and national levels, not the international one. With few exceptions, European agricultural co-operatives have members in one country only. They participate in nation-building to such an extent that they hardly even consider the option of becoming truly international co-operatives.

The national regulatory systems are, particularly in EU member states, challenged by the Europeanisation of the food industry and retailing. During the 1980s and early 1990s cross country mergers were frequent within these sectors, resulting in a process of increasing concentration in both, according to the logic of countervailing power.

In some EU countries, particularly Denmark, the Netherlands, Ireland and France, agricultural co-operatives have been international for many years in the sense that they exported a significant proportion of their production, though not in the sense that they produced abroad. In the 1980s this began to change. Some co-operatives decided to expand abroad or to diversify their activities, and for such purposes they needed to find new ways of attracting capital. Table 3 provides an overview of the international activities of the major co-operatives in France, the Netherlands, Ireland and Denmark in 1993.

Agricultural co-operatives with heavy international involvement and production abroad tend to apply new financial models, of which three

may be identified: conversion to a limited company; formation of a limited subsidiary, and the issue of high-interest shares to members and non-farmers.

Table 3 Internationalisation of Major Agricultural Cooperatives in Selected European Countries, 1993

Name of cooperative	Country	Turnover abroad (%)	Production abroad
Arkadie	France	10	no
Cana	France	17	no
Socopa	France	20	yes
Sodiaal	France	19	yes
Unicopa	France	22	no
Campina	Netherlands	47	yes
Coberco	Netherlands	53	no
Coveco	Netherlands	44	no
Cehave-Encebe	Netherlands	38	no
Friesland	Netherlands	66	yes
Avenmore	Ireland	66	yes
An Bord Bainne	Ireland	100	yes
Dairygold	Ireland	30	no
Golden Vale	Ireland	58	yes
Kerry Group	Ireland	66	yes
Waterford	Ireland	70	yes
Danish Crown	Denmark	70	no
ESS-Food	Denmark	99	yes
Kløver	Denmark	25	no
MD Foods	Denmark	61	no
MD Foods Int'l	Denmark	100	yes
Vestjyske	Denmark	80	yes

Source: Hybholt 1994

The first method was applied by a number of the Irish dairy co-operatives, which have reorganised their organisations since 1986 into limited companies and thus attracted non-farmer capital through the Stock Exchange (Butler, 1989). Although in formal terms farmers remain majority shareholders, their control seems likely to decrease over the years (Harte, 1995; Jacobsen, 1992).

One of the major 'co-operatives' in Ireland, the Kerry Group, serves to illustrate this point. Since its reorganisation into a limited company in 1987, it has expanded its international involvement and diversified its activities significantly, increasing its turnover from EIP 291 in 1987 to EIP 827 in 1992.

Some co-operatives in Denmark and France applied another model: the formation of subsidiaries for international activities organised as limited companies. The Danish dairy co-operative MD Foods illustrates this strategy. In 1989 it established a subsidiary, MD Foods International, based on 50% non-farmer capital. MD Foods International has since invested in a number of foreign countries, particularly the UK. In the long run the turnover of the subsidiary might exceed that of the parent

company, and it is doubtful whether farmer control in such a situation could be maintained if the subsidiary needs a major injection of capital.

The third model for capital attraction has been applied by some Dutch and French co-operatives, which issued high-interest shares to members and non-farmer investors. This model does not change the member controlled organisation, since shareholders have no voting power.

The trend for food producers increasingly to engage in product innovation and diversification tends to weaken agricultural co-operatives for two reasons: co-operatives are less experienced in product innovation than their limited competitors, as they have hitherto emphasised low risk standard goods production (Søgaard, 1994b); and diversification is difficult for agricultural co-operatives as it weakens the link between members' production and the processing and marketing activities of the co-operatives: the backbone of the co-operative construction.

To sum up, there are a number of reasons for the observed trend towards conversion of agricultural co-operatives. Some have to do with competitive pressure; others with softer types of internal or external influence which, over the years, undermine their identity as member-controlled, member-oriented enterprises (Bager, 1992).

Conversion of co-operatives seems particularly likely when vigorous environmental pressure is combined with weak internal reproduction of identity (Stryjan, 1989), as in many old, large-scale co-operatives. Market and state pressures have tended to increase, and the emergence of large, complex co-operative organisations has challenged the democratic structure of the co-operatives and empowered employees to control information flow and influence decisions. Member orientation – the true touchstone of the co-operative identity – has tended to become increasingly mixed up with profit orientation. This is probably the key to understanding the observed trend towards conversion.

It ought to be stressed, though, that the conversion trend is a long term process and that conversion into the limited organisational form has hitherto been the exception rather than the rule. The dominant feature has been conversion from genuine co-operatives to hybrid forms.

Applying Neo-institutional Organisation Theory in the Analysis of the Conversion of Agricultural Co-operatives

The observed trends in the European retail and food producing sectors suggest that macro-level analysis, based on system determinism and the hypothesis of globalisation and TNC expansion, is insufficient to understand the European process. Such macro-level analysis needs additional meso-level analysis of agro-food restructuring in countries and large regions such as Europe, based on theories on how economic and technical change interact with collective action and with institutional and organisational change. Macro-level analysis needs to be combined with research into how institutions and social actors in countries and regions react

against or reshape global agro-food challenges, or formulate new agendas, bearing in mind that the bulk of social action and institutional restructuring takes place at lower levels than the global one.

Neo-institutional organisation theory forms a promising point of departure for such an endeavour. This theory draws attention to the 'softer' types of pressures and influence coming from outside as well as inside organisations rather than to economic or technical ones, suggesting that there are two basic types of isomorphism: competitive and institutional. Early formulations suggested the former being of particular relevance in business organisations and the latter in non-profit organisations and public organisations predominantly shaped by political and social processes. More recent research has questioned this early tendency to identify technical and competitive issues with for-profit organisations and institutional issues with non-profit organisations. It is increasingly recognised that the cultural, political and normative processes which neo-institutionalism has called attention to are also relevant to business organisations³; and, conversely, that technical-competitive issues are relevant to non-profit organisations.⁴

By means of the concept of institutional isomorphism the theory particularly seeks to explain, "*why there is such startling homogeneity of organisational forms and practices*" (DiMaggio and Powell, 1983: 148). The basic hypothesis is that homogeneity is produced by organisations influencing one another and being influenced collectively by external and internal processes. The concept refers both to the direct, power-based influence which may leave an organisation in a few-choices or a no-choice situation, and to the 'softer', non-power-based influence which in informal ways transfers the characteristics of one organisation to the other or operates from within the organisation itself.

The theory further suggests that there are three basic forms of institutional isomorphism: "*(1) coercive isomorphism that stems from political influence and the problem of legitimacy; (2) mimetic isomorphism resulting from standard responses to uncertainty; and (3) normative isomorphism, associated with professionalisation*" (DiMaggio and Powell, 1983: 150).

Neo-institutional organisation theory and the concept of isomorphism promise to further our understanding of why for-profit organisations, co-operatives, non-profit organisations and other types of organisation operating within the same societal sector, increasingly tend to resemble one another (Scott and Meyer, 1991). That is what makes it appropriate for the analysis of the trend towards conversion of co-operatives selected in this article as the prime 'test field' for the theory.

Isomorphic processes influencing co-operatives are mediated by a number of sources, including the members and the co-operative institutional framework, but in ambiguous ways. Some tend to strengthen the reproduction of their identity while others undermine it. The co-operative institutional framework, i.e. co-operative legislation and the myriad federative co-operatives at sectorial, national and international level (Søgaard, 1994a), tends for instance to strengthen the identity of co-op-

eratives, while sectorized institutional frameworks tend to weaken it where non-co-operatives dominate. It is therefore important to focus on the balance between these two adverse processes which result in either homogenisation with other co-operatives (congruent isomorphism) or homogenisation with non-co-operatives (non-congruent isomorphism) (Bager, 1994).

The observed trend to conversion of co-operatives seems to be caused by a long-term shift in the balance between congruent and non-congruent isomorphism. Congruent isomorphism has tended to weaken, and this, with decreasing member control, paved the way for increasing non-congruent isomorphism. There are, though, significant variations in this trend from country to country and sector to sector.

Faced with the challenge of analysing the conversion of co-operatives, neo-institutional theory suffers from three major shortcomings: (1) its focus on activity rather than form, implying a neglect of the co-operative institutional framework, (2) its focus on normative isomorphism rooted in the employees and neglect of normative isomorphism rooted in the members, and (3) its narrow focus on institutional aspects and neglect of competitive aspects which, due to the double character of a co-operative as enterprise and association, ought to be replaced by a more balanced approach.

Qualitative empirical analysis of isomorphic processes affecting co-operatives seems possible through three stages: (1) identification of the sources of isomorphism, (2) categorisation of these sources into congruent and non-congruent forms, and (3) evaluation of their importance.

The sources of isomorphism may be grouped according to their position in society and their position as congruent or non-congruent isomorphism as shown in Figure 1.

Figure 1 Sources of Congruent and Non-Congruent Isomorphism Affecting Agricultural Cooperatives

	Congruent Isomorphism	Non-Congruent Isomorphism
Political/ Administrative System	Protective legislation on co-ops and family farms; National cooperative associations	General company legislation; National business associations
Economic System	Competition with co-operatives	Competition with non-co-operatives
Social System	Normative isomorphism stemming from members	Normative isomorphism stemming from employees

Taken together, the importance of congruent isomorphism on European agricultural co-operatives seems to be stable or decreasing, while that of non-congruent isomorphism appears to be growing. The importance of normative isomorphism mediated by employees seems growing throughout Europe, while competitive isomorphism mediated by non-co-operative competitors or coercive isomorphism mediated by sectorised institutional frameworks also appear to be growing in importance.

The impact on the agro-food system of an overweight of non-congruent isomorphism, and hence a trend to conversion of agricultural co-operatives, is different in countries with farmer-dominated regulatory systems from that in countries with less farmer influence. In the former, the fading of co-operatives does not necessarily imply less farmer control over the agro-food sector, since they also control the sectorised institutional framework, while in other countries it may undermine the economic and institutional protection of family farms.

An Illustration: The Consequences of Isomorphic Pressures on Danish and Norwegian Dairy Co-operatives

Danish and Norwegian dairy co-operatives may serve to illustrate these points. In Norway the corporatist, agro-industrial regulatory system is highly comprehensive and has a substantial direct and indirect bearing on dairy co-operatives. They are granted privileges and even monopolistic rights, e.g. by appointing co-operative dairies as the sole suppliers of dairy products within their districts; they are obliged to perform administrative duties for the public authorities to such an extent that they *"have tended to lose their co-operative character, i.e. their identity as organisations which promote the interests of the members"* (Røkholt, 1982: 159); they are subordinated to the farmer associations, which have the biggest say in negotiations with the Government, and they seem generally to have lost competitiveness and innovativeness as a result of their clientelist relation to the regulatory system.

In Denmark the national and EU regulatory system also has a bearing on the dairy co-operatives, but the influence is more modest. They enjoy some tax advantages compared to limited companies, but the government does not provide them with any sort of monopolistic position. It collaborates closely with the co-operatives and farmer associations, and sometimes delegates administrative duties to them, e.g. EU milk quota regulation, but this collaboration has not placed the co-operatives in a clientelist position as in Norway. Furthermore, they have not been subordinated to the farmer associations but have co-operated with them on equal terms.

While coercive isomorphism mediated by the institutional framework is more modest in Danish dairy co-operatives than Norwegian ones, the opposite applies to competitive isomorphism. Danish dairy co-operatives face severe competition from other EU enterprises, co-operative as well as non-co-operative. Though co-operatives still influence one another markedly, e.g. by copying each others' organisation strategies, the influence of non-co-operatives on co-operatives through the mechanisms of market and technology seems to be growing.

Taken together, non-congruent isomorphism seems to dominate the Norwegian dairy co-operatives, while Danish ones enjoy a more balanced situation. In Norway the important sectorised institutional framework, the

dominance of farmer associations, and the close collaboration between farmer associations and the State, have undermined the identity of the dairy co-operatives. Their important role as administrators of public regulations has, in combination with their monopolistic position, transformed them into quasi-public bodies. In Denmark the greatest challenge is a combination of increasing isomorphic pressure from private competitors and growing normative isomorphism mediated by employees, pulling agricultural co-operatives in the direction of quasi-corporations.

Conclusions

Macro-level theory on agro-food restructuring has focused rather narrowly on globalisation, the expansion of the TNCs, and the role of macro-level institutional frameworks. It has tended to perceive agro-food restructuring as a top-down process induced by techno-economic change at global level.

The present contribution questions the macro-level approach and its basic assumptions. Down to top change is also an option, as is global agro-food restructuring induced by socio-political change. Socio-political change is particularly important at the geographical meso-level. Institutions and organisations such as consumer pressure groups, the organic farming movement and national agro-food regulatory systems are primarily located at the meso-level.

This makes analysis of 'in between' institutions and organisations in nations and regions important in the sense that they mediate between the macro- and the micro-levels, improving our understanding of meso-level responses to global challenges as well as inducement of meso-level socio-political change at macro-level.

Neo-institutional theory appears appropriate for the analysis of institutional and organisational change. This is illustrated here by an analysis of the tendency of agricultural co-operatives in Europe to convert, arguing that this trend is not only caused by 'hard' techno-economic factors, but also by 'soft' ones such as the growing importance of non-congruent isomorphic pressures on co-operatives.

Empirical investigation of the European agro-food sector and analysis of the conversion of co-operatives point to a number of conclusions which question some of the results of macro-level analysis:

- The European agro-food sector remains heterogeneous and rather fragmented. Most food still comes from national producers and is distributed by national retailers. The 'winners' during the 1980s and 1990s were large national corporations with an European outlook rather than the TNCs, and the 'losers' were small-scale family enterprises.
- The present trend towards internationalisation in the European agro-food sector ought to be labelled Europeanisation rather than Globalisation. Cross continental investments remain the exception rather than

the rule, and trade bloc building is an important feature in Europe as well as in America and Asia.

- European farmers have long had a significant influence on the agenda of the agro-food sector significantly, at least in Central and Northern Europe. In a number of European countries national regulatory systems, in which farmer associations, agricultural co-operatives and agricultural ministries participate, have dominated the scene for decades, and to some extent this applies to the EU. These national regulatory systems are challenged by the free trade trend, decreasing political influence on the part of farmers, the agro-environmental problem and the tendency of agricultural co-operatives to transform. Yet, farmer influence remains substantial.
- Though they are challenged by the trends towards concentration and Europeanisation, co-operatives remain important in Europe. The Europeanisation trend creates a dilemma for agricultural co-operatives as they were constructed as part of nation-building processes. The process of concentration in the food industry further aggravates the situation.
- These challenges open co-operatives to long-term, gradual conversion into hybrid organisations or convergence into limited companies. The dominant feature hitherto has been conversion into hybrid organisations, in some cases quasi-public organisations, in other cases into quasi-corporations. Yet the expectation that co-operatives will disappear completely, and with them a channel for farmer influence, is dubious. National and European regulatory systems, farmer associations, and hybrid 'co-operatives' are likely to continue influencing the restructuring of the agro-food sector.

Bringing meso-level perspectives and theories such as neo-institutional organisation theory into macro-level analysis of agro-food restructuring, as attempted in this analysis, promises to help reformulate, enrich and strengthen the interesting field of Agricultural Sociology. Based on its macro-level, political economy approach, Agricultural Sociology has identified important features of contemporary agro-food restructuring such as the globalisation of commodity systems and the prominent role of the TNCs. Yet it has also tended to exaggerate and generalise these features and trends, thereby opening itself to criticism. Meso-level approaches, focusing on institutional and organisational change as well as collective action, may help to overcome these weaknesses.

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Notes

- 1 On the basis of US data and of microeconomic reasoning, Caves and Petersen (1986) reach a similar conclusion, saying that market shares of cooperatives vary with farmer homogeneity and closeness of cooperative activities to farmers' production and interests.
- 2 In the USA and EU farmer cooperatives are exempt from general anti-trust legislation. The EU has largely copied US legislation in this respect, dating back to the Capper-Volstead Act (1922). Similar legislation exists in other European countries, but is not unquestioned. In Sweden an Act of 1993 limited the right of farmer cooperatives to build national associations.
- 3 A study of business organisations in Japan, Taiwan and South Korea illustrates this point, concluding that "*institutional arrangements have a paramount role and can be observed at the very core of market-regulated, technically dominated environments*" (Orrù et al., 1991: 362).
- 4 Many organisations belonging to the so-called Third Sector – or l'Économie Sociale (the Social Economy) – illustrate this point in that they combine economic, social and political goals. The economic side of Third Sector organisations is particularly evident in the case of identity between the dominant and beneficiary categories (Gui, 1991: 555ff).

2 The International Cooperative as a Partnership: Legal Aspects

Ruud Galle

The playing field of the international food industry is ever changing. Internationalization, globalization, mergers and takeovers, on the side of supply as well as demand, change the picture daily. These developments do not pass the cooperatives active in the food section. They, too, are being confronted with internationalization, mergers and takeovers. The question arises whether the cooperative structure as such can form an obstruction for an active participation in this process. Does the cooperative structure play a positive or a negative part in cross-border adventures? Which are the special (legal) aspects of international forms of cooperation, meaning cooperative joint-ventures as well as international legal amalgamation between cooperatives?

The Cooperative as an Ideological Formula and/or as an Enterprise and Legal Entity

Ever since the middle of the last century the cooperative has strongly developed, in particular in the food industry. Initially, the cooperative formula served mostly as a countervailing power. In this sense the cooperative has been very successful in many countries. Small entrepreneurs, often farmers, joined forces in order to obtain a strong position in the market. The purpose was, of course, to obtain such a significant position in the market that a fair price could be negotiated. Quite often the cooperators chose a forward integration into the processing chain. In that case the cooperative no longer functions only as a commercial link but operates their own factories in which the raw materials are processed into consumer products, and the members/producers get the possibility to determine themselves in what form and at what price the products were eventually offered on the market. Roughly, big, often internationally operating cooperative food industries arose in this way. Ideology played a part as well. However, the many cooperative schools which existed at the end of the last century all preached different theories. Whereas in Southern Europe the consumers' purchasing cooperatives and employees' cooperatives mostly developed, in Western and Northern Europe mainly entrepreneurs' cooperatives came into being. The smaller entrepreneurs were driven to their cooperative association by their ideal of freedom.

What has remained of these ideologies? Study of the legislation on cooperatives of several Western European countries leads to the conclusion that this ideology is of a relative significance only. This certainly seems to be the case for the respective cooperative laws of the Central and Northern European countries and to a less extent for those of the Southern European countries. In the further analysis I abstract from ideology. In the context of this paper, I see the cooperative mainly as an enterprise formula which is assumed by small entrepreneurs; these entrepreneurs are linked to their cooperatives not on the basis of ideological considerations but exclusively for economic reasons. These days a member of a cooperative is not a cooperator in the ideological sense but a cooperator who does not apply the ideological doctrine but prefers to use his calculator.

The cooperative is a hybrid legal form. It is an enterprise form, a legal entity, a special type of association. The cooperative is defined as such in the different laws, whilst – as argued – the legislator mostly abstracts from ideology. However, in some countries, for instance Belgium and certain American States, the ancient ideological principles are still of importance if the cooperative wants to qualify for tax or anti-trust-related benefits.

National Legal Definitions: Essential Elements

Each time a specific object appears to be the decisive factor for the cooperative. Whereas in the legal systems of most countries, the founders of a legal entity like a foundation, a company, or an association are free to determine the object themselves, this is different in case of a cooperative. Here it is the legislator who has determined the object. The cooperative has a 'Förderungsauftrag', as it is called in German. The cooperative is supposed to function exclusively for the benefit of its members by reaching agreements with these members and thus providing their economic needs. Such need may be a highest possible price for the agrarian products supplied, a lowest possible price for the fertilizer supplied by the cooperative, or the granting of credit at the lowest possible interest rate. Thus the cooperative conducts business for the benefit of the members, not for the benefit of shareholders. Hence, the cooperative is not considered to be an association of capital but an association of persons.

This makes the cooperative a 'non-profit enterprise' to the extent that the object is not to make profit for the benefit of third parties but to render services for the benefit of the members against the most favorable tariff. The cooperative is an 'operation at cost'. Thus, the cooperative is a commercial enterprise because it is, of course, the economic result that counts. This is not different if, like in Belgium, the cooperative is indicated in the law as a company and not as an association. In many countries, also in Germany, the cooperative has the obligation to issue shares. Sometimes this was a reason for the legislator to indicate the cooperative as a company/société/Gesellschaft, while in other instances, like in Germany, alliance is sought with the notion of association/association/Verein. In

this sense the cooperative is what is referred to as 'Rechtsformunabhängig'. Decisive factors are the object and thus the acting as a non-profit enterprise in the above-mentioned sense. In view of the specific object, it is not surprising that the member ownership and thus the member control always appear as an essential element. The cooperative exists for the sake of the members and not for the sake of third parties.

Payment is made on the basis of proportionality. The extent of the economic activity between a member and the cooperative determines to what degree the member enjoys the advantages which the cooperative is able to provide to him. This does not alter the fact that certain legal systems also know the possibility, sometimes in addition, to settle on the basis of contribution of capital.

It appears that in most law systems the following elements are essential for the cooperative:

- The objective - the 'Förderungsauftrag',
- Commercial activity; non-profit enterprise,
- Operation at cost,
- Member ownership,
- Member control, and
- Principle of proportionality.

It is significant that especially in those countries which have chosen the association structure and not the company structure, there exists a large flexibility - when organizing any form of cooperative cooperation, one may strongly deviate from the above-mentioned essential elements. Such deviation from the legal standard type may give rise to the question whether at any moment one can still speak of a cooperative. Such questions must, of course, be answered according to national law. In view of the abstraction from ideology as mentioned above - and as has appeared that the cooperative is 'Rechtsformunabhängig' - this is not of interest in this context.

Private Character

As stated above the cooperative functions exclusively for the benefit of the members. In many countries this is a legal starting point. However, quite often the legislator allows to a limited extent that transactions are concluded with third parties which are of the same nature as those concluded with its own members. Sometimes this limitation is of a quantitative nature, sometimes of a qualitative nature. This option may be of great significance, in particular for agricultural cooperatives, for instance in order to prevent factories from not being utilized to the maximum. Assuming that doing business with third parties is allowed, it is possible to divide the cooperative business activities in three segments, namely (1) the primary, (2) the secondary and (3) the tertiary business. The primary business consists of concluding transactions with the members. The

members must – as the Americans call it – ‘patronize their cooperative’. They are constantly concluding transactions with their cooperative, mostly on an exclusive basis. The secondary business of the cooperative consists of the processing of the supplied products in the cooperative's factories. If considered a separate management operation, the nature and organization of the secondary business does not differ from those of a non-cooperative enterprise. The difference is, of course, that the secondary business is not conducted for the benefit of shareholders, but is to be considered a continuation of the primary business, thus an exploitation with the object to obtain for the members the highest possible price for raw materials. The tertiary business consists of concluding similar transactions, not with members but with third parties. For reasons of a legal nature, this tertiary business will remain of limited extent.

In view of the economic characteristics of the cooperative, with its limitations resulting from legal provisions, the cooperative must be considered to be of a private nature.

In most countries there is privacy to the extent that the member is supposed to do business with his cooperative on an exclusive basis. This is not so everywhere. In a country like the Netherlands, for instance, the obligation to supply or to purchase, depending on the type of cooperative, must explicitly be agreed on. The exclusivity leads to a certain privacy. The same applies to the legal object. The cooperative functions for the benefit of the members exclusively or, in case of a tertiary business, mainly for the benefit of the members. Therefore it is not strange that the cooperative is financed by the members. Self-financing has always been a characteristic of the cooperative form of association, having as a logical consequence the member ownership and member control, referred to above.

Does the private character lead to the conclusion that a venture financing with the assistance of third parties is impossible? The answer is ‘no’. Of course, a question like this should be considered per jurisdiction. However, in general it can be stated that, certainly in Western Europe, the legislator allows several financing instruments to the cooperators. An exception may be Belgium. In most cases the association form has its limits. Of course, the participant in the equity formation requires a dividend as well as a vote. Both are possible, but only to the extent that the principles of member ownership and member control remain in force.

Internationalization of the Cooperative

The term internationalization focuses on primary business. Internationalization of the secondary businesses was never a problem. If we study the activities of the major agricultural cooperatives, it appears that they belong to the major exporters and importers. Internationalization of the primary business arises if cooperatives have members at the other side of

the border or because cooperatives of a different nationality exploit together a secondary business for the benefit of their respective members.

Legal Instruments - European Cooperative Society (SCE)

Which legal instruments are available? The most simple form of internationalization of primary business is, of course, the international membership. The agrarian domiciled in country A can be a member of a cooperative established in country B. Private international law, in particular if somewhat harmonized, like in the European Community, can offer a solution. The parties will make a choice of law, probably in favor of the laws of the country where the cooperative is established. Then this law governs the membership relation.

Internationalization may furthermore be affected by cooperatives established in different countries, working together. Of course, a contractual joint venture is always a possibility. Feasible is also a joint venture having legal entity. In this event one may opt for a joint subsidiary but also for a joint cooperative mother. The problem, of a more psychological nature, is that this cooperative mother, the head or top cooperative, will be a legal entity according to the laws of either country A or country B. The solution is, of course, a harmonized international entity, that is to say, a legal structure which has the same identity in several countries. In the European Community we know only one such entity, namely the EEIG (European Economic Interest Grouping). This European Economic Interest Grouping certainly has some characteristics of a cooperative. Yet, the EEIG did not become a success because of the many restrictions which apply to this legal structure.

The outcome of the above-mentioned international cooperative through a cooperative international holding is the European Cooperative Society (SCE)¹. It is the intention of the European Commission that the European Cooperative Society, abbreviated SCE, will become an additional cooperative legal structure in all member states of the European Community, consequently next to the own cooperative. The establishment of such an SCE is possible if the activities are spread over several member states.

The first draft for a 'Regulation of the Council of the European Community concerning the status of the European cooperative society' was published in Pb EC C99 (1992, p. 17 u/i 35). The amended proposal was published in Pb EC C236 (31 August 1993, p. 17 ff).

According to Article 1, paragraph 2, of the draft Regulation, to be called hereinafter 'the Regulation', the SCE is "a company, the capital of which has been divided into shares". According to paragraph 1 of this Article, SCEs may be established under the name of European cooperative society everywhere within the Community under the terms of and in the way as prescribed by the Regulation. The object of the SCE has been prescribed by

the Regulation (paragraph 3), viz. “fulfilling the needs and stimulation of the economic and/or social activities of its members”.

In view of the contents of Article 1 and the name European Cooperative Society, the society referred to is a company with a cooperative objective. This society does have members. The conclusion must be that the SCE is also an association. Upon closer consideration of the cooperative business enterprises, the distinction company/association appears to be less important than often assumed. The partnership structure indicates, like it does here, that the participants must contribute in a capital which is divided into shares. However, here the capital is variable, as is the number of members (Article 1, paragraph 4).

If the SCE is established by legal entities, then the capital must amount to at least 100,000 ECU. If the SCE is established by private persons, then the capital must amount to at least 50,000 ECU. The shares are nominal. There can be different kinds of shares (Article 15). A member must take shares. According to Article 15, paragraph 5, the articles of association should determine how many shares one has to buy at least in order to obtain the membership. Upon study of the different provisions of the Regulation in this respect it is concluded that the share can certainly not be compared with the share known from company law. The most significant difference is that the share can be cashed upon termination of the membership, just like with the German ‘Genossenschaft’ and the Belgian cooperative company. The exposure of the member is in principle the same as the exposure of the shareholder of a company; that is to say that he can only be called to fully pay up the share, or as the Regulation puts it in Article 1, paragraph 5: “The members may be called to account for the commitments of the SCE only up to the amount of their share in the capital”. However, it may be determined in the statutes that the liability – not towards third parties but towards the legal entity SCE, as may be assumed – can be extended to a multiple of the capital taken or to any other amount determined in the statutes. This facility corresponds with regulations existing in member states where, unlike in the Netherlands, a legal regulation of a cooperative with shares also exists.

Another important difference with shares of a company consists of the possibility to pay dividend on the shares, independent from the results of the company (which, for cooperatives, is difficult to determine), but on the basis of the size of the economic interaction between the cooperative on the one hand and its separate members on the other (Article 52).

In the Regulation a choice has been made for the traditional cooperative characteristic ‘one man one vote’ (Article 22). However, here too, like in the legislation of most of the European member states, the possibility is explicitly offered to deviate from this in the statutes. If a plural voting right is created, the statutes should mention the further conditions. The basis for this seems to be that the authority is coupled to the extent to which the members participate in the activity of the SCE, and thus not to the amount of the capital contributed. In the revised draft the possibility is offered – and in my opinion wrongly – of a differentiated voting right if

the membership substrate of the SCE does not consist of private persons only.

Third parties (non-members) may, as appears from the Regulation, participate in the (risk-bearing) capital of the SCE. This is a very current cooperative issue. This may be put in the shape of issuance of shares without vote (Article 49). Contrary to what is possible in the Netherlands, the Regulation does not provide an opportunity for third parties to participate in the general meeting having a voting right. Nevertheless, Article 51 provides that the SCE should have access to all financing means which are allowed for cooperatives in the member state in which the SCE has its seat. The question how these two articles relate to each other deserves further attention.

If maximal flexibility with respect to the financing of the SCE is really aimed at, then Article 21, paragraph 1, can better be deleted from the draft. However, this will encounter resistance from those who advocate absolute control of the members from an cooperative ideology, which in view of the object of the SCE, is similar to the object of any other form of cooperative cooperation: exclusively or virtually exclusively supplying the needs of its own members, is not incomprehensible.

Conversion of a cooperative established in a member state into an SCE is possible, if this cooperative has had a subsidiary or a branch office in another member state for at least two years and if the cooperative has proven that it has been carrying out real activities in several member states. If two cooperatives established in different member states would desire maximal integration, then the larger of the two could convert itself into an SCE, and subsequently the individual members of the smaller cooperative could accede to this SCE. More natural in this case would, of course, be a legal merger of these two with a new SCE, or between the new (converted) SCE and the smaller cooperative. Unfortunately the Regulation does not know the possibility of establishment by means of such an international legal merger of national cooperatives, unlike the draft regulation concerning the European Company (SE).

For larger national cooperatives, with many hundreds or even thousands of members the absence of the possibility of an international legal merger is definitely a disadvantage. An integration of several national cooperatives into one SCE is presently only possible when the members subscribe again to the SCE. The mechanism of the international legal merger has the big advantage that the memberships of the cooperatives established in different member states are transferred by law to one and the same SCE. Therefore, in particular for the larger cooperatives, the optimal ultimate goal, one SCE with members in several member states, is not that easy to achieve.

The issue of internationality may not be forgotten when establishing an SCE. The founders must be seated in different member states. Which law is governing the relation between the SCE and its members, being private persons, or members-legal entities which may perhaps be considered as (national) daughter cooperatives?

The SCE will be subject to the Regulation under review and to what has been provided for in the statutes and which is in accordance with the contents of the Regulation. The national law on cooperatives of the member state where the SCE has its seat shall be applicable permissively in as far as necessary. Pursuant to private international law the laws of the place of establishment, like e.g. the (further) laws pertaining to legal entities, bankruptcy law, labor law etc., shall otherwise be applicable as well, which is also endorsed in the Explanatory Note to the Regulation, page 47.

The SCE can certainly fill the needs which exist in the practice of the international cooperative business community. The advantage of the SCE is that it will better fit in with the structure of the national cooperatives involved than the EEIG. Since the Commission has distanced itself from the ideology – although the individual character of the cooperative is still too much emphasized by giving less flexibility to SCEs with members-legal entities than to SCEs with only private persons as members – there are ample possibilities to organize the SCE, and thus the relation between this legal entity and its members, in the manner desired by such members. This flexibility must be more reason to give this Regulation a fair chance.

The fact that the proposed model deviates from the model of any national cooperative is only of relative significance, as has appeared. It has, however, a lot of conformity with the Belgian cooperative company because it is not only an association but a company as well.

The cooperative nature of the SCE, and which also applies for the national cooperatives of several European member states, is guaranteed by (1) the specific (cooperative) object, (2) an administrative organization based on the association model, and (3) the flexible starting point that the members are the parties which finance the cooperative and (consequently) are in control. Also, in case only the national law on cooperatives is taken as a starting point when assessing the SCE – which is dubious as this is an additional international law system – there is no reason for criticism of a really fundamental nature.

Hopefully, the fate of the European Company will not befall SCE and hopefully, we may soon welcome this new European legal structure.

Anti-Trust Law

It is necessary to make some remarks with respect to the Anti-Trust law aspects. As all persons familiar with cooperatives are aware of, binding the members – or to put it nicely, the members' loyalty – is of utmost importance for the cooperative formula. The member is supposed to do business exclusively with his cooperative for a longer period of time and he is also to finance this cooperative. Only if the ranks are closed can the cooperative become a success.

This binding of members is organized differently in the different countries. Whereas in one country a minimum duration of membership of five

or ten years is permitted, in another country the freedom of withdrawal exists in accordance with the principles pertaining to associations. In the latter case, compensations are often charged in case of a premature termination of the relationship without making withdrawal impossible.

The European Commission as well as the European Court of Justice expressed themselves several times about the allowable extent of binding the members. These days, the structuring of contractual relations, at least in case of companies of some extent, should also be considered from a competition law point of view. A far-going binding of members may have as an effect the prevention, restriction, or distortion of competition as is prohibited by Articles 85 and 86 of the E.C. Treaty.

As member loyalty is an exponent of the cooperative formula and the cooperative may stimulate the competition, as was recently held by the Court in the DLG case, a moderated anti-trust regime should apply to cooperatives². Whilst the United States introduced a specific cooperative anti-trust legislation already in 1922, the Capper-Volstead Act, relatively little attention was given to the position of cooperatives in competition laws in Europe. Germany seems to take the lead, both in the legislation and in the doctrine. There are presently some interesting cases pending before the Court in Luxembourg in which the extent of the so-called cooperative exception of Regulation 26 of 1962 is discussed.

This Regulation indicates to which extent Article 85 – which forbids agreements between undertakings and also decisions by associations of undertakings, like cooperatives, which may affect trade between the Member States and which have as their object or effect the prevention, restriction, or distortion of competition within the common market – is applicable to agricultural cooperatives. Article 86, which forbids abuse of a dominant position, always applies for agricultural cooperatives.

The DLG case in my opinion is a very important one. It was concluded that the derogation provided for in Regulation 26/62 does not apply to a cooperative that confines itself to distributing products not listed in Annex II to the Treaty, such as fertilizers and pesticides. Nevertheless, the Danish agricultural cooperative in question – DLG – managed to get the approbation of the Court. The issue of the proceedings was, as described by the Advocate General Mr. Tesauro the following question: ‘Is a clause in the statutes of a cooperative association set up to purchase agricultural products, under which the association may expel members who become members of competing organizations, compatible with the Treaty competition rules?’

DLG claims that loyalty of the members is a characteristic feature of cooperatives and is the natural quid pro quo for the advantages of membership of an association pursuing communal objectives. The fact that a member who buys outside the cooperative, becoming involved with organizations competing with that cooperative, may be expelled for that specific reason, is therefore to be regarded as a logical reaction by the association to conduct which is liable to undermine its financial standing

and commercial efficiency, and therefore falls entirely outside the 'scope of Article 85 (1)'.

The Advocate General endorses that some restriction of the independence of the members may be regarded as inherent in its very membership. The protection of the common interest may not, however, be regarded as absolute. Against that background it is assessed that the contested clauses in the statutes of the cooperative are not anti-competitive in intent for the purpose of Article 85 (1). The cooperative does not involve, by virtue of its object, a restriction of competition. Then, the analysis must proceed to the question whether, although the object is not anti-competitive, the impact which the binding of the members has on competition is acceptable or not.

In the DLG case it was considered most important that the cooperative by its collective purchase of agricultural products can counterbalance the contractual strength of other (investor-owned) suppliers on the specific market.

By means of the cooperative collective purchasing, the inherently weak contractual position of the individual farmer is exchanged for a workable competition. It is emphasized that in principle the loyalty clauses at issue are consistent with the requirement of ensuring that the association functions properly. The clauses 'constitute a normal way of obtaining protection, through the statutes, against situations in which there is a conflict of interest and are therefore not anti-competitive in intent for the purposes of Article 85 (1)'. The factual and legal circumstances, however, could make these clauses unacceptable because of the too strong anti-competitive effects. In order to avoid excessive inflexibility of the market the members of the cooperative should have the possibility to withdraw from it at reasonable intervals. If a member desires so, the loyalty has to be limited in time.

The Court in this case deemed a membership period of five years appropriate. A ten-year period was transferred into a five-year period when deciding to insert the contested clauses in the statutes.

The second factual circumstance that has to be taken into account is the cooperative's position in the relevant market. If a cooperative holds a very high market share, the members' loyalty resulting from the statute clauses could create a significant barrier for competitors to access the market in question. Also, as contemplated by the Advocate General in the DLG case, the cooperative that holds such a strong competitive position has less need for protection against members doing business with a competitor.

Finally the Court held that subject to the findings to be made by the national court relating to the factual circumstances, a clause in the statutes of an agricultural cooperative that prohibits members to purchase from a competitor does not have the object or effect of preventing, restricting or distorting competition within the meaning of Article 85 (1) of the Treaty.

That binding members is an exponent of the cooperative form and that this type of cooperation generally leads to a stimulation of competition now has been ruled by the Court, must yet be explained over and over again. Maybe we are hindered by the fact that, unlike in the United States,

the original ideology has been left far behind. Binding the members is inherent to this special type of business enterprise. The binding of course must be linked to the cooperation itself, that is to say, necessary for the object of the cooperative and the specific way in which this object is achieved. The extent of loyalty as required by the cooperative's statutes should be, as the Germans call it, 'Genossenschaftsimmanent'; it should be crucial for the equilibrium of the cooperative.

Concluding Remarks

The legal structure of the cooperative in itself does not constitute an obstacle for internationalization of the primary business in the above-mentioned sense. Being a member of a foreign cooperative may be somewhat more complicated than being a shareholder of a foreign company. However, well developed private international law certainly enables us to work with an international membership. Effective international cooperative integration, by means of cooperative joint ventures or even mergers, is only possible within the European Community by working with daughter or mother cooperatives organized according to the laws of any member state, thus national law. The efforts of the European Commission to create a European Cooperative Society (SCE) deserves a lot of praise. It is recommendable that the Commission does not only consider the civil law aspects of the international forms of cooperative cooperation but certainly also the aspects relating to anti-trust law. The Commission has many times shown to adopt the standpoint that the cooperative deserves sympathy and certainly not only for reasons of economic nature.

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Notes

- 1 The French and German names of this Society are, respectively: Société Coopérative Européenne (SCE), and Europäischen Genossenschaft (EUGEN).
- 2 Göttrup-Klim - Dansk Landbrugs Grovvarerelskab Amba (DLG), judgment of 15 December 1994, no. C250/92.

3 Creeping Privatisation of Irish Co-operatives: A Transaction Cost Explanation

Laurence N. Harte

The Irish co-operative movement celebrated its centenary in 1994. Agricultural co-operative organisation has been a success story in the Republic of Ireland, especially in the dairy sector where co-operatives or co-operative controlled firms currently account for virtually all of the milk purchases from farmers. Over the past ten years however the traditional co-operative has come under some threats with the formation of the Co-op PLCs¹ (public companies with farmer co-operatives as the controlling shareholders) and other developments such as the sale by farmer members of dairy co-operatives: Bailieboro, Westmeath and Premier Tir Laoighean, and the conversion of a further co-operative, Donegal Creameries, to a public company.

Although the effect so far on overall co-operative control has been small, the fact that the change occurred at all is significant, especially because the new co-op PLC structure provides a means by which farmer co-operative control of the sector can be progressively reduced over time. The changes in voting control structure of four of these Co-op PLCs since establishment is shown in Table 1. While a special resolution receiving 75% majority support at two consecutive extraordinary general meetings is required to allow farmer co-operative shareholding go below 50%, it is very likely that when the time is right, the organisations concerned could put a sufficiently attractive package of incentives in place to get farmers' agreement. Already, some farmer board members of the Co-op PLCs have expressed the view that effective co-operative control could be exercised by holding 30-50% of the equity (O'Donohoe, 1993). Thus the scene is set for a progressive reduction of co-operative control of these enterprises.

The purpose of this paper is to consider why the decline in farmer co-operative control and the corresponding increase of private interest ownership is occurring and to assess whether this development is positive or negative in terms of the economic efficacy.

In surveys conducted amongst co-operative chairmen and chief executive officers, the need to gain additional capital for growth and the need to provide shareholders with a current market value for their shares were identified as the two primary reasons for the change to Co-op PLC, and the need to provide a mechanism to motivate and reward executive staff was considered a further but secondary motive for conversion (Jacobson and O'Leary, 1990; O'Donohoe, 1993). While accepting these reasons, I wish to argue that the change to PLC is part of a wider and more

fundamental shift away from the co-operative organisation form and that it is justified on transaction cost grounds.

Table 1 Proportion of Ordinary Share Capital Held in Co-operative Control at Year End for Four Co-op PLCs (% of Issued Share Capital)

	1986	1987	1988	1989	1990	1991	1992	1993
Kerry Group plc	83.1	78.7	66.0	60.0	60.0	57.7	57.7	54.8
Avonmore Foods plc	100.0	100.0	71.9	71.6	71.6	63.6	63.5	63.5
Waterford Foods plc	100.0	100.0	84.7	78.6	78.5	78.5	68.6	68.6
IAWS Group plc*	100.0	100.0	100.0	78.4	78.4	63.1	63.4	63.4

* Year ends 31 July

Source: Annual Reports, 1986 to 1993, for each company

Agricultural co-operatives are a means by which farmers club together to accomplish vertical integration, either upstream (a purchasing co-op) or downstream (a marketing co-op) (Sexton, 1986). The discussion therefore begins with a review of the modern theory of vertical integration and its base in transaction cost economics. Evidence on current vertical integration practices and trends in modern business are presented. This is followed by a critique of the co-operative organisation form. Two parallel developments of the 1980s, privatisation of public sector enterprises and the emergence of the management buy-out mechanism, are then presented to illustrate the wider context of the change in governance structure in the co-operative sector. This is followed by a review of the circumstances in which the Irish Co-op PLC structure first emerged in 1986 and finally conclusions are drawn.

Vertical Integration and the Transaction Cost Approach

The process of production and marketing of all goods and services involves a number of different activities. Consider, for example, the various stages through which a food product such as cheese moves before it is purchased at the local supermarket. Here we can distinguish between the production of the dairy feed, dairy farming, the assembly and processing of the milk and the provision of retail services. Vertical integration (VI) involves the joint administration, in the same firm, of two or more of these stages. The decision of a firm located in one stage to become involved in the production of its raw materials or other inputs is referred to as backward (or upstream) integration, while expansion into subsequent stages in the production and marketing process is termed forward (or downstream) integration.

Individual stages in the process however could be further subdivided. For example, the assembly and pasteurisation of milk and the manufacture of cheese could be carried out in two separate firms, or the rearing of replacements, the production of winter feed, and the keeping of milking

cows could be conducted in separate farm businesses. Given a fine enough definition of the various stages, it follows therefore that virtually all firms are integrated to some extent. For this reason an understanding of VI is fundamental to our understanding of the role of firms in the economic system and it is now very much part of the modern economic *theory of the firm*.

The question as to why firms emerge at all was among the earliest approaches to the study of the theory of the firm. Coase (1937), in his now famous article, put forward the proposition that firms and markets are alternative methods of co-ordinating production and that the firm displaces market exchange when the costs of using the market are high. Resources are allocated in the market system by the forces of supply and demand without the guidance of any authority (the 'invisible hand' of the market). The firm, on the other hand, involves the internal allocation of resources by the authority of its management, the 'visible hand' of the manager.

Coase's view was that managerial co-ordination would replace market co-ordination wherever the costs of using the market system exceed the costs of organising the transactions concerned within a firm. Thus, for example, a dairy farmer would be more likely to rear his own replacements than buy them because the costs of using the market might be high in terms of the risk of buying in diseased or unreliable stock and the uncertainty of not being able to get the type of stock required at a competitive price. By contrast, the farmer is less likely to get involved in the manufacture of dairy feedstuffs because feed can be more easily sourced on the market where there are a number of suppliers, quality standards are easily specified and price levels are transparent. In this way VI has been conceptualised as a means of avoiding the costs of external *market failure* (Casson, 1984).

Costs of Using the Market

Taking Coase's ideas, Williamson (1975, 1981) attempted to specify the circumstances under which the costs of using the market tend to be high and where integration is therefore more likely. Williamson predicts that VI is more likely in circumstances where (1) the assets required are highly specific to the transaction, (2) there is a high degree of uncertainty involved and (3) the transaction recurs frequently.

Highly specific assets arise in situations where an activity is unique to a particular process or product. It is similar to the concept of sunk costs in that such assets would not have acceptable alternative uses. Suppose the manufacture of a particular type of cheese requires a process which is not used for other cheese products. It would be unlikely under these circumstances, even if technically possible, that this process would be sub-contracted to an outside company because of the possibility of opportunistic re-contracting by one of the parties. Opportunistic re-contracting occurs

if one party to the contract changes the terms of the contract once the other party is committed in some way.

In the cheese product example, this could arise if the subcontractor, having supplied for a number of months asked for better terms, safe in the knowledge that he was the only supplier with the required equipment and expertise. The processor might find himself in a weak negotiating position. On the other hand, if after the subcontractor installed the special equipment and trained employees in the process, the processor was to plead that the original price was too high and seek to renegotiate, the supplier, who is locked into this single outlet, may have little choice but to reduce the price below what would leave a reasonable return on investment. It is argued therefore that these conditions tend to favour in-house solutions.

If however this process or ingredient for cheese manufacture was one that applied to a number of cheese products, produced by a number of dairy processors, and a number of possible subcontractors were available, then competition in the market would serve as a safeguard against the possibility of opportunistic behaviour and reduce the incentive to internalise the transaction. In these circumstances where the market may be said to work well, the cost of using the market is considered to be lower and the need for VI is less.

Williamson's second condition for VI is uncertainty about future outcomes, such as input or product prices. He argues that this makes it expensive to use the market because it is difficult to design market contracts that will safeguard the interests of all parties. Such circumstances facilitate speculative behaviour and allow the possibility that one party will behave opportunistically and exploit the other and so there is an incentive to integrate rather than depend on market exchange. For example, if future prices for the cheese ingredient could be predicted with a high degree of certainty, then even if there was only one supplier it would be possible to write a contract for the supply of this product that would be acceptable to both parties.

The third condition which Williamson associates with VI is transaction frequency. Even where highly specific assets are required and there is an element of uncertainty, it would not be worthwhile integrating an activity unless it occurred frequently. For example, a large construction project may involve specific investments and have an element of uncertainty as to the outcome, but it would not necessitate the acquisition of a construction firm.

Internal Organisation Costs

Central to the theory of VI is the concept that organising an activity in a firm, making rather than buying or further processing rather than selling, is not cost-less, and as implied above the optimum level of integration is decided in a trade-off between market transaction costs and internal

organisational costs. Internal organisational costs include funding costs, the costs of acquiring new skills, managerial and monitoring costs, and the positive or negative effects on the existing business (Levy, 1985). *The modern thinking on VI is that these costs are often underestimated, especially those related to managerial and monitoring costs, and that firms too often opt for VI solutions when some form of market contract would be more efficient.*

The nature of the internal organisational inefficiencies as compared with market systems have also become better specified and understood. The market system is regarded as a much more direct and efficient mechanism for communicating information and inducing change than managerial planning within an organisation (Williamson, 1991). Given a disturbance in the market, individual buyers and suppliers who are directly exposed to market forces reposition automatically. In terms of the incentive to change, these actors receive all the gains or losses associated with their response. *Within an organisation* on the other hand, signals are more indirect and the gains and losses associated with actions are diluted and shared with others often in some arbitrary way so that incentive and accountability is weakened. Exchange within an organisation therefore lacks the direct competitive signals and pressures of the market.

VI increases the span of control in organisational terms leading to communication difficulties and so reducing management effectiveness. VI is in effect a diversification strategy in that entering upstream or downstream activities requires different skills and inexperience may lead to comparatively high internal costs (Harrigan, 1986).

Furthermore, there are particular incentive effects associated with the ownership of assets. Ownership confers residual rights of control i.e. rights to the surpluses generated by the assets owned. Where an activity requires effort that is not easily measured, as in most management situations, the incentive to perform is higher where the manager owns the assets, and so has rights to the residual benefits, than in the case where the manager is an employee (Hart, 1989; Grossman and Hart, 1986). For example, where a supplier is bought out, the owners/managers lose ownership rights and their incentive to invest time and energy in the business diminishes. The management now become agents of the larger firm with potentially conflicting interests and, according to agency theory (Jensen and Meckling, 1976; Fama and Jensen, 1983), the firm will incur agency costs of structuring, monitoring, and bonding the contractual relationship. Conversely, where a part of a business is split off, the new owners/managers will have greater incentives than before to invest their time and energies in the independent company and the parent will not have to incur the agency costs.

These incentive effects of ownership have direct implications for the co-operative organisation structure. Through the co-operative, farmers retain ownership of the enterprise and all rights to residual surpluses. Co-operative management act as agents, for which they are paid salaries, but the gains or losses from over or under performance accrue to the farmers.

Greater awareness of the limitations of the organisation has led to a strong preference for market mechanisms over internal governance structures in the past 10–15 years. Williamson (1986) counsels that market intermediation is generally to be preferred to internal co-ordination within a firm in circumstances in which markets may be said to work well. It is put more strongly by others who regard VI as a last resort, to be used only if absolutely necessary (Stuckey and White, 1993).

This approach to VI attributed to the work of Coase, Williamson, and others is the *transactions cost* theory and is based on achieving trading mechanisms which minimise the cost of transacting business. It provides a framework which sets boundaries to the scope of the firm, predicting the activities a firm should perform itself and those that it should leave to others.

A review of empirical studies in support of the transactions cost approach to VI is provided by Mahoney (1992). In general the research associates VI with small numbers bargaining (few buyers and sellers), environmental uncertainty, product complexity and asset specificity.

According to this theory of VI, therefore, the need for co-operative vertical integration is dependent on the extent of dysfunction or failure in the market concerned, and the degree to which this would deteriorate if the influence of co-operatives in the market was to decline. If the milk market in Ireland, for example, can be regarded as competitive and is not likely to change if co-operative influence diminishes, then the need for co-operative vertical integration does not exist and deintegration would enhance the sector's performance. On the other hand, if the market cannot be regarded as working well, or would not be competitive in the absence of the co-operatives, then the sector is justified in retaining the structure, albeit at some cost. In this respect, the agreement of the farmers concerned with the move to Co-op PLC could be interpreted as their judgement that the market works well and will continue to do even when co-operative involvement is reduced.

Modern Vertical Integration Practice

In competitive market economies, inefficient governance structures may be expected to give way to efficient systems overtime. Accordingly, study of modern VI practices and trends in the wider business world provide a further means by which the efficiencies of alternative co-ordinating forms can be assessed.

VI is a business strategy and as such is a response to competitive conditions, and so should change as these conditions change (King, 1992; Stuckey and White, 1993). For example, there is some evidence that the need for VI tends to diminish over the life of an industry (Casson, 1984). New products often require involvement upstream in special processes, because of the lack of skills of outside suppliers, or downstream into market development because of the need to provide new marketing serv-

ices (Lowes, Pass and Sanderson, 1994). In the early stages of the development of personal computers for example, some of the pioneering companies like Texas Instruments opened electronics stores to demonstrate their new products (Harrigan, 1986). Later the phenomenal progress of this industry was partly attributed to its high degree of deintegration allowing an unprecedented rate of innovation at all levels. The automobile industry provides a similar example of change in VI strategy over its life cycle (Langlois and Robertson, 1989). The modern auto industry has deintegrated to the extent that Mercedes-Benz is planning a model for 1997 for which everything except the German-made engine and transmission will be manufactured and even partly assembled by outside suppliers (Fortune, 1994).

A Move Away from Vertical Ownership

Recently, research has broadened the VI concept and focused on a range of methods of achieving *vertical co-ordination*, of which ownership of an upstream or downstream activity is but one. For example, Frank and Henderson (1992) distinguished between five different means used by farmers and food manufacturers in the US to achieve vertical co-ordination of their activities: spot market, market specification, production management agreements, resource providing agreements, and full vertical ownership. Williamson (1991) included intermediate or hybrid modes such as various forms of long-term contracting, reciprocal trading, regulation, franchising and the like, in between the two polar modes of markets and vertical ownership.

The past 15 years have witnessed a strong movement to deintegration in business generally, especially away from full vertical ownership. An influential article on vertical integration by Hayes and Abernathy (1980) which argued that too much backward integration by American manufacturers was a contributory factor to poor performance in the US economy, was credited with stimulating new interest in deintegration in the manufacturing industry in the US in the early 1980s. The argument was simply that commitment of time and resources needed to master technology back up the channel of supply was distracting companies from doing their own jobs well.

Greater awareness of the competitive success of the Japanese model of manufacturing, where a small number of very large organisations surround themselves with a much larger but still limited number of supporting subcontract firms, has increased the momentum of the deintegration and out-sourcing trend (Dwyer and Ouchi, 1993). The Japanese system fosters a very 'hands on' *supportive* and *obligational* contracting relationship between buyers and suppliers which contrasts with the traditional *adversarial* approach of western companies. It offers the benefits of vertical integration with the market efficiency of an arms length relationship (Morris and Imrie, 1993).

Organisations of all types are finding it cost effective to subcontract more and more of their operations. Some of the most common include routine operations such as office cleaning, catering, landscape maintenance and transport, but non-routine functions that were often guarded tightly are also increasingly farmed out as companies focus more and more on their core strengths (Huber, 1993). Whereas large companies in the past tended to have many specialist such as engineers, lawyers, economists and scientists on their payrolls, the trend more recently is to minimise such staff roles, maintain simple and lean management structures and out-source these functions.

The reasons for the greater efficiencies derive to some extent from economies achieved by the subcontractor in servicing more than one organisation, but also, if not mainly, from the greater attention given to the performance of the task. An outside contractor can make better use of specialists and is usually in a better position to motivate staff because it has career structures and reward systems that are designed specifically for the task in hand. It is also more likely to develop and adopt the best techniques since all of its energies are focused on this area of activity (Drucker, 1993). Furthermore, many mature companies are weighed down with trade union agreements and inflexibility whereas the subcontractor is free.

Closer Vertical Co-ordination Without Vertical Ownership

A high degree of vertical co-ordination however has been preserved in many of these new arrangements through hybrid forms of contractual and co-operative working relationships. Through such mechanisms and the building of trust between buyers and suppliers, companies are finding ways of dealing with uncertainty and the need for idiosyncratic investments without having to resort to full vertical ownership (Smith Ring and Van de Ven, 1992). In a sense, while ownership is not the preferred option, closer vertical co-ordination is assuming greater importance and is being achieved through mechanisms such as 'just-in-time' deliveries, 'total quality' and 'right first time' practices, and continuous improvement schemes, all with the help of modern information technology and a more co-operative approach.

The need for more vertical co-ordination in the food chain is also evident with greater product differentiation, emphasis on product quality and on environmental and animal welfare issues. Food retailers in response to consumer demand wish to trace the origin of food products upstream to the farm and beyond to be assured of wholesomeness and quality. Food product differentiation in the future will not be achieved solely by new processing techniques, it will require a co-ordinated change in practices and processes right back to the farm. For example, a new milk product may require milk which has been physically handled in a particular fashion or cooled or stored in some special way. An increasing

demand is therefore expected for product differentiation at farm level which can only be achieved by greater vertical co-ordination and co-operation (Barkema et al., 1991; Barry et al., 1992; Sporleder, 1992).

In summary, therefore, the current approach to the VI decision is to use market mechanisms as far as possible and, where closer vertical co-ordination is necessary, obligational contracts and other co-operative mechanisms are to be preferred to full vertical ownership. This seems to be supportive of the trend to rolling back farmer ownership of the dairy processing and marketing businesses and the emergence of new structures such as the Co-op PLC. The challenge for the industry however is to find the most efficient way of allowing this while at the same time facilitating the continuing need for close co-ordination between processors and farmers at an operational level.

The Co-operative Organisation Form

Many agricultural co-operatives in Ireland and elsewhere have more than a century of trading behind them. As a development movement and an organisation structure, the co-operative has stood the test of time. Yet in the wider economy the co-operative is a minority organisation form compared with the joint stock company. The efficiency of co-operatives is not proven by their survival and development over so many years, as co-operatives in most countries have been favoured by government policies (and sometimes have been used as instruments of government policy) through tax breaks and other direct and indirect supports. This support has now all but disappeared in the Irish case. Neither is the literature satisfactory in resolving the issue of co-operative efficiency, mainly because of data and methodological difficulties in comparing co-operatives with companies. Theoretical differences between the two organisation forms however have been well articulated. The deficiency is in the empirical evidence on the relative performances of the two governance structures.

The great advantage of the co-operative is that it provides a means by which its members can come together to achieve sufficient scale to conduct activities that would otherwise be out of the reach of individual members. However, this benefit does not come without some organisational disadvantages. Over the years problems such as confused objectives, ineffective direction, poor management and under capitalisation have been associated with co-operatives (LeVay, 1983). Based on Jensen and Meckling (1979) and Porter and Scully (1987) these weaknesses may be specified more precisely in terms of three generic problems: (1) a horizon problem, (2) a portfolio problem and (3) a control problem.

The Horizon Problem.

A horizon problem arises when an investor's claim on the net cash flow generated by an asset is shorter than the productive life of the asset. The return to the investment decision is less than the return generated by the

asset. This results in underinvestment in these assets or the requirement to pay above average rates of returns to encourage investment. Consider a dairy co-operative which distributes its profits to members on some patronage basis such as a better milk price or a patronage dividend. A farmer member investing in this co-operative is unlikely to feel that he can participate fully in the potential benefits because part of the net cash flow will be retained in the business and so shared with future members.

Fellow members who increase their use of the co-operative and non-members can also receive more than their fair share. The latter is similar to the so called 'free-rider' problem where members who invest less or perhaps do not invest at all also receive benefits. It is predicted that the horizon problem will affect the decision to invest in long-term assets most severely. Investments in intangible assets such as research and development and marketing which have very long or perpetual lives are considered most vulnerable.

The Portfolio Problem

In so far as members of a co-operative are obliged to invest in proportion to their use of the co-operative, they are said to have a portfolio problem as their claims on the assets (share in a co-operative) cannot be freely bought or sold and so they are inhibited from diversifying or concentrating their investment portfolio to take account of their personal wealth and their preferences for risk-taking. Also by excluding outside investors, co-operative members are forced in aggregate to bear risks that outside investors could diversify. Because of this portfolio problem, it is predicted again that co-operative members will require higher returns on their investments or will be more reluctant to invest than shareholders in a company.

Farmers' reluctance to invest in co-operatives is well known, but it has always been presented as illogical and as an inability to take the long-term view. This of course is a misrepresentation, farmers are simply acting in their own best interests and behaving rationally given the horizon and portfolio problems.

The Control Problem

It is widely accepted that the objectives and interests of managers and shareholders in an organisation do not always coincide. This is referred to as the 'principal-agent' problem and is encountered in all organisations where managers (agents) conduct business on behalf of members (principals). However, it is considered to be more severe for co-operatives for two reasons: one related to the lack of freedom to transfer shares between members, and the other to the absence of the range of equity-based management incentive mechanisms available to companies.

Lack of freedom to concentrate claims (shares in the co-operative) in the hands of a few shareholders dilutes the incentive to take difficult decisions. In a co-operative, only a very small proportion of the gains or losses from decisions can be captured by an individual member. Accord-

ingly, individual members or even boards of directors have a low incentive to innovate or to take unpalatable decisions such as disciplining management or initiating management change. With many members having similar stakeholdings, the responsibility falls to the many rather than the few and the 'agent-principal' problem expands to an 'agent-many principals' problem. By contrast, in a company, one or a few shareholders, by acquiring a substantial proportion of the equity, can capture a substantial proportion of the benefits of an innovation or a management change and will therefore be more likely to take such action.

For this reason, co-operatives are often regarded as poor innovators and likely to have greater difficulties in complex and dynamic business environments. The co-operative is also regarded as an ineffective organisational form for new business entry. Perhaps this explains why co-operatives have been so unsuccessful in establishing in new areas of activity even with significant head starts in the form of government support and grant aid. In the fruit and vegetable sector for example, group marketing has been highly favoured by EU aids and promoted by virtually every government initiative on produce marketing but with very limited success. Corbett and Street (1993) have recently questioned the wisdom of persisting with the group marketing philosophy in the UK because there have been *'only some successes, a proliferation of failures and many organisations that are clearly going nowhere'*. Similar criticisms have been levied at the group marketing philosophy as a mechanism of improving produce marketing in Ireland (Harte, 1987). This is also in keeping with Tetzschner's (1991) observation that the entrepreneurial phase of co-operative development in Europe has effectively faded away over the last two generations with few truly new co-operatives started over the past sixty years.

As for management incentives, co-operatives cannot use share ownership and share option schemes to compensate and motivate management. Traditionally co-operatives have not provided for share ownership by management and since share transfer is inhibited and there is no market in the shares, co-operatives do not have this mechanism available as a management incentive. It makes it more difficult to attract and hold good management in a competitive labour market, and for incumbent co-operative management it could be an incentive to encourage conversion to a public or private company.

The absence of a market in the shares is a further control handicap in that it deprives members of an objective means of monitoring the value of a co-operative and this adds to the difficulty of evaluating the performance of management.

By comparison with the joint stock company structure therefore, the co-operative organisation form involves higher transaction costs associated with the horizon, portfolio and control problems. Accordingly, in the absence of a need for vertical integration, the co-operative would not be the organisation form of choice on transaction cost grounds.

Conflicting Evidence on Co-operative Performance

Although the theoretical problems with the co-operative structure have been well specified, the significance of these problems in practice is far from being conclusively proven. Two studies of milk processing firms in the US, each using the same data set and similar methodologies but relying on somewhat different measures of efficiency, found that co-operatives were less efficient than non-co-operatives on all of the efficiency criteria used (Porter and Scully, 1987; Ferrier and Porter, 1991). The authors concluded that co-operatives would not emerge under free market conditions and that they owe their existence to favourable treatment in the form of tax breaks, interest subsidies and gratis services from the US Department of Agriculture. *“Co-operatives once functioned to overcome market failure in the agricultural sector of the US economy..... Modern transportation and communication systems have placed many more buyers and sellers of farm inputs and products in proximity to one another. The role of co-operatives as a countervailing force no longer exists”* (Ferrier and Porter, 1991, p. 172-173).

By contrast, Lerman and Parliament (1990) found that co-operatives in the US dairy industry performed as well or better than comparable investor-owned firms, although in a later study the authors attributed this to a higher proportion of ‘pass-through’ sales of liquid milk by this sector and presented evidence that co-operatives seem to be less efficient in higher value-added food processing (Lerman and Parliament, 1991). This agrees with the view that co-operative organisations are ill-suited to entrepreneurial and complex tasks that entail activities far removed from the direct interests and experiences of members (Caves and Petersen, 1986).

A simple financial ratio comparison of co-operatives registered as companies and non-co-operative agribusiness companies was conducted by Hind (1994) in the UK. No significant difference between the performances of the two groups was found and it was concluded that *“co-operatives do not perform differently to non-co-operatives, despite being required to balance member needs with the attainment of corporate goals”*.

A pro-competitive effect on non-co-operative firms has long been claimed as a benefit of co-operative involvement in a market. This is referred to as the ‘pacemaker’ or ‘yardstick’ role of the co-operative. Sexton (1990) has demonstrated this pro-competitive role for open membership co-operatives in an oligopsonistic market and has presented this as justification for continued favourable policies for co-operatives in the US and as a counter to the Porter and Scully criticisms. Similarly, Tennbakk (1995) demonstrated that if the cost structure of co-operatives and other firms is assumed to be the same, a mixed duopoly of co-operative and private firms is more efficient in overall welfare terms than a pure private duopoly, although both would be inferior to a mixed duopoly of nationalised and private firms.

Although not a true measure of performance as such, there is also evidence that co-operatives may be limited in their capacity to grow.

Fulton et al (1995) found that the growth rate for a sample of large US and Canadian agricultural co-operatives over the past 40 plus years has been low or perhaps zero.

Co-operative Life Cycle

In so far as co-operatives are considered a means of correcting or mitigating market failure, as market performance improves, the need for co-operatives will diminish, and in so far as the co-operative organisation form may be regarded as less efficient than its corporate counterpart, a transition from co-operative to company structure would be expected in a competitive market. The co-operative form therefore would exhibit a life cycle, the progress of which is determined by the dynamics of the market structure. Only in the special case of chronic market failure would an infinite life be predicted.

LeVay (1983) lamented the limited attention that has been paid to the concept of a co-operative life cycle, arguing that not all disillusionments of co-operatives should be characterised as failures and that co-operatives can be dissolved when their specific objectives have been achieved. LeVay concedes however that once an organisation has been set up, incentives will exist to keep it in being. *"Survival becomes important to members and they will find a succession of raisons d'être to maintain it."* The need to maintain the co-operative as a 'pacemaker' in the market is often the main and most unassailable reason put forward for the continued existence of a co-operative. This of course is a very legitimate reason, but has the disadvantage that it is difficult to prove or disprove absolutely without dissolving the co-operative. Two types of mistake are possible: *type 1* is to dissolve the co-operative while it is still acting as an effective pacemaker and *type 2* is to maintain it much longer than is justified on organisation efficiency grounds.

The issue therefore is to decide whether the Co-op PLC development in Ireland represents a change in organisational form at the end of the life of the co-operative and so logical on organisational efficiency grounds, or a change away while the co-operative is still acting as 'pacemakers' and so will ultimately lead to a deterioration in market performance.

Certainly some co-operative experts and researchers do not agree that the Irish dairy enterprises which have turned PLC were approaching the end of their co-operative life cycles. Jacobson and O'Leary (1990), Garoyan (1991) and O'Donohoe (1994) argued that it occurred because Irish co-operatives had departed from co-operative principles to some extent in particular by failing to allocate profit on a patronage basis and not providing a means for share redemption for members retiring or ceasing to trade with the society. They urged Irish co-operatives to remedy these weaknesses and claimed that *'co-operatives as businesses can do anything a PLC can do'*.

The claim that co-operatives as businesses can do anything that a PLC can do should not be accepted without question. Promoters of co-operation should consider the possibility that there are some functions for which co-operatives are not suited or can only accomplish at a higher cost, and that a point may be reached when co-operative enterprises attain a level of development and complexity where further progress can be best achieved under a corporate organisation form.

There is a danger that the high level of educational, intellectual and research investment devoted to the co-operative ideal over the years, by the co-operative movement itself and by aligned co-operative researchers, may act as a type of exit barrier leading to the *type 2* mistake of retaining the co-operative structure longer than can be justified on organisation efficiency grounds. Perhaps it is overstating it to suggest that this is analogous in technical terms to getting locked into the wrong technology.

The Conditioning Business Environment of the 1980s

If the part privatisation of Irish co-operatives is because there is no longer a need for vertical ownership of these enterprises by farmers or because of weaknesses in the co-operative organisation form, or even because of failure to properly implement co-operative principles, why did it take 90 years to be discovered, why did the conversion begin in the 1980s and not earlier? I wish to argue that the timing was influenced by a general change in economic and organisational thinking which took hold in the late 1970s and early 1980s and led to a new emphasis on the efficiency of market mechanisms and a greater awareness of the limitations of organisations and planned systems. The vertical deintegration trend and shift away from vertical ownership already discussed is a product of this thinking. Two further products of this new ethos, public enterprise privatisation and the use of management buy-out as a mechanism for reorganisation also have interesting parallels with the changes in the Irish co-operative sector.

Privatisation of Public Sectors Enterprises

The role of the state in the economy was a major preoccupation of governments throughout the 1980s and many countries, both developed and developing, introduced policies to reverse the nationalisation programmes of past years. (For a review, see Fraser and Wilson, 1988). At the forefront of these developments was the Conservative Government in the UK which took over from Labour in 1979. The Conservatives, under Margaret Thatcher, pursued a very aggressive programme of privatisation of state industry, and their long period in office has allowed this to continue uninterrupted for 15 years. The accepted policy objectives of this programme were to increase competition and improve consumer choice,

to reduce public sector borrowing, to give the public and the work-force a stake in industry, and to allow nationalised industry to escape the 'dead hand' of government (Hatch, 1988).

The success or otherwise of the privatisation programme must be judged on the extent to which economic efficiency of the enterprises and services improves. According to agency theory, the transfer of ownership from public to private sector increases employee and management incentive and facilitates performance monitoring in the enterprise. It predicts that these effects are most likely where product markets are competitive and reasonably free from externalities. Most of the earlier UK privatisations satisfied these conditions and the subsequent records of the companies involved were generally good, with some excellent performances. In the utility industries, however, the position is much less clear as it is much more dependent on the design of the regulatory environment and how effective it is in promoting competition (Yarrow, 1989; Meredith, 1992).

Privatisation of public sector enterprises is not directly comparable with the conversion of co-operatives to PLCs since the co-operatives have always been in the private sector. In fact the conversion of the Irish co-operatives is generally referred to as 'going public' whereas the same process in the case of public enterprises is referred to as 'privatisation'. However, there are a number of similarities. In each case control is changing from a democratic governance structure to an investment-based control system. Financial ownership is transferred to commercial investors which includes employees, management and other stakeholders. Also in each case quotation on the stock market provides a new means for monitoring performance and share ownership and stock options may be used as management incentive instruments. Under the new structure core management can share directly in the gains or losses associated with the performance of the enterprise. The privatisation movement was gathering momentum at the same time in the 1980s as the Co-op PLC structure emerged.

Management Buy-Out

Management buy-out (MBO) is another phenomenon of the 1980s which is relevant to the current discussion. Although part of the business scene in the United States since the early 1970s, it was only in the 1980s that it became important in Europe. A management buy-out is a means by which existing professional management of a business unit acquire a significant equity stake in the business (usually alongside a venture capital partner) and in time may take full control of the independent venture. Opportunities for MBOs arise mainly through divestments of subsidiary companies or divisions by large companies who no longer consider these functions a vital part of their core businesses. Divisional divestitures have accounted for about two-thirds of MBOs in the UK (Wright et al., 1987; Wright et al.,

1994). Other MBO opportunities arise through receiverships and retirements of owners of family businesses. MBOs are usually characterised by a highly leveraged capital structure but offer venture capitalists and management the possibility of very high capital gains if the venture succeeds. Because of the need to pay down a high level of debt in a relatively short time, the MBOs tend to suit relatively mature business enterprises generating free cash flow.

As with privatisation, the MBO is a device to reduce the agency cost of control over corporate assets. MBOs provide an entrepreneurial opportunity for management to effectively take control and use the assets of the enterprise more efficiently. The overall record of MBOs is very good with only about one in ten failing to survive and most succeed in their goal of *"releasing management talent and energy and thus increasing shareholder value"* (Carroll, 1990).

The conversion to Co-op PLC has much in common with the MBO in that it was pioneered by management, and senior managers through share entitlements and options emerged in all cases as the biggest individual shareholders (other than the co-operative and institutional shareholders). Like many of the classical MBOs it required considerable entrepreneurial and managerial skills, offered the possibility of substantial capital gain and a means for senior management in particular to break from salary-only compensation. This of course is no more than the senior management team would expect in any public company. In this respect there is a strong incentive for co-operative management to go the PLC route.

The Co-op PLC differs however from the MBO in that the transition was made without the involvement of venture capital partners or the need for high levels of debt and the inevitable pressures on cash flow in the early years, and management were not at any time aiming for majority shareholdings. Many MBOs however, having successfully been acquired by management, are later taken public to provide capital for growth and to provide an exit mechanism for the venture capital partner and for employee and management shareholders who are retiring or who wish to realise some of their capital gains. In this way the buy-out management team may again find itself with a minority shareholding alongside institutional shareholders. In a way Co-op PLC management has effectively achieved this while avoiding the high risk, high leveraged venture capital stage.

The parallels between the Co-op PLC developments, public enterprise privatisation and MBOs are presented to illustrate the signals and the business strategies that were current at the time of the formation of the Co-op PLCs.

The Agribusiness Environment of the 1980s

The main agribusiness event of the 1980s was the introduction of the EU Milk Quota Scheme in 1984 which capped milk production. This was a major discontinuity following a period of continuous production growth. As well as placing a limit on milk production, the new regime weakened the intervention support mechanism and was one of the first signals that market forces would become more important in the future. Moving more strongly into the market was a daunting prospect for agribusinesses which hitherto were heavily dependent on intervention products, and in Ireland many observers were concerned about the small size and weak competitive position of the firms. This weakness was emphasised in many reports and the companies were urged to achieve larger scale by mergers, joint ventures, strategic overseas investment and growth through diversification (IDA Ireland, 1987; Moloney, 1987/88; Gill and Igoe, 1990; Igoe, 1993).

The Diversification Strategy

Although the preference of the co-operative movement was to achieve scale by merger to form three large dairy co-operatives (Maloney, 1987/88), the main co-operatives, with the notable exception of Mitchelstown and Ballyclough dairy co-operatives, opted for independent growth by international and product diversifications which they set out to achieve by domestic and foreign acquisitions. It is well known that diversification is not without its dangers, especially if it takes an organisation away from its own area of capability. Yet it is preferred by most companies to a strategy of managing decline, even if the latter may be more desirable from a purely profit and shareholder value point of view.

This new approach to growth represented a major change for companies which up to then had grown organically and confined themselves almost entirely to domestic processing and commodity exports. It required a completely new approach on the part of the organisations concerned and new funding instruments. It is to the credit of the managements of these organisations, virtually all of which were home-grown, that the subsequent developments were so successful.

The Entrepreneurial Event: The Kerry Group Case

The pioneer in this new growth strategy was the Kerry Group. Kerry co-operative was the first of the large dairy co-operatives to experience a downturn in its milk supply, which fell by 15.5% between 1978 and 1981; and even after some recovery, Kerry milk supply in 1983 was still 6% below that achieved in 1978 (Kerry Annual Reports, 1981 and 1983). Faced with the milk supply problem, Kerry co-operative embarked on a plan to

diversify away from complete dependence on milk. Although it had earlier experimented with a joint venture in packaging in 1981, Kerry's first significant diversification came with its venture into pigmeat processing in 1982. At the end of 1983 it opened its first office in Chicago to further develop its casein business in the US.

In 1985 Kerry considered the *"legal, tax and commercial implications of a number of options to increase its share capital"* and brought forward and obtained shareholder approval for the Co-op PLC structure in February 1986 (Kerry Annual Reports, 1984 and 1985). In March 1986, Kerry acquired the beef processing business of the Cork Marts/IMP Group. It also started manufacturing and sourcing raw material in the US in 1986, and it added further production facilities in the US in 1987. In 1988 Kerry made its first acquisitions in the UK and US and later in the same year the group acquired Beatreme Food Inc., giving it a very significant stake in the US food ingredient business (Kerry Annual Report, 1988).

Perhaps in retrospect the conception of Co-op PLC structure by Kerry and its advisors in 1985 will be regarded as a true entrepreneurial event of the Schumpeterian or catalytic type (Binks and Vale, 1990). It gave rise to a new combination of resources, and as a catalytic event, it subsequently led to allocating and refining events through the formation of the other Co-op PLCs and the sales of co-operatives such as Bailieboro, Westmeath and Premier Tir Laoighean. It is likely that most if not all of these events will be judged to have had positive economic effects.

Although Kerry's expressed objective was to design a new funding mechanism, the solution had much more far reaching effect. As well as solving the funding problem, it provided a means by which many of the problems associated with vertical ownership by farmers and with the co-operative structure could be overcome. Incentive was enhanced through staff equity participation and the use of stock options. Management in particular could now share in the benefits of any improved performance of the organisation. Shareholders could begin to solve their investment portfolio problem and it was no longer necessary to be concerned about members' horizon problem, because outside investors could be relied upon to provide any additional equity needed. In effect it provided a mechanism by which the straight jacket of the co-operative form could be shed and the growth potential of the enterprise realised.

Kerry Group plc increased its sales at an average annual rate of 18.7% between 1986 and 1993, and the values of the shareholdings offered at a preferential price to its farmer members prior to public flotation have increased by a factor of ten over the eight year period.

Non-funding considerations of the Co-op PLC structure would seem to have been a much more important part of the reasons why other Irish co-operatives took the PLC route two years later. While the need for funding was again the issue emphasised in most of these cases, the conversions came at a time when the domestic dairy sector was generating historically high cash flows, while the investment needs of its core business were relatively low. Gearing levels in the sector were also at historic low levels

by this time. In the late 1980s and early 1990s the core dairy sector was generating and retaining an estimated £21 million annually in excess of requirements to maintain its capacity (Harte, 1992). This agrees with the findings of Collins (1991) who has presented evidence that the need for equity funding was not the reason for reorganisations in the cases of five large American agricultural co-operatives that have taken on characteristics of publicly held corporations.

It is likely however that the strong cash flow in the Irish case played no small part in the success achieved by these firms after going public. For example, of £310 million spent by Waterford Foods plc (formerly Waterford Co-operative) on acquisitions and capital expenditure in the 1988-93 period, cash flow provided £118 million, £112 million was funded by debt, and £80 million was raised by share placings, rights and preference share issues (Maddock, 1993).

The Current Competitive Structure of the Irish Milk Market

On transaction costs grounds it has been argued that the need for co-operative vertical integration hinges on the efficiency of the agricultural market concerned. In the Irish dairy sector case, therefore, it is dependent on how well the milk market works, and how well it would work if the influence of the co-operatives was to decline. How well a market works is usually thought of as dependent on its structure in terms of the numbers of buyers and sellers, and the extent to which they compete with each other. In 1994 there were 54 registered purchasers of milk in the Republic of Ireland and the concentration ratio for the four largest buyers was estimated at 52%. This market is a long way from being too concentrated or one which provides conditions for individual purchasers to exploit suppliers. It is a long way from the Irish dairy market of the last century and from the world of Horace Plunkett (one of the founding fathers of the Irish Co-operative Movement) and his followers.

It might be claimed however that milk purchasers can exercise local monopsony power as they have very substantial shares of milk purchases at local level. With a relatively homogenous product and high market transparency, through the use of yardstick measures for milk price comparisons such as the Irish Farmers Journal Milk League and the Craig Gardner Milk Price Audit, scope for local exploitation is severely restricted. Nevertheless, farmers may feel vulnerable or at a competitive disadvantage since their number is large (49,068 at the time of the 1991 Census of Agriculture) and average size is small. But the power of milk producers has been enhanced by the milk quota regime in that it created a higher entry barrier in dairy farming. Farmers in this situation, far from being vulnerable or in a weak bargaining position, have found their milk supplies more actively and competitively sought after than had been the case before.

Perhaps a more legitimate concern is how the market will behave in the future with a further weakening of EU agricultural support mechanisms and with the inevitable rationalisation and decline in the number of milk processors. The likely dynamics of the market in this respect are impossible to predict, but the concerns about lack of competition in this market are no more justified than they would be in the markets for cattle, sheep, cereals or other farm products. In fact, with a PLC structure and the threat of an outside take-over always hanging over poor performers, competition and good performance in the sector would be more assured with the presence of publicly quoted companies.

Discussion and Conclusion

Transaction cost economics provides a theoretical framework to critically evaluate the vertical integration decision in agribusiness. On transaction cost grounds, greater confidence in the efficiency of market mechanisms over co-ordination within organisations has emerged over the past 15 years. In particular better specification and awareness of internal organisation costs and the importance of ownership of assets as an incentive has led to a general shift away from full vertical integration as a business strategy, and especially away from vertical ownership of upstream or downstream activities.

In the modern Irish dairy market where the new Co-op PLC structure first emerged, there is little evidence of poor market structure or market dysfunction. The need for Irish farmers to vertically integrate into downstream processing and marketing is therefore weak or non-existent. Persisting with a VI strategy in such circumstances is inefficient on transaction cost grounds.

The use of the co-operative organisation as a means of achieving VI adds further to the inefficiency. The traditional co-operative suffers from a number of theoretical weaknesses, although the effect of these in practice has not been well proven by the available empirical evidence. These performance weaknesses, which represent higher transaction costs by comparison with the joint stock company, are unlikely to be important where the co-operative is on familiar ground in terms of technology and markets, but when the enterprise steps out of this role the weaknesses begin to limit potential. In general the co-operative is a self-help instrument, usually backed by government support, which is used to mitigate the problems of poor market structure, and when this need becomes weak or no longer exists a change in organisational form is predicted.

It is against this background that privatisation of Irish agricultural co-operatives began in the 1980s and may be expected to continue in the years ahead. In this context it could be thought of as a development which was waiting to happen, but was inhibited by organisational inertia and the absence of effective conversion mechanisms. Its timing in the 1980s in the Irish case was triggered by changed circumstances in agribusiness and the

diversification strategies adopted by the leading dairy companies. The Cop PLC structure chosen however owes much to the general economic and business thinking of the time, and the parallels with privatisation of public sector enterprises and with the increased popularity of management buy-out mechanisms are striking.

The conversion of co-operatives to public limited companies is therefore much more than just a new funding mechanism. It is a rolling back of VI in the agribusiness sector; it is a preference for the joint stock company structure over the co-operative; it is a solution to the short-run investment horizon of the co-operative; it begins to solve farmers' investment portfolio problem, and it provides a means by which management performance can be monitored and rewarded.

In so far as modern agribusiness markets can be regarded as efficient and continue to be so, this privatisation of agricultural co-operatives must be considered an efficiency enhancing development in the agribusiness sector.

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Note

- 1 The general method by which the traditional co-operatives were converted to Co-op PLCs is as follows: A new public company was formed with two types of share capital, 'A' and 'B' shares, having equal ranking. The 'B' shares were issued to the original co-operative in exchange for its assets and subsidiary companies. Some of 'A' share were then offered to farmers and employees at a discount on the expected market price of the shares. Further 'A' shares were placed in public flotation. As currently constituted, the shareholding of the co-operative in the public company must be maintained above 50% giving the co-operative majority control. This control structure is copper fastened by requiring agreement by 75% of the farmer members in two consecutive extraordinary general meetings to permit the co-operative shareholding to fall below 50%.

4 The Saskatchewan Wheat Pool in the Globalized Food Sector: Can They Remain True to Their Roots?

Lou Hammond Ketilson

Managers in today's organizations are constantly exhorted to break with the past and meet the new demands of a global economy and a post-industrial society. The point is generally that globalism heralds increased competition and increased capacity for and reliance on the flow of vast quantities of information. Crucial for survival are increased responsiveness and flexibility of organizational structures. The key question, of course, is how this responsiveness and flexibility are to be achieved. On this the literature is divided.

One position holds that responsiveness and flexibility will be achieved by decentralizing authority and decision making, respecting and empowering workers at the various levels of the organization (Kanter, 1990; Chandler, 1990; Clegg, 1990). Some writers even suggest that democratization, not just decentralization is a likely and appropriate response to current needs (Nightingale, 1982; Bennis, 1993). This view has been embraced and lauded by many who believe that the social and economic structures of the industrial revolution are now fragmenting into diverse networks held together by information technology.

Conversely, there is another literature developing that suggests increased competitiveness and flexibility in some companies has come at the expense of employee democracy (Clegg, 1990; Sayer and Walker, 1992). Strategies such as the increased standardization of procedures, increased control over managers, and the elimination of half of the middle management positions by removing the need to have many personnel with information processing responsibilities have been chosen. This has been accomplished through 'hyperquantification', more elaborate computerization, and other changes which serve to centralize conceptualization and decentralize only the execution of tasks.

The overall conclusion is that no one model for improving flexibility can be prescribed, and that to the extent an organization has control over its own responses to a changing environment, each will have to consider its own context, its own values and corporate culture. For co-operatives, due to their long tradition of focusing on ways to strengthen democratic practices, the literature communicates the message that increased participation, decentralization, and democratization are likely to be changes that foster success.

Co-operatives have always held that democracy was a defining feature; a feature which could readily be called upon to identify what it was that

distinguished them from other privately owned corporations and small businesses. Indeed, this was true for co-operatives in the early years of their formation. For the first half of the twentieth century the premise that in a co-op, democracy is practiced in a setting of face-to-face interaction and common needs, was the accepted basis on which many co-operatives were organized and managed. This premise became less practical with changes in the social, economic, and political environments. Not only were co-op members more geographically dispersed, but the degree to which they shared, or acted upon, needs in common became less clear. The core idea that co-operatives were premised upon a group of people coming together to solve common problems shifted to the concept of co-operatives as organizations that supply goods and services to individual consumers to meet individual needs. This has been a profound shift with many consequences, one of which is that consumers of the co-operatives products and services no longer needed to interact with others in an association of members.

And while democracy continued as an ethical imperative for co-operatives, the lack of face-to-face interaction and the increased diversity among members meant that opportunities for spontaneous direct and participatory democracy were reduced or absent altogether. Coupled with these changes we saw the 'professionalization' of management, including boards. In consequence, co-ops now tend to emphasize formal representative democracy where election at an annual meeting is all that is needed to provide legitimacy to a board of directors, who then work with paid management to run the co-op (Travena, 1983).

Democratic Practice and the Management of Co-operatives

Briscoe (1971) argues that the organizational structures initially put into place in order to facilitate participatory decision-making¹ have themselves become reified. He suggests that in the early days of development the institutional form of democracy was instrumental in attaining certain changes and improvements, such as providing access to participation in the economic system to those who might not otherwise have access. However, he suggests that currently the democratic structure has taken on *institutional* value without possessing *instrumental*² value in terms of business operation, and concludes that democracy is valued for its moral superiority and, as an institutional value, "*resists change and exerts normative restrictions on business activities – burdens not borne by the co-op's competitors*".³

This necessity of having to juggle the membership's right of access to participation in organizational decision-making⁴ with the imperatives of efficient business operation has contributed to the development of rather elaborate mechanisms for member participation (Brown, 1985). As a result the various organizational structures currently in place in co-operatives, and the processes established for facilitating participation have evolved

from the initially instrumental and possibly now institutional value placed on the ideal of democratic models for participation (Ehrenreich and Edelstein, 1983). Goalsetting and decision-making processes are key variables affecting structure within co-operative organizations. The democratic nature of co-operatives is reflected in these two processes.

Goal Setting

A natural system model recognizes that 'domain consensus' (Thompson, 1967), or the claims recognized by those elements in the environment able to provide necessary support to the organization, defines the set of expectations about what the organization will or will not do, and thus effectively defines operational goals. Accepting this perspective leads one to conclude that the *official*⁵ goals of co-operatives can potentially be undermined by agencies in the external environment whose *operative goals* differ from the official goals of the focal organization, but who do control resources essential to the organization.

Goals are not static but evolve, reflecting the influence of a variety of interest groups (Pfeffer and Salancik, 1978) and the power of the dominating elite (Perrow, 1968). By identifying the groups in control of resources central to the focal organization, the evolution of operative goals throughout the co-operative's history can be traced.

Consumer co-operatives, for example, were dominated in the early years by the members who contributed financial resources and legitimation to the co-operative as a social and economic institution. Power over decision-making and goalsetting rested with the Board of Directors, who acted as trustees for the membership. As the consumer co-operatives grew in size and complexity, reliance for financial resources shifted from the members to other financial institutions, and to suppliers of goods and technical services. The membership's power over decision-making and goalsetting diminished as board decisions began to reflect the desires of these external agents. Organizations which drew financial resources from retained earnings tended to remove decision-making further from the membership by allowing management to assume that role. This consequence is also a reflection of the importance currently attributed to the managerial task area. As co-operatives have grown in size and complexity, it has become more difficult for the lay board to possess the technical and administrative skills necessary for decision-making. Increasingly management has been allowed to assume this role, thereby obscuring the lines of responsibility drawn between elected and paid officials (Ostergaard and Halsey, 1965).

Further developments in the study of goals have expanded the external dependency concept introduced by Pfeffer and Salancik (1978) to include a broader range of stakeholders exerting influence over the goalsetting process (Ackoff, 1981; Mason and Mitroff, 1981; Mitroff, 1983). Perrow (1968) set the stage for this perspective by identifying a variety of goal

categories, delineated by external (societal, output and investor goals) and internal (system, product characteristics and derived goals) reference points. An examination of each of these goal categories in the context of who influences the identification of the goals contributes further to the understanding of the behavior of co-operative organizations.

Societal goals are expressed in terms of the function co-operatives perform for society. Some individuals consider co-operatives to be agents for social change capable of undertaking the complete reformation of society; others see the movement as a corrective to abuses apparent in the existing society; some view co-operation as an aid to specific occupational groups or classes (MacPherson, 1977); while still others see co-operative organizations functioning to improve the competitive performance of the total economic system (Nourse, 1957).

Goals as output can be identified by asking the question, 'Who benefits?' Originally, and in the eyes of many co-operators today, this was seen to be the *membership*, who also, in the case of co-operatives, constitute the owners. Adding to the complexity of the situation, we find that the member/owners of many co-operatives are also the *clients* or consumers. In terms of the idealized conceptualization of the purpose of co-operatives (that of social change agent), society in general also benefits, thereby having an additional influence over goalsetting.

The traditional investor goal, return on investment, is the goal most often cited as the primary directive for privately-owned corporations, and is often advocated as the normative directive for co-operative organizations. However, capital is not the only item of value invested in co-operatives. Labour and legitimization are also contributed, and thereby command a position of responsiveness on the part of goalsetters. As a result, maximization of profit may be a necessary but not sufficient characterization of the goals of a co-operative organization.

System goals include such variables as size, growth, market share and, ultimately, survival. Increasingly, such goals are established by top management, with input from the co-operative's board of directors. A long-standing debate in the co-operative community has centred on the issue of size versus democratic participation in decision-making (Craig, 1977; Laidlaw, 1977). One school of thought has advocated increases in organizational size as a means for achieving economies of scale and competitive power within the market place. Another believes that 'small is beautiful', and advocates the democratic process for participation in decision-making as the co-operative *raison d'être*.

Product goals, as a subset of system goals, can be useful as a means for comparing co-operative organizations to similar privately-owned corporations. For example, the product and service policies of consumer co-operatives as compared to other supermarket chains or independents can be utilized to identify how the 'co-operative difference' is interpreted in terms of quality of goods, disclosure of information or additional services provided.

Finally, derived goals, defined as such because “*the ability to pursue them is derived from the existence and behavior of the organization but is not considered essential to its conduct*” (Perrow, 1968, p. 308), may be considered to be the social goals of the organization. It is assumed of co-operatives that they have a greater obligation to their membership, to their employees, and to society in general, than do privately-owned organizations. In recognition of this obligation, co-operatives have pioneered the *social audit* as a means for measuring achievement of social responsibility goals.

According to Perrow (1968), the use of goal categories underscores the characterization of organizations as “*coalitions or sets of interacting interest groups*”, rather than as integrated entities. It can be concluded that, unlike the picture of goal setting and behavior posited by rational models of organizations, not all behavior in the co-operative organization is completely integrated or functionally indispensable, contributing to the achievement of an ultimate goal. Rather, the co-operative pursues a variety of goals, some of which may be in competition with each other. It is possible that conflict can be resolved only by serial attention to this multiplicity of goals, but the end result may be that no one goal is adequately achieved. In order to understand what therefore is perceived as seemingly erratic or non-rational behavior, a *multi-constituent* perspective regarding goal setting and decision-making is required.

Decision Making

Traditional conceptualizations of the *decision-making process* accepted a rational model, assuming that authority over decision-making rested with the owners, or in larger organizations, with the representatives of the owners, the board of directors and management. It was assumed that decisions taken by such representatives were carried out with the best interests of the owners in mind. It soon became apparent, however, that as ownership and control were effectively separated, the degree to which the former was proven to be true was dependent upon the degree to which the self-interest of those in control ran parallel to the owners' interests, and, if this was different, the degree to which there were checks on the use of that power (Berle and Means, 1968).

In theory, the ‘powers of control’ or the power to exercise virtually all the rights of ownership (Mace, 1971), should rest with the board of directors, as the trustees of the member/owners in a co-operative organization. In reality, such powers of control are more likely to rest with senior management officials. Decisions ultimately taken by the directors will be influenced and possibly determined by those who possess these powers. If the powers of control rest with top management, and they in turn are oriented toward an agent in the external environment other than the membership, it is unlikely that the needs of the members will be given top priority in decision-making. Indeed, the rather tenuous nature of the

organization as a discrete entity is underscored when the discretion of the organization is challenged, and other elements in the task environment assume control over its activities.⁶

What has emerged in many co-ops is a situation where the Board plus senior management control the co-operative. They define issues and make the decisions. Conceptually, a separation between the association of members and the business side of the organization has emerged. The tension between the two tends to be resolved by concentrating on the business and becoming 'market oriented' rather than member oriented. Consumer co-ops in particular, but many others as well, picked up on this mode of thinking through the lean and mean 1980's, substantially downsizing the resources put into member education and democratic structures and processes. The consequence, members tend to become pure customers and to judge co-ops today mostly by their performance compared to other businesses.

But what does this mean for co-operatives in the future? Are we to assume that the patterns that appear to be developing will only continue and that co-operatives of necessity must move away from the democratic notions that have been a defining feature for so long? And what of the co-operatives that choose to adopt models of financing that introduce outside investors? How will this affect member control? This paper will explore such issues by examining the case of the Saskatchewan Wheat Pool, a large Canadian agricultural co-operative which has recently converted to a publicly traded co-operative.

The Case of Saskatchewan Wheat Pool

Current Situation

Saskatchewan is located in the middle of the three prairie provinces of western Canada. Since the turn of the century, local and provincial development in Saskatchewan has been largely centred around primary products. In the southern portion of the province, agriculture has been the mainstay, with the development of the oil and potash industries favoring districts where the wells (south and west) and mines (central corridor) are located. In the north of the province development has been based largely around forestry, fishing and trapping.

With a population that fluctuates around the one million mark, the province has struggled over the years to establish alternate industry to supplement its agricultural base. Despite some progress in this direction, the state of agriculture continues to have a major impact on the overall provincial economy. Cereal grain prices, once the mainstay crop, have dropped dramatically over the past ten years. The number of farmers has decreased and the size of farms has increased. The poor return from cereal crops has resulted in a move by farmers to diversify into oilseeds, pulse, and more exotic crops, such as spices and canary seed. Concurrent with

these diversification moves has been an increased development of food processing initiatives around the province.

After ten years of depressed grain prices the provincial economy would appear to be experiencing a turnaround, with the support of improved potash sales and slightly improved grain prices. Yet Saskatchewan continues to be one of the more disadvantaged parts of Canada, with high out migration a testament to the lack of employment opportunities for young people.

History

The Saskatchewan Wheat Pool was formed in 1924. Its history is colorful, rooted as it is in the struggle of individual farmers who chose collective action to redress the imbalance in power existing in the market place in the early history of the province. With the influence of the Territorial Grain Growers Association, an educational and political organization, farmers turned to co-operatives as a means of obtaining farm supplies and gaining greater control over the marketing of their produce. In 1911 farmers launched the Saskatchewan Elevator Company with the aim of building an elevator system owned and controlled by farmers. Positive experiences with centralized selling of grain through the Canadian Wheat Board established by the government during World War I, but later disbanded, convinced farmers that this form of centralized control would provide greater benefit for all than could be achieved individually. The formation of the Saskatchewan Wheat Pool, to pool and market the production of all members was the final step in achieving this objective.

Current Context

The Saskatchewan Wheat Pool began as a marketing co-operative, collecting and moving its members' grain from elevator point to market. Over the years the Pool has evolved from being primarily a grain marketing co-operative to providing a major supply function in farm inputs to its members, with farm inputs distributed through over twenty seven farm service centres and one hundred C. P. I. ⁷ Sheds around the province. The Pool currently supplies approximately 40% of the farm input market, and markets 58% of the province's grain through 410 elevator points. In recent years, diversification into food processing has contributed significantly to revenues during years of poor harvests and depressed grain prices. Fully one half of 1994-95 earnings came from value-added activities.

Saskatchewan Wheat Pool has historically been the largest co-operative and business in Saskatchewan; within Canada, the Pool ranked 64th in the 1992 Financial Post 500, and is the largest agricultural co-operative. At its July 31 1996 year end Saskatchewan Wheat Pool reported net earnings of

32.6 million, fixed assets of 1.1 Billion, and members equity of 443.7 million.

The Pool's operating divisions include farm supplies, livestock, terminal elevators, flour milling, and publishing the nation's largest farm weekly newspaper, the *Western Producer*. Over the years the Pool has also entered into strategic alliances with associated companies, with ownership arrangements varying from a 22% investment in Pound-Maker Agventures Ltd., an ethanol and feedlot venture, to 100% ownership of InfraReady Products Limited, a value added processing plant for raw cereals, legumes and oilseed. In all the Pool has invested in a total of 17 companies, some joint ventures with other co-operatives such as Inter provincial Co-operative Limited, some with private industry, such as Northco Foods. (See Figure 1 for the Saskatchewan Wheat Pool Organizational Structure.)

Within recent years in the food and grain marketing industry, competition has increased exponentially. The rapid pace of merger and acquisition has challenged the Pool's traditional position of dominance within the province. Recently constructed oilseed processing plants by international giants Archer Daniels Midland and Cargil within the province present further challenges to Saskatchewan Wheat Pool's historical position. Nationally and internationally the Pool will have to continue to grow to sustain any kind of presence in the farm supply, food processing and grain marketing industries.

In addition to changes in the competitive environment, significant changes to the regulatory and sociocultural environment are having a major impact on the way in which the Saskatchewan Wheat Pool has traditionally run its operations and served its members.

Agricultural reform driven by both trade agreements and fiscal constraints has resulted in the loss of the 'Crow Benefit', a transportation subsidy historically paid directly to the rail companies, dramatically reducing producers' incomes and subsequently, the Pool's. The future abandonment of rail lines currently frozen to the year 2000, will dramatically change the face of the prairie grain delivery system.

Greater diversity of producers, producer needs and market segments has augmented a move to increased individual freedoms. A growing percentage of the producers in the province feel that their individual marketing opportunities are being impaired by centralized selling models, challenging a cornerstone principle of the Saskatchewan Wheat Pool.

In response to these changes and in anticipation of even more, Board and management of Saskatchewan Wheat Pool concluded that two central strategies were required to move the Pool into the next century in a renewed position of strength provincially, nationally and internationally.

A new CEO in January of 1994 has been instrumental in implementing the new direction approved by the Board of Directors. Becoming more effective at the core business of grain handling through reducing costs and by increasing the flexibility with which the company was managed, was deemed essential. It was proposed that these two objectives would best be

achieved through reorganization of the Country Services Division and a revised collective agreement. To strengthen the Pool's capital position, financial restructuring was deemed necessary. Both employees and members have been affected by these decisions.

Relations with the employees representative, the Grain Services Union, have historically been quite good. During negotiation of the recent collective agreement, however, provisions regarding contracting out were challenged by management (and ultimately achieved) and became a central issue of dispute. An agreement was not reached and a thirteen day strike ensued in September, 1994. Occurring as it did in the middle of harvest put the elevator managers in an impossible situation of wanting to serve the members during the most critical time of the year, and wanting to retain loyalty to the union. Loyalty to the members prevailed and the work stoppage strategy was unsuccessful in the country. The strike ended in a very bitter fashion.

Within this context of labor difficulties, the Board of Directors and management of the Pool took what was to become a very controversial proposal to the delegate body in July of 1994. The primary source of funding for Saskatchewan Wheat Pool ventures and reinvestment in infrastructure and other aspects of the business had traditionally been retained earnings in the form of members equity⁸ and debt financing. In recent years reductions in working capital have impeded the Pools ability to move quickly with investment decisions. An increased demand for payout of members equity with the average age of Pool members increasing in the future, was predicted to aggravate an already difficult situation.

The proposal put to the delegates was to transform Saskatchewan Wheat Pool from a solely member-owned co-operative to a co-operative offering two types of ownership. Current members would continue to have voting membership in the Pool by retaining a portion of their equity in a voting share account. Only active farmers would be allowed to purchase this type of share. A second type of nonvoting share would be offered to the public, with members having the opportunity to convert the balance of their current equity in the Pool to nonvoting shares, able then to be traded on the open market. This proposal was decided upon by a meeting of the delegate body⁹, and was passed with the support of 80 percent of the delegates.

From the outset, the Saskatchewan Wheat Pool President Leroy Larsen, and the Board of Directors made it very clear that converting equity to shares would not mean the Pool would stray from its original principles of being farmer-controlled. This promise was a major selling feature for the proposed conversion with the members.

An in-house trading period from January 15 to February 14, 1996 enabled members to convert existing equity (or to divest in exchange for cash), and to purchase additional Class B non-voting shares. From February 15 to March 14, Saskatchewan Wheat Pool employees and Saskatchewan residents had an opportunity to purchase shares. On March 15, the shares were listed on the Toronto Stock Exchange.¹⁰

Saskatchewan Wheat Pool's Democratic Structure and Processes

Democratic Processes

Since its inception, Saskatchewan Wheat Pool has envisioned its role as a co-operative to be a voice for its farmer members in the formation of agricultural policy, as well as providing a marketing and supply mechanism whose objective it was and is to enhance direct economic benefit to its members. This role has been carried out through lobbying and advocacy to alter the legislative and policy environment within which its farmer members run their businesses; and through the development of a grain collection and marketing infrastructure which could enhance the individual bargaining power of the farmer member through collective strategies, and deliver to the member a greater share of the end product of their farm output. A further objective of the Sask Wheat Pool has been to ensure the future of farming for the family farm as well as the viability of rural communities.

Volunteer Activities

Volunteerism is central to the success of the Pool's democratic structure and processes. The primary entry point for volunteers is at the local committee level. Each elevator point has a local committee whose mandate it is to represent the issues of that point and community, via the delegate system, to the Board and management within the Pool. Livestock and other special interest committees also function within the Pool's committee and democratic structure. Agricultural policy issues have been the primary focus of most committees, as well as operational matters pertaining to that community. Each committee holds an average of four meetings throughout the year. Local annual meetings traditionally held in the fall, and other member activities provide additional opportunities for member involvement.

In addition to providing a mechanism for receiving and distributing policy and operational information to the membership, the local committees provide input and advice to delegates, the Board of Directors, and managers. This input includes product and service needs or problems, proposed positions on agriculture policy for the Pool to advance on behalf of its farmer members, cropping information and status, and concerns of a more general nature.

Local committees also provide a mechanism for recruiting delegates. Recruitment is encouraged by two programs in particular sponsored by the Member Relations Division; the Farmers for the Future Program and the Advanced Committee Leadership Program. The former is a seminar designed for farm couples to develop interpersonal, leadership and farm management skills, and to learn more about Pool operations and direction. The latter provides an opportunity for members with an interest in becoming more involved in Pool leadership to learn about the democratic structure of the Pool, and to attend a portion of the fall Annual Meeting.

The local committees have also been central to delegate recruitment and to recent efforts to encourage more women and aboriginal people to participate in the Pool's democratic processes and to attend informational meetings.

In 1994, 71% of members participated in at least one of the six kinds of activities identified in the member survey; attending the local annual meeting, voting for the delegate, signing the delegate nomination form, attending other SWP meetings, attending a SWP sponsored social event, or serving on a local committee. Approximately 14% of all members serve on local committees. More than 51% of members surveyed discussed issues with a local committee member or delegate, and 89% read the member's newsletter.

Surveys of the Membership

Regular surveys of membership knowledge and attitudes has been a tradition of Saskatchewan Wheat Pool since the early 1980's. The survey instrument is quite comprehensive and covers topics ranging from general attitudes toward the Pool's functioning as a co-operative, opportunities for member participation, to Pool services and operations, to positions taken on a range of agricultural policy issues. Results of the survey are incorporated into the Policy and Member Services Division planning process.

Women's participation in the Pool has received specific attention since the early 1990's, and a separate survey of women in Pool households has been conducted in the last two surveys to increase the total number of women respondents in the membership survey. In the past two years women claiming membership in the Pool has risen from 28% to 46% of respondents. Despite the increase in membership, actual participation in Pool activities is not high, and interest in involvement remains low. It would appear that Saskatchewan Wheat Pool initiatives to increase women's participation have not had a major impact, and more work will have to be done in this area.

Member Education

Saskatchewan Wheat Pool is strongly committed to member education and development. The Pool's delegate development program, as an example, provides a variety of opportunities for delegates to participate in knowledge and skill development seminars and workshops, as well as to attend industry and co-operative conferences. The Pool is also an active supporter of the Co-operative Youth Program and 4H, encouraging local committees to sponsor youth developmental opportunities.

The Western Producer, published by the Pool is a weekly newspaper devoted to farm policy and related information, received by members and non members alike on a subscription basis. All Pool members receive a quarterly newsletter called Pool Today, which covers a wide variety of topics ranging from farm practice and policy to Pool operations. A committee newsletter, the Committee Communicator, is also published quar-

terly to provide committee members with Pool, industry, co-operative and policy information. In addition, the Pool also makes available to delegates and management, on a monthly basis, audio tapes covering a wide range of topics such as policy updates, marketing and commercial information, and information about educational and other programs available to members.

The Responsible Stewardship program recently introduced by Pool management provides information for farmer members to examine and modify their current farming practices to improve their impact on the environment. For example, the Farm Environmental Assessment Guide is a workbook aimed at helping farmers audit their operations. The Guide's easy to follow process allows producers to examine current practices and conditions, identifies areas needing upgrading, and looks at issues related to health, both personal and financial.

Finally, Saskatchewan Wheat Pool provides financial contributions to the Centre for the Study of Co-operatives at the University of Saskatchewan dedicated to research and teaching about co-operatives.

Participation of Members in Decision Making; Local Committees

The first point of access to participating in the Pool's decision making process is the local annual meeting, where members meet to elect representatives to the local committee, receive reports on financial and operational results, and discuss policy issues. There are typically two to four committees in a subdistrict. Committee and member meetings offer opportunities for district delegates to provide information to the membership regarding upcoming issues, as well as to gather feedback from members about issues of concern to that subdistrict. The Pool has a very clear system of representation, with each delegate having to be elected in subdistrict elections (by mail ballot) held every two years. Elections for the 8 odd numbered districts and 8 even numbered districts are held on alternating years. Once elected, district delegates elect one of their district delegate group to serve on the Board of Directors for a two year term. Through resolutions advanced at the local committee level, and delegate voting at the annual meeting held in the fall, as well as the election of delegates and directors, members exert their control over the decisions made by the Pool.

Saskatchewan Wheat Pool committee renewal is a major initiative planned for 1995. Committee focus groups revealed that members believe committees have an important role to play in the Pool's future, but that improvements are needed to make involvement and the role more interesting and meaningful to a larger number of members, in particular younger members. In addition, there is a perception on the part of members that staff and delegates do not listen well. Planned changes include looking at a local process to introduce new ideas, strengthen leadership, and generally help committees refocus. The Member Relations Division has just completed the consultation phase, will be piloting new initiatives,

and if successful, hopes to have changes implemented beginning in 1995-96.

Early indications suggest that there will be a move away from local delivery point-oriented committee activity, to a regional focus in keeping with a structure adopted by the Country Services Division and their marketing teams approach. Multicommunity collaboration rather than competition is seen as a way of best using all current resources or what may be there in the future. With changes to rail lines and elevator delivery points anticipated following recent federal government changes to the Western Grain Transportation Act, services are more likely to be provided on a regional basis, so input from members will also need to have a regional orientation. This change will not undermine the work of the committees at the local level, however, as they are seen as providing important contributions in the area of customer data and responding to the unique circumstances in a specific area.

Democratic Structures

The importance of member input into Pool operations and farm policy positions is demonstrated by the structure of the organization. The Pool has a dual reporting structure with two senior executive officers, one for the commercial divisions of the organization, one for the policy and member services divisions. The latter contains the communications, policy and economic research, and member relations divisions.

Governance Structures

The Saskatchewan Wheat Pool has a very elaborate democratic system. The province is divided into 16 districts, with seven to nine delegates in each district. Resolutions from committee and member meetings are reviewed at the district level before being referred to the Provincial Resolutions Committee of Delegates which manages the resolutions process leading up to and during the Annual Meeting. A total of 134 delegates, including 16 directors met at last year's annual meeting to discuss and debate Pool operations and agriculture policies. The president and two vice presidents, all full time positions and two executive members of the Board, are elected every year. The Board of Directors normally meets monthly.

Member Relations Division

The elaborate democratic system is supported and serviced by the Member Relations Division (M.R.D.). With a staff of twenty six SWP provides one of the most extensive support systems of any co-operative in North America.

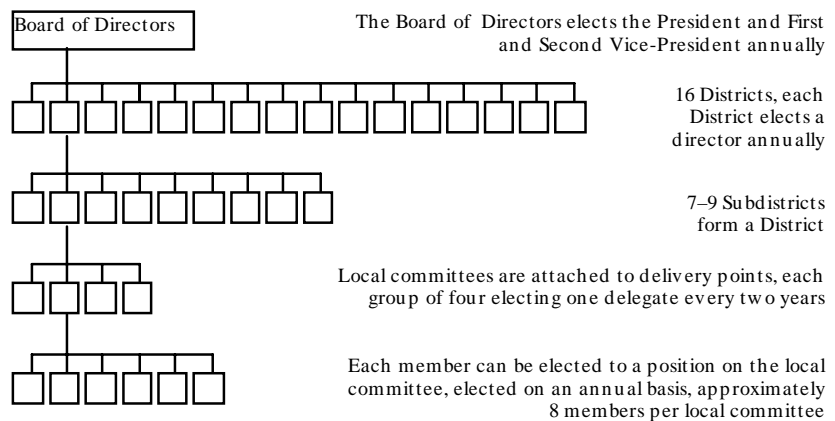
District representatives serve as liaison with the democratic and commercial structures across the province, providing information, training and facilitation in a variety of areas. The role of the Member Relations

Division has been modified recently as a result of internal reviews. There will be an increased involvement with commercial operations as a result of the restructuring of the Country Services Division (C.S.D.), an emphasis on team models for management, and commitment to continuous improvement in member communications and participation. As part of the team, the Member Relations representative, will act to advance the concerns of the member more directly in decisions made by C.S.D. managers.

Annual Meeting

Saskatchewan Wheat Pool holds an eight day annual meeting attended by 134 delegates. Management undergoes intensive scrutiny by the delegates presenting their divisional reports and responding to questions. This scrutiny is extended to the CEO and Executive Director as well, who conduct what is essentially a bear pit session with the delegates. Delegates then have an opportunity to debate and vote on resolutions coming forward from the districts, providing direction to the Board and management for the oncoming year on both internal operational and external public policy issues.

Figure 1 Saskatchewan Wheat Pool's Democratic Structure



The Impact of Conversion to a Publicly Traded Co-operative

What has been described is the way in which Saskatchewan Wheat Pool has functioned to date. With conversion many of the accepted practices may be changed completely. The decision by Saskatchewan Wheat Pool's elected officials and management to convert to a publicly traded co-operative is a decision to move into uncharted territory. Just how successful they will be in retaining their functioning as a co-operative within the context of pressures from the open market remains to be seen. Issues arise in a number of areas.

Ownership Structure

Ownership and control have been central to the debate among members over the conversion decision. The legislation supporting conversion has been drafted in such a way as to leave voting control in the hands of the farmer/members, while ownership rests in the hands of as many farmer/members who choose to convert their equity into Class B non-voting shares.

In order to retain maximum control of the Pool, it is imperative that as many Class A farmer/members retain as much of their equity in the organization as possible. Initial polling of the membership indicated that older members were more likely to take their equity out rather than convert. This created concern for Board and management. A concerted campaign was waged in the countryside from December 1995 until just prior to the in-house trading period (January–February 1996) to ensure that members did not sell their shares. During in-house trading, most sell orders were issued by older members. Of those 60 years or older, 12,000 members offered to sell 43% of all shares sold. This amounted to \$60 million and underscored the fact that under the Pool's previous equity arrangement, a huge majority of dollars was held by those over 60 years.

As a result of the major marketing campaign waged by the Member Relations Division, 51,000 of 78,000 equity holding Pool members chose to retain all or some of their Class B non-voting shares. The vast majority were younger members. This portion represented 54% of \$165 million of existing share capital, and was considered substantial enough for the Board of Directors to authorize management to proceed with the final steps of conversion.

Unlike the stability of past, ownership will now be dynamic, changing as the Class B shareholders change. Ownership and control, both previously held in the hands of the farmer member, will now be divided. Farmer members currently hold 54% of existing share capital; Pool employees hold another small portion, and the people of Saskatchewan the bulk of the remaining. What this pattern will be in the future is a matter of great interest to the previous owners of the Pool who believe that control is now out of the hands of the Class A shareholders.

Goalsetting

The ability of co-operatives to redress the inequalities within the marketplace stems from the essential difference in transactional perspective inherent in co-operatives. As Thompson and Jones (1980, p. 386–387) state, *“even though co-operatives perform functions similar to those of traditional business firms, they have unique differences in their relationship to their owners. The co-operative organization does not buy, process and sell to make a profit as a separate entity; instead, it procures services for the benefit of its members – who hope to increase their savings if it is a consumer co-operative, or*

to increase the profits of their own separate business if it is a farmer or business co-operative”.

Will this description ring true of a publicly traded co-operative? Whose objectives will come into prominence under the new model.

Sask Wheat Pool Board will be legally bound to serve the interests of the corporation. In the past, decisions which have been taken in the interest of the member welfare, such as a decision to keep freight tariffs low to reduce costs to producers, will no longer be possible. In the future the interests of the shareholders will take precedence. If the majority of shareholders are not farmers, or those who share the interests of the farmer/members, the goals set for the Pool may diverge from that of the past. This causes particular concern related to positions taken by the Pool on agricultural policy issues. It very possible that observers will note a sharp reduction in agricultural policy lobbying by Saskatchewan Wheat Pool in the future.

Decision-Making

The annual meeting has traditionally been an opportunity for delegates to receive a tremendous amount of information about the Pool's operations. How this tradition will be affected by the issuing of public shares is still not certain. Whether more or less information and of what type can and will be made available to the delegate body remains one of the unknowns as the Pool goes ahead with restructuring. Preliminary discussions indicate that two annual meetings will be required, the first for Class B shareholders, then for Class A.

Another associated issue is whether the relationship of the Board with members, which is currently seen as representative, will be possible in future. The way in which the Board is able to use the delegate body may be substantially modified in light of insider information regulations, and may effectively nullify the representative nature of the current democratic system.

Provisions have been made in the new legislation¹¹ to allow for the appointment of a board member who is not a member of the delegate body, in other words, not a farmer/member. Such a decision, however, requires the support of 2/3 of the voting delegates to amend the bylaw. This provision does open the way to non farmer members on the Board, and is seen by many as an indication of the future direction of decision-making.

Another provision of the legislation that has caused tremendous controversy, and resulted in legal action¹² by a group calling themselves the Co-operating Friends of the Pool, has to do with changes to the decision-making process. Past bylaws of the Pool required delegates, rather than a general plebiscite of members, to vote on major decisions facing the co-operative. With conversion to a public company, it is mandatory that non voting shareholders be allowed to vote on decisions that fundamentally change the course of the Pool. The CFP have charged that

all members should have had a chance to vote on changes of such significance. It is bitterly ironic for them that in the future non farmer members will have more right to participate in such decisions than did farmer members prior to conversion.

A New Generation Co-operative

Saskatchewan Wheat Pool had its origins in a fight by farmers for fairness in the marketplace. They desired the ability to procure for themselves a greater share of the returns associated with the end products made from their grain. At the time that the Pool was formed, all members shared a common vision of the role that the Pool would play in supporting members' needs. Within today's membership, however, there appears to be two views as to the role that the Pool specifically, and co-operatives in general, should play in society and in serving their members.

The Pool represents for many of its farmer members a way of enhancing the profitability of their farm business. It is a means to achieve 'collective independence'.¹³ The financial restructuring decision is seen as an opportunity for greater profit on the part of Saskatchewan Wheat Pool, with benefits flowing to its membership and investors. Their concern is for the sustainability of the Pool as a viable player in the agrifood industry, thus contributing indirectly to the long term sustainability of farming in Saskatchewan. In this view, the Pool takes on a role very similar to any other significant employer and investment opportunity. Jobs will be created by expansion, members will benefit individually through their investment, and the economy of the province will be strengthened.

For another portion of the current membership, and those most opposed to the conversion process, the Pool represents a means to alter the structure of the marketplace and a mechanism for economic and social development in rural communities. In their view, it is imperative that the Pool hold firm on agricultural policy issues which have a major impact on the small farm, such as central desk selling. Such positions may be controversial, and in some circumstances, even in direct contradiction to what is commercially advantageous for the Pool, but these positions have been upheld historically because direct benefit to members was seen to outweigh direct benefit to the organization. For those holding this latter view, opening up the control of the Pool to nonfarmers, and those who invest for speculative reasons is not only anathema to the essence of a co-operative, but is believed to undermine the objective of local control and decisions made for the benefit of Saskatchewan farmers.

The tension between these two viewpoints has fueled the controversy surrounding the financial restructuring decision. Board and management would appear to moving away from a view that the Pool has a responsibility to fundamentally change the marketplace, as it did in its origins, to one where the role of the co-operative is to supplement the market while trying to serve its members effectively.

Saskatchewan Wheat Pool has identified itself as a New Generation Co-op, now with a broadened base of participation. Board and management appear to remain committed to sustaining the elaborate and tremendously expensive member services side of the organization, thus demonstrating a willingness to fight to retain its 'co-opness' in the midst of its struggle to become larger and more competitive. As the Pool moves into its 71st year of operation it faces a primary challenge: to continue to operate as a co-operative as it moves forward to face challenges from its competitors as a publicly traded co-operative.

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Notes

- 1 Many co-operative organizations currently have elaborate mechanisms in place for facilitating participation by the membership in the decision-making process. These very elaborate systems of representative democracy are often criticized by co-operators who support the participative democracy to be found in town meetings.
- 2 Briscoe cites Allen Wheelis, *Quest for Identity* (Norton, 1958) p. 73. He defines institutional values as being those associated with myth, mores and status within society. These values claim absolute status and immunity to change, as they are seen to be in accord with the dominant institutional directive. Instrumental values are related to relative adequacy of function for an implied or specified function.
- 3 Briscoe, R. 1971, p. 110. Briscoe found in his study that many managers and directors of co-operatives perceived co-op values to be incompatible with business success. Co-operatives with managers who held this view suffered from what he termed the 'frozen co-op syndrome' and failed to formulate long term goals and strategies which would enable them to move out of this situation. The more successful co-operatives had managers who had found a way to transcend this dilemma and were able to embody co-operative values in their business operations.
- 4 Despite having the right of access to participation in decision-making, not all members will exercise that right. Some Canadian research indicates that only a very small percentage of members could be considered to be active in this process (Apland, 1987).
- 5 Perrow (1961) defines official goals as the general purposes of the organization as put forward in the charter or public statements. Within the context of a co-operative these might be referred to as the ideological goals of the organization. Operative goals designate the ends sought through the actual operating policies of the organization; providing a picture of what the organization is trying to do regardless of what the official goals identify as the aim.
- 6 Pfeffer and Salancik (1978) define the boundaries of an organization on the basis of where the discretion of one organization ends and that of another takes over. Thus, an organization can be viewed as a separate, autonomous entity to the extent that it controls discretion over decision-making. The point at which this discretion ends, and the discretion of another takes over, is the boundary of that organization. Co-operatives have a rather amorphous quality because of their close (sometimes highly dependent) relationship with other co-operative organizations within the system.
- 7 C. P. I. refers to the Crop Protection Institute formed by major chemical suppliers to ensure compliance with stringent federal environmental protection and chemical storage legislation.
- 8 Members equity accumulates over the years as a result of purchases made through the Pool, and is held in the individual member's name. This equity is returned to the member upon reaching the age of retirement or if the individual divests of all interest in the business of farming; or to the member's estate upon death. The member pays income tax annually on the amount of equity earned, and at the age of retirement can withdraw the full amount of equity which is considered nontaxable income.
- 9 A general vote of members was not held because the Pool's Act and bylaws legally give the decision making authority to the delegate body. The decision to not hold a vote of the general membership has contributed to much of the controversy around the decision. A group of Saskatchewan Wheat Pool members calling itself the Co-operating Friends of the Pool was formed with the intent of preventing the conversion.

- 10 The decision to convert was made very attractive by valuing members equity at \$10.00 per share, then immediately increasing that value to \$12.00 per share upon conversion. Shares have since traded as high as \$16.00.
- 11 Changes were required to the Saskatchewan Wheat Pool Act to enable conversion to proceed. This sparked another round of debate and controversy as legislative committee hearings allowed dissenters to air reasons why changes to the legislation should not proceed. The act was passed in the Legislative Assembly in March, 1995.
- 12 The Co-operating Friends of the Pool did not proceed with the legal action, but continued to use the media and public meetings in their attempt to stop the conversion process.
- 13 From the speech to the delegates by Don Loewen, Chief Executive Officer, December 1994.

Part II

Strategies for Agricultural Cooperatives

5 Organizational Structure and Globalization: The Case of User Oriented Firms

Michael L. Cook

Leaders of U.S. agricultural cooperatives face two overriding strategic questions as they plan for the 21st century: can their organizations compete in an increasingly *global* market place, *and* can their organizations compete in an increasingly *industrialized* food and fiber sector (Barkema et al., 1993; Handy and Henderson, 1991; Torgerson, 1990; The Economist, 1991; Urban, 1991; Sexton, 1991; Cook 1995; Sporleder 1992). The answers to these questions are, of course, complex and multifaceted. Trade and agricultural policy factors, economic endowments, human resource, financial and market strategy all influence the answer. But, perhaps as important an element for cooperative leaders to consider is the organizational structure factor. Is the traditional organizational form of a user owned, user controlled, user benefited cooperative the most effective in achieving producer objectives in an increasingly industrialized and globalized food and fiber market place?

Background

Most U.S. agricultural cooperative organizations originated in the early 1900s due to a combination of economic, farm organization and public policy factors. During the ensuing years, U.S. farmer cooperatives slowly but consistently increased their aggregate market shares of inputs handled, farm marketings, and services provided. That is, until reaching a peak in the 1982-1984 period. Subsequent to the 1982-1984 period U.S. cooperatives market share decreased for the rest of the 1980s as they adapted to the worse economic depression since the 1930s. Nevertheless, as the end of the 1980s approached, cooperatives began to reverse the decline and by 1994 aggregate market shares had reached or surpassed 1982-1984 levels of inputs handled (Table 1).

Table 1 U.S. Farmer Cooperatives' Share of Farm Marketings and Farm Production Expenditures, 1950-1994, in Percentages

	1950	1960	1970	1982-84	1990	1994
Percent of Cash Receipts of Farm Marketings	17	24	26	30	27	31
Percent of Farm Production Expenditures	14	15	16	28	27	30

Source: USDA-ACS, *Farmer Cooperatives*, and *Cooperative Historical Statistics*.

Market shares by commodity exhibited a wide range from a low of 9 percent in livestock to a high of 82 percent in dairy. Market shares for grains and oilseeds were 38 percent, cotton 34 percent, fruits and vegetables 18 percent, fertilizer 41 percent, petroleum 45 percent, and feed 22 percent.

Public Policy Support for Cooperatives

Public support for agricultural cooperatives in the U.S. includes (a) limited immunity from antitrust laws, (b) beneficial tax treatment, (c) access to favorable credit terms, and (d) technical assistance.

Limited Immunity from Antitrust Laws

Since the passage of the Clayton Act in 1914 and the Capper-Volstead Act in 1922, U.S. agricultural producers are free to "act together in associations" to collectively process, market, bargain and handle commodities and products they produce. Furthermore, farmers, through their associations, may contract, initiate agreements, and/or establish marketing agencies in common, subject to member definition and organizational conditions. Nevertheless, as broad as these two federal laws (most states have complementary provisions in their antitrust legislation) are in permitting agricultural producers to participate in collective action, they do not fully exempt cooperatives' antitrust provisions. Neither may farmer cooperatives be used by nonfarmers to fix prices nor can farmer cooperatives engage in predatory practices harmful to other business organizations (Knapp, 1973).

Beneficial Tax Treatment

At the federal level, net income of farmer cooperatives is generally taxed according to the single-tax principle instead of the double-tax principle usually applied to investor oriented firms. This single-tax principle ensures that cooperatives' net income is taxed at either the cooperative firm level or the member-patron level, but not both. This favorable tax treatment evolved out of provisions first passed in the 1909 Corporation Tax Statute. This law placed a tax on corporate and joint-stock firms' net income but exempted agricultural and horticultural associations operating on a mutual basis (Knapp, 1969).

Access to Favorable Credit

The U.S. government helped create and implicitly supports the Farm Credit System. The System is a nondepository, structurally complex, farmer-owned-and-controlled agricultural lender entirely dependent for its loanable funds on sales of debt instruments in financial markets. Its origins can be traced to European roots and the 1916 birth of the Federal Land Bank System followed by the legislated emergence of two siblings, the Federal Intermediate Credit Bank and its companion Production Credit Associations and the Banks for Cooperatives. In addition to the initial seed money provided to start each of these banks, the federal

government has supported the system by maintaining its 'agency status' – a set of unique characteristics that help ensure the financial markets will remain receptive to the amount of system securities needed to be sold.

Technical Assistance

Dating from the 1926 passage of the Cooperative Marketing Act, the U.S. government has supported the development of agricultural cooperatives. The U.S. government provides technical assistance to individuals interested in forming or improving cooperatives by conducting economic, legal, financial and governance analysis; by assisting in the establishment of cooperatives; by expanding the concept of cooperative development to assist in rural development; by supporting research into the theoretical foundations of American agricultural cooperation; by conducting international comparisons of cooperative policies, strategies and structure; and by collecting, analyzing and maintaining a large historical and statistical data base (Torgerson, 1993).

Guiding Principles of U.S. Agricultural Cooperatives

In the struggle to attain legal recognition and approval, U.S. cooperative advocates relied on economic and philosophical arguments. The two most frequent economic justifications for forming cooperatives cited to legislative sponsors of collective action were: (1) individual producers needed an institutional mechanism by which to bring economic balance under their control and because of excess supply induced prices, and (2) individual farmers needed countervailing power when confronted with monopolistic and/or monopolistic market structures (Cotterill, 1984).

The 40-year evolution of major cooperative legislation, which lasted from 1890 to 1930, produced more than 85 state cooperative incorporation laws, the Sherman Antitrust Act, the Clayton Act, and the Capper-Volstead Act, each in some way attempting to address these real and perceived market failures (Suhler and Cook, 1993).

The philosophical arguments evolved from the principles and practices developed by the Rochdale Society members during the mid-1800s in England. By the 1920s these rules had been consolidated into the three hard-core principles of democratic control, service at cost, and limited return on equity. Further refinement of the cooperative principles was summarized by the U.S. Senate-requested study coordinated by the U.S. Department of Agriculture's Agricultural Cooperative Service in 1987 (USDA, 1987). From that study the current cooperative principle semantics have evolved: a cooperative is a user-owned, user-controlled, user-benefited agricultural producer organization. More explicitly:

- The farmer stockholding *owners* are the major *users* of the cooperative;
- The *benefits* received by the farmer-owner stockholder who contributed equity capital to a cooperative are tied to the concept of *use* of the cooperative in the form of patronage;
- The *control* of the cooperative by the owner stockholder *user* must be structured democratically in that voting power is not proportional to

equity investment although it may be in certain situations structured in proportion to usage.

These principles ultimately define the property rights of the user member in the U.S. agricultural cooperative organization. Consequently, these property rights establish incentives and disincentives as to the investment, patronage and control behavior of the user-member. These incentives-disincentives in some cases are quite distinct from the investment, patronage, and control behavior of non cooperative (IOF) structured business organizations. These differences present governance, management, and financing challenges to cooperative leaders. Some of these challenges are explored in more depth in the second part of this paper.

A Taxonomy of U.S. Agricultural Cooperatives

U.S. business structures are legally, financially, and organizationally complex. Current agricultural-related cooperatives are no different. Their structural evolution has created a plethora of formations and classifications. In order to simplify this maze, a simple taxonomy is introduced. In developing a taxonomy it is preferable to utilize a paradigmatic or theoretical model to serve as the basis for identifying separable categories. Unfortunately the multitude of agricultural cooperative types encumbers meaningful categorization. Consequently, function-based, geography-based, and commodity-based elements are combined with neo-institutional arguments in the development of the taxonomy advanced in this paper. Seven cooperative types are described: (1) Farm Credit, (2) Rural Utilities, (3) Sapiro I (Bargaining Cooperatives), (4) Sapiro II (Marketing Cooperatives), (5) Nourse I (Local Supply and/or Marketing), (6) Nourse II (Regional Supply and/or Marketing), and (7) New Generation Cooperatives.

Farm Credit System: Twelve Federal Land Banks were the first components of the Farm Credit System when it was chartered by Congress under the Federal Farm Loan Act of 1916. Subsequently the Federal Intermediate Credit Banks were created in 1923 to provide short- and intermediate-term credit; the Production Credit Association in 1933; the Banks for Cooperatives in 1933; and the regulator, the Farm Credit Administration. The motivating forces behind the efforts to organize the system came from concerns about the *unavailability* of agricultural and real estate loans, extremely *high rates* and the *length of terms* (federal law prohibited national banks from making loans with maturities beyond five years). After an initial surge of lending, the Farm Credit System loan volume continued to increase steadily until hitting a peak of more than \$80 billion in outstanding loans during the 1980s.

Since 1987 the Farm Credit System has restructured through consolidation and merger. Currently there are eight banks remaining (two of them lending to agricultural cooperatives and six lending to cooperative

credit associations). When the restructuring began, there were 37 Farm Credit System banks.

Rural Utilities. Formed to provide a missing service due to the high per unit cost of serving a low density customer base, the rural electric and telephone cooperatives were formed in 1936 and 1949. The resulting systems are a combination of approximately 1,200 cooperatives and 950 non-cooperatives providing telephone and electric service to more than 45 million rural customers.

Sapiro¹ I Cooperatives: Bargaining Cooperatives. Bargaining cooperatives address market failures through horizontal integration. Producers organize these Sapiro-inspired associations in an attempt to affect the terms of trade in favor of members when negotiating with first handlers (Sapiro, 1921). The functions of bargaining cooperatives can be described as twofold: (a) to *enhance margins* and (b) to *guarantee a market*. These types of associations are found most often in perishable commodities in which temporal asset specificity creates a situation of potential post-contractual opportunism. The most recent activity in bargaining cooperatives is in the growth of poultry growers associations - a reaction to the industrialization of the broiler sector.

Sapiro II Cooperatives: Marketing Cooperatives. Marketing cooperatives are a form of producer vertical integration pursuing a strategy of circumventing and competing with proprietary handlers. They usually can be categorized in one of two ways, single or multiple commodity. The objectives are similar - to bypass the investor-owned firm, enhance prices, and in general, pursue the Sapiro goals of *increasing margin* and *avoiding market power*. Because of property rights and benefit distribution issues, management and governance functions are considered more complex in a multiple commodity marketing cooperative.

Nourse² I Cooperatives: Local Associations. Local cooperatives are economic units operating in geographical space where achieving scale economics in commodity assembly (usually grains or oilseeds) and input retailing might dictate the presence of a spatial monopolist/monopsonist. Founded to *provide a missing service or to avoid monopoly power or to reduce risk or achieve economies of scale*, they epitomize the Nourse philosophy of cooperation Ð that of a 'competitive yardstick' with the objectives to keep investor-oriented firms competitive (Nourse, 1992). Today, after much consolidation, local associations still are the most numerous type of U.S. agricultural cooperative in number.

Nourse II Cooperatives: Multi-functional Regional Cooperatives. Competitive yardstick-driven regional cooperatives usually perform a combination of input procurement, service provision, and/or product marketing. Many integrate forward or backward beyond the first handler or wholesaling levels. They might be organizationally structured as federated, centralized or a combination. They differ from Nourse I local cooperatives in that there is little probability of being a spatial monopolist/monopsonist in their geographic market.

New Generation Cooperatives. New Generation cooperatives are the result of recent collective action-oriented founders attempting to address market failure situations, excess supply price depression, traditional cooperative property rights structural weaknesses, and free rider issues. Specific solutions in the form of asset appreciation mechanisms, liquidity creating delivery right clearinghouses, proportional patronage distributed control, base equity capital plans, and membership policies controlling entrance, are established in their by-laws and operating practices.

Current Strategies

Post-1985, U.S. agricultural producers addressed their organizations' economic dilemmas by pursuing one of three generic user-oriented strategies: (a) conversions, (b) refinement of traditional cooperative practices and principles, and (c) formation of new generation cooperatives.

Conversion refers to the strategy taken by cooperative members whereby they restructure themselves as investor-oriented corporations, sell the business, or reorganize segments of the business as ordinary corporations with minority public ownership. According to Schrader, 1989, and Collins, 1991, the economic rationale for conversion lies in the inability of financially successful farmer cooperatives to reward equity capital in the traditional form of return on investment. Conversion is a producer investment strategy that has gained increasing attention since the mid-1980s in countries such as Australia, Germany, the Netherlands, Ireland, and Canada (Barton, 1992).

Most U.S. cooperative organizations have opted, however, for the refinement of cooperative structure rather than conversion to the investor oriented model. The refinement strategy maintains that with some adjustments to the current structural model independent producers are best served by the cooperative model - especially if the maintenance-founder issue is addressed (Cook, 1992a). Adjustments have ranged from radical restructuring in the form of rationalizing assets, establishing strategic alliances, and redefining 'singleness of purpose' to addressing the horizon-portfolio-undercapitalization problem by implementing innovative equity acquisition-redemption policies to proportionalizing the 'current' ownership and control mechanisms. Certain scholars argue that the optimal or near optimal refinement strategy is the 'proportionality' solution (Royer, 1992; Barton, 1989; Dunn, 1988). Royer, 1992, however argues that some of the refinement measures being adopted are not only economically and legally unsound, but inconsistent with the proportionality solution.

The third cooperative organization strategy gaining importance in the U.S. since the post-1985 period is the formation of 'new generation cooperatives.' Producers in adapting 'value-added' strategies encouraged by the same forces creating the industrialization phenomenon and reacting to structural-organizational weaknesses of traditional cooperatives, are

organizing and financing a new form of cooperative organization. By formally defining property rights, this new generation cooperative addresses the free-rider, horizon, and portfolio constraints encountered by traditional cooperatives (Cook, 1993). In the past several years producers and their cooperatively owned lenders have invested more than \$1 billion in these new cooperative ventures in the upper Midwest (Egerstrom, 1994).

Globalization

The food and fiber sector is becoming increasingly global in both scope and behavior. At the global level, the value of further-processed or value-added trade in food products surpassed the value of commodity trade during the 1980s. Continued domestic and global consolidation and integration have vaulted a number of investor oriented food processing and marketing firms into the global rankings for total sales volume and profit. Most of these firms established considerable market share strength in their domestic markets before successfully expanding into global ventures. Meanwhile, cooperatives in Europe, Japan and the United States concentrated on building domestic market share positions in commodity-related first handling levels, and in some cases, processing levels. A small number of cooperatives in the advanced agricultural countries have been active in establishing well-defined global marketing strategies. This is especially true for U.S. agricultural cooperatives. Before addressing the challenges this industry and firm strategic set of issues create, a brief review of globalization from a U.S. point of view is presented.

Global Industry Environment

Increasingly, firms competing in the food chain are becoming less domestic in their strategic choices (Henderson and Handy, 1993; Van Zwanenberg, 1992; Shaw, 1992; Taylor, 1992). Not only are these firms becoming more export-import goods trade oriented, but also more foreign investment driven and more international commercial relationship seeking. But in this acceleration toward globalness a high degree of variability in degree and scope of competitiveness among commodity and agricultural input food products is observed. In other words, the pattern of international competitiveness between industries differs considerably. The recognition that each international industry as a distinct competitive environment creates complex strategic challenges for agricultural and food firm decision makers.

Industries have been classified at the extreme as being 'multi-domestic' or 'global' (Bartlett and Ghoshal, 1987; Porter, 1986; Prahalad and Doz, 1987). Multi-domestic industries are characterized by competitive forces that are constrained structurally by country. Consequently, national

competitive environments are isolated and competition is analyzed in much the same way as domestic competition. The international industry is essentially a set of domestic industries although a number of the competitors may be multinational firms who extract little advantage from being multinational. 'Multi-domestic' international industries include many types of retailing, wholesaling, life insurance, consumer finance, and consumer food products (Porter, 1990).

At the other extreme are global industries. They can be characterized as a series of linked domestic industries where structural forces combine to produce a single competitive arena which transcends national competitive environments. Competing in a global industry exposes decision makers to an interdependent competitive environment where strategic actions taken in one country affect competitive situations in other countries. Therefore, an important difference between the international multi-domestic and global industry is the degree of interdependency existing across national borders. Market interdependencies result when a competitor that internationally externally or internally integrates operations compels rivals to respond in kind or risk a loss of competitiveness. In a global industry firms compete against each other on a worldwide basis, utilizing competitive advantages that grow out of their entire network of global activities. Businesses coordinate advantages created at their home base with others that result from a presence in many nations, such as economies of scale, the ability to serve multinational and multi-origin customers, and a transferable brand reputation. Global industries, as defined here, include textile machinery, semiconductors, oil field machinery, civil commercial aircraft, and insecticides and fungicides.

Since World War II industries have become increasingly global (Porter, 1990). In identifying these industries as global, trade flow levels as well as considerable degree of tangible and intangible asset linkages are important conditions. Even though globalization is accelerating, most industries are not global (Morrison and Roth, 1989).

Global Food Firm Strategies

Agricultural and food firm decision makers have four basic options to consider when analyzing the role of globalization or internationalization in their future competitive strategies: (a) importing, (b) exporting, (c) foreign direct investment, and (d) commercial relationships.

U.S. agricultural exports and, to a lesser extent imports, are classified as to how close they are to their final consumer form. There are three categorizations: *bulk* (basically unprocessed such as wheat, cotton, coarse grains); *intermediate* (partially processed such as soybean meal and cattle hides or used as inputs on the farm such as seed and animal feeds or used by food manufacturers such as sweeteners and flour); and *consumer oriented* (primarily shipped for consumption in the retail market and food service sectors such as frozen dinners, processed meats, fresh fruits and

vegetables). In the 1960s, 70 percent of U.S. food and agricultural exports were in bulk form. By 1990 approximately 50 percent were shipped in bulk form, 25 percent in intermediate form, and 25 percent in consumer-oriented form. The pattern is reversed for most European countries. Since 1990 export growth of intermediate and consumer-oriented products have grown at 6 percent a year and bulk exports have continued to decline (Greene, 1994).

Foreign direct investment is a strategy primarily designed to exploit cost differentials and coordination efficiencies across countries. Such options as investing in countries with low factor costs, minimizing tax liabilities through favorable transfer pricing, or investing in countries which offer passive or direct investment incentives are unique to businesses with international operations (Cook, 1992b). In the U.S. alone, food manufacturers supply their products to foreign market consumers primarily through investments in local production in foreign markets. In 1992 processed food sales from U.S. owned foreign affiliates totaled \$89 billion – almost four times U.S. export sales of processed foods. Even though U.S. exports of processed foods continued to grow, the gap between them and foreign affiliate sales more than doubled between 1982 and 1992 (Malanoski, 1994).

International commercial relationships is the fourth strategy option available to food firms. They often take one of the following forms: co-packing, joint ventures, coventures, franchising, or licensing of trademarks, patents, and copyrights. Henderson and Sheldon, 1992, expand on the advantages of commercial relationships – particularly licensing. They identify three particularly important factors: ownership, location, and internationalization. Their findings also suggest that U.S. food firms were more aggressive in outbound licensing than inbound licensing.

In observing trends in food firms' global strategies, Henderson and Handy, 1993, conclude the following: (1) as firm size increases, food firms tend toward foreign investment and away from product trade; (2) as firm dominance in its home market increases, food firms tend toward foreign investment and away from product trade; (3) as the diversity of food products produced by a firm increases, the firm tends toward foreign investment and away from product trade; (4) a firm's investment in intangible assets is positively associated with its investment in foreign operations, but has no significant impact on product trade; (5) the greater a firm's specialization in food, the greater its tendency for foreign sales through both exports and overseas operations; and (6) international commercial relationships in the form of licensing, joint ventures, and strategic alliances appear to be an increasing part of food firms' global strategic portfolio.

What does this global industry and food firm strategy analysis mean for agricultural cooperatives?

Cooperative Structure and Globalization

The process of increasing global competitiveness appears to create a particularly complex strategic challenge for cooperatives. As discussed in previous sections, agricultural business organizations have found that competing in a global environment is more than expanding exports from a single origin base in commodity form. Because of more open markets, domestic-oriented firms have found that reacting to increasing inflows of competitive import demands as much attention and resources as efforts to expand exports. In expanding overseas sales, the firm must decide whether to produce at home and export to a foreign market or to locate production overseas. This decision is normally based on a comparison of delivered costs, and is a function of production costs, transport costs, tariff-nontariff barrier considerations, fiscal issues, and transaction costs. But for the agricultural cooperative the analysis is usually more complex.

According to the aforementioned definitions, most of the industries in the food sector would be considered multi-domestic rather than global. Nevertheless, as previously documented, certain industries within the food sector are rapidly moving toward becoming more globalized. Cooperative decision makers in confronting this challenge will have to overcome the following constraints if their objectives are to benefit their member owners through globalization. These constraints include: (a) mission clarity, (b) single origin, (c) capital availability, and (d) governance.

Cooperative Globalization Constraints

Mission Clarity

'Cooperatives are counter-culture alternatives to mainstream business' and are 'hard-headed economic enterprises differing from investor-oriented firms in small details regarding ownership and voting structure.' In addition, 'cooperatives are exotic fringe phenomena' and sometimes 'prominent community institutions.' They are also 'methods for correcting market failures' and 'seeds of a new society acting as agents to social progress while holding over pre-industrial values.' Fairbairn et al., 1991, in this facetious manner reminds cooperative leaders how important and difficult it is to have a clean mission - a singleness of purpose.

Agricultural cooperatives in the U.S. are increasingly faced with the dilemma of balancing community needs and commodity organization bottom line. Consequently, cooperative leaders are constantly addressing the 'boundary of the firm' challenge - a narrow set of products or a multipurpose organization. Additionally, determining the organization's optimal allocation of resources is more complex because a single 'return on investment' mission statement objective immediately raises the query of 'Who's ROI?' Staats, 1987, suggested that the scope of optimization in a cooperative is broader and more diffuse than it is for a comparable IOF.

He argues that most members prefer a joint profit optimization (a combined farm and cooperative objective function rather than optimization of separate profit functions). The scope of optimization is more diffuse because the cooperative must treat each member as a separate cost locus giving rise to collective choice problems.

Perhaps agricultural cooperatives do not deem it necessary to compete in the global marketplace as do investor-oriented firms and therefore more vaguely defined missions are justified. Or, perhaps the mission, objectives, and/or goals of the cooperative organization really are different from investor-oriented firms. Fulton and Ketilson (1991) argue that the role of cooperatives is not limited solely to economic considerations. Their findings conclude that cooperatives provide an important collective action function which has both social and economic consequences to member and community development. This 'mission is different' view of agricultural cooperatives might have significant strategic implications for Nourse II federated multipurpose cooperatives if their Nourse I locals opt for community-social objectives while they choose the global commodity-product direction.

As U.S. agricultural cooperatives consider entering the globalization foray, streamlining and achieving focus in the mission becomes an important strategic step.

Single Origin Constraint

A second possibility as to why cooperatives move cautiously into global competition is because they are 'single origin' in that their objective is to optimize the utilization of their member owners output, not to originate products in another area or country. Being single origin for a cooperative is rational because of the member owners' high degree of physical, site, dedicated asset and temporal asset specificity. This asset specificity comes in the form of investments, land, machinery, perishable output, and location whereby their value in the next best use is often significantly lower. Consequently the member owner is most interested in extracting maximum rents from his/her asset specific investments. Owners of immobile assets, such as land, have fewer choices in playing the global game. With reluctance to participate in foreign direct investment, cooperatives are limited to remaining single origin exporters, thus limiting flexibility and subject to frequent periods of being 'out of the market.'

Limiting their options to those of a single origin firm (similar to parastatal marketing boards) agricultural cooperatives have significant difficulties achieving scale economies in generating and utilizing global intelligence and risk management. Caves and Pugel, 1982, argue that these are the two most important factors for achieving economic success in international bulk commodity trading. It is near impossible to achieve these two scale economies without operating in a multiple-port, multiple-origin organizational structure. U.S. cooperatives have paid a very high price to learn the Caves-Pugel law.

Capital Availability

To strategists, globalization usually implies growth in one or more key performance measures. Investor-oriented firms grow in order to survive – that is, in order to attract equity capital from market sensitive risk capital investors. Numerous cooperative researchers argue that growth in the cooperative form of business, however, is constrained because of the tendency to underfinance the cooperative (Staatz, 1987; Peterson, 1992; Porter and Scully, 1987). The members' disincentive to contribute risk capital is the result of a set of vaguely defined property rights. These constraints manifest themselves in the form of horizon problems, free rider problems, and portfolio problems. Fulton et al, 1995, in examining the largest U.S. and Canadian cooperatives, conclude that over the past 50-plus years their sample experienced little or no growth as measured by total assets.

Many cooperative managers and writers have agreed that the most difficult challenge in contemporary cooperative management is acquiring equity capital. Staatz, 1987, condenses their arguments to the following. Members are reluctant to contribute more equity capital to the cooperative because (1) the return on investment at the farm level is greater than return on investment in the cooperative; (2) for free rider reasons or because of heavy discounting of patronage refunds, the member underestimates the value of the cooperative; and (3) the member overvalues return on investment on the farm. Additionally, geographic and commodity scope may limit number of members and consequently the amount of capital that could be raised. As mentioned earlier, these arguments have been contested by numerous studies summarized in Lerman and Parliament, 1993.

Whether cooperatives are under-financed or not, the process in acquiring equity capital is considerably different from raising equity in an IOF. There is no entrepreneurial incentive unless delivery rights accompany membership entry, and there is no capital market interested in providing capital because of the illiquidity and nonappreciability characteristics of cooperative stock. Therefore, the cooperative decision maker in his/her resource allocator role must treat equity with extreme care. This difficulty in acquiring equity and the inherent conflicts created by the horizon problem have been blamed for the scarcity of cooperative investment in capital-intensive and global industries.

Other differences between the equity acquisition and redemption methods of IOFs and cooperatives have effects on the resource allocation role of management. In attempting to address the horizon problem, cooperative managers quickly encounter the fact that if equity is to be retired, new equity capital must be acquired just to maintain the same capital structure and level of working capital. If growth is an objective, the equity that is retired plus the incremental needed for growth must be added. Given the limited sources of equity capital, it is easy to understand why those who favor growth become attracted to the development of permanent equity reserves. Another difference in resource allocation

might arise in the process of developing the capital expenditure budget. Where the board is elected on a one-person, one-vote basis in many cases, small-in-number but large-in-patronage members might face difficult hurdles in attempting to move the cooperative in a new or more global customer/supplier-oriented direction. Cooperative management – usually a proponent of growth for numerous agent and non-agent reasons – must referee this potential conflict objectively (Cook, 1994).

Because of site asset specificity (especially in Nourse I, II, Sapiro II, and New Generation cooperatives), cooperative members tend to pursue risk-conservative strategies when dealing with diversification and global investment. This risk averseness is reinforced by the fact that an investment in a cooperative is an investment in a related industry, thus decreasing diversification. These two factors could influence cooperative management to concentrate the allocation of resources less on portfolio or boundary assets and more on improving operating efficiencies – an influence that has important implications for globalization strategy choice.

Given slow growth, disincentives for providing risk capital and single origin constraint and the ‘mission is to move our members output – no one else’s,’ globalization strategies beyond the exporting function will be a challenge. Foreign direct investment will be considered only for narrowly defined objectives – usually related to improving the return on the members’ output.

Governance

A final limiting factor in cooperative global venturing might be the importance and structure of membership control. Caswell’s research demonstrates that investor-owned corporate agribusiness firms maintained significantly higher levels of director and firm contact through board membership than did U.S. agricultural cooperatives. She concludes that this absence of a range of outside directors on cooperative boards serves the principle of democratic control but may have adverse effects on the breadth of board decision making (Caswell, 1989). Given the uncertainty and rivalous nature of global market decision making, expectations regarding strategic information is a potential area of conflict between management and boards of directors.

Cooperative boards and members as user-owners of a tied-equity type of organization have high expectations as to how much operating and strategic information should be made available for their perusal. Lack of reliable third-party measures of organizational performance, the economic importance and inter-relatedness of the cooperative and their farming operation, and the mobility-decreasing influence of capital illiquidity in a cooperative are some arguments offered by members as justification for their high information expectations.

Management, on the other hand, takes the position that the more competitive the environment, the more valuable undistributed strategic information becomes. They add that cooperatives invest heavily in member communication, media, and networks, and their innovative com-

munication methods should receive more respect and appreciation. To do more, they might argue, is too costly. Increasing heterogeneity of the membership increases the complexity of fulfilling this critical role, and it is probably a given that managers of user-oriented organizations will never be relieved of the pressure generated by continual demand for strategic and operation information. A critical challenge for producer-oriented organizations is to build a cooperative knowledge base within the membership.

Globalization Advantages

U.S. agricultural cooperatives have a long history of being export oriented. But as the commercial environment becomes increasingly globalized, cooperative decision makers are reexamining their competitive advantages. They appear to be building their global strategies around three self-declared strengths: (a) access to the raw material supplier (Sapiro II) or customer (Nourse I and II), (b) reputation for assured supply and quality, and (c) persistent innovation in a rivalry intense set of industries.

Access to Supplier/Customer

As the market share percentages suggest, U.S. cooperatives have close member contact in the milk, grain, oilseed, cotton, certain fruits, and the nut subsectors. They also have high market shares in plant food, feed, and long term credit. Most of the perishable commodities handled are subject to contract assurances. Increasingly the nonperishables are also moving to more formalized coordination mechanisms including marketing and production contracts. Lang, 1994, states it from the producers point of view, user value creates a relationship between cooperative and producer that is difficult to sever.

Reputation

Anecdotal evidence is offered to justify this advantage. Baccigaluppi, 1994, states that Sapiro II cooperatives are "generally quite savvy and sometimes ahead of the rest of the U.S. industry in developing international markets ... In general, however, cooperatives are U.S. trade leaders rather than followers. SunMaid Growers, Riceland Foods, Sun Diamond Growers, Blue Diamond Growers, Calcot, Diamond Walnut, Sunsweet Growers, Goldkist, Harvest States, Sunkist, Ocean Spray, and Tri Valley are just a few cooperatives that derive substantial revenue from international business - up to two thirds in some cases."

Persistent Innovation

Particularly in Sapiro II cooperatives, the mandate is to find new markets for increased production. It is argued that without that pressure IOF firms would optimize rents and consequently be less aggressive in international market expansion.

How Global are U.S. Agricultural Cooperatives?

A comprehensive overview of the degree of U.S. agricultural cooperative globalization is not available. Numerous partial studies on the role of cooperatives in grain or specialty crops exist, but they did not employ the taxonomy suggested in this preliminary paper nor were the globalization definitions used (Spatz, 1992; Bunker and Cook, 1980). A few studies, such as Reynolds and Spatz, 1991, and National Council of Farmer Cooperatives, 1995, attempt to analyze the property rights constraints role in fostering or inhibiting progress toward globalization. Table 2 is the author's qualitative attempt at strategically describing where U.S. agricultural cooperative might be on the globalization continuum.

Table 2 Degree of Globalization by Type of U.S. Agricultural Cooperative

	Sapiro I	Nourse II	Farm Credit	New Generation
Export (Bulk)	very active M	active M	active M	NA
Export (Inter)	very active I	limited I	active M	potential
Export (Processed)	active I	non-existent	active M	potential
Import	very limited I	active M	limited M	limited potential
F.D.I.	extremely limited I	limited I	under exploration I	very distant
Common Relationship	active I	light activity I	facilitative I	potential

M = maintaining

I = increasing

NA = not applicable

Rural utilities, Sapiro I and Nourse I are not internationalized to any significant degree.

Building on the work of previous cooperative and global strategy researchers, the argument contained in this paper is that the success of user-oriented agricultural firms in an increasingly globalized industries food sector will depend upon (a) their ability to understand the property rights constraints faced in attempting internationalization, (b) their ability to understand their sustainable competitive advantages, (c) their ability to develop globalization or multi-domestic strategies that are consistent with their constraints and advantages, and (d) their ability to create new institutions that simultaneously facilitate the enhancement of member needs and develop sustainable competitive advantages.

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Notes

- 1 Aaron Sapiro, a California attorney who promoted a centralized, single commodity, enforced commitment, market power oriented type of producer cooperative, was instrumental in the formation of many cooperatives in the 1920s.
- 2 Edwin Nourse, a Midwestern economist, advocated the competitive yardstick philosophy implying the correction of market failures by increasing the number of participants in the market.

6 Implementing the Sixth Reason for Co-operation: New Generation Co-operatives in Agribusiness

Gert van Dijk

This paper discusses changes in the agro-food markets with respect to the incentives to co-operation between farmers. The 'Sixth Reason' denotes that the historical reasons as such are no longer valid. It is concluded that each of the five historical reasons has taken on a meaning which is different from the past. The Sixth Reason indicates that each of the five historical reasons are to be regarded in a changed context. Thus the Sixth Reason consists of the following five elements:

- Co-operation is to create a firm that is to act as an interface between highly sophisticated and globalised food industries and ecologically sustainable farming in economically sustainable rural areas.
- Co-operation is a means to create a network economy which is indispensable to make fast moving technologies accessible.
- Safe and diversified food products require systems of passport production from the grass-roots to the final consumer; cooperatives are well equipped to manage such production systems.
- In more liberalised market conditions co-operatives can lower transaction costs to realise a diversified risk management among farmers.
- Diversification is an expression of entrepreneurial activity; entrepreneurship is expressed in new forms of co-operation.

A number of new generation co-operatives are discussed. Some were newly engineered, some were recently re-engineered. It is concluded that the historical co-operative principles are no longer valid. The NGC is the expression of smaller groups underlying homogeneity. Certain principles are reinvented. Others are about to disappear. Among these are open membership or free entry, and the one man one vote rule if there are differences in the enterprises controlled by the members.

Introduction

When studying the theory and practice of co-operatives, particularly in agribusiness, the student inevitably is confronted with the issue of the co-operative principles. Apparently founders and leaders of co-operatives had to adhere to structures and rules of conduct for co-operative managers and members without which the co-operative would go astray and thus would be in danger of losing its 'raison d'être'. All the empirical

evidence and practical experience from history brought co-operative organisations to a number of principles (Inter-national Joint Project, 1995). These were meant as an advanced warning: 'If you, co-operative leader, do not adhere to such and such rules you will surely fail. Learn from history how to set up and control a co-operative'.

Sometimes people and organisations went even further. The principles became rules: 'If you do not stick to these principles you should not call yourself a co-operative'. Yet we see in the last decade of the 20th century the birth of co-operatives which are structured in such a way that many a co-operative idealist would hesitate to call them co-operatives. If questioned 'Are you a co-operative?' the member of such a co-operative would probably respond by 'I guess this is as close as we can get'.

First, five historical reasons for co-operatives are discussed. Then, I argue why a good deal of these co-operatives features are now behind the horizon. Third, the Sixth Reason is described. Finally, the question is asked as to whether new principles are likely to emerge in the future.

Historical Reasons for Co-operation

Undoubtedly the need for countervailing power has been the most important historical reason for why farmers and horticultural producers have set up their co-operative enterprises. Co-operatives were created at a time when farmers began to integrate in the market economy. Their trade partners were private companies with superior market information who enjoy monopoly power vis-à-vis the farmers. By joining forces, the farmers were able to influence the market structure and the market behaviour of the buyers and/or suppliers. Many examples exist where cartels were dismantled due to co-operative firms (CFs) entering the market¹. Thus, cut-throat price competition among farmers was mitigated and replaced by functional and quality-oriented competition.

When considering this First Reason for cooperatives it must be kept in mind that at that time markets for agricultural products and food products were, apart from crises, buoyant. From the point of view of farm inputs such as farm implements and fertiliser, the demand by farmers was growing strongly. Henceforth, a Second Reason for farmers to start co-operatives was to gain access to industrially produced goods and services. What should be mentioned in particular is the access to credit at favourable interest rates. The latter example is still today clearly visible in the former communist countries of Central and Eastern Europe. There is little doubt that in The Netherlands co-operative banking has been a crucial factor in agribusiness and farm development.

Like all other co-operatives, the co-operative banks could realise their goals due to economies of scale. By the sheer large scale characteristic of their activities they were able to bring the steady outflow of capital from farming and rural communities to a halt. Especially co-operative banks

may be seen as forms of organised trust underlying modernisation and expansion of agribusiness.

The realisation of efficiency in processing co-operatives was and still is essential. Almost all agricultural products are of a bulky nature. Therefore unit costs of processing decrease sharply by expanding the operations of the CF. Hence, efficiency by economies of scale is the Third Reason for the creation of a co-operative. Co-operative auctions in flower, fruit and vegetable marketing have as their core business the market management under conditions of transparency. Market management yields competitive conditions so that the price system is efficient and in order that the right incentives are realised. Of course, intensive competition and prevention of monopoly positions is a prerequisite number one.

Time and time again it has been proven that accumulation of supplies (or suppliers) causes accumulation of demand (or buyers). Therefore co-operative auctions represent a very good example of both effectiveness and efficiency due to size of operations.

The Fourth Reason for a co-operative is risk management. No doubt CFs had to find their place in the market by gradual quality improvement involving all members. So on the one hand CFs reduced competition among members as was discussed under the First Reason, but on the other hand competition was based on such marketing elements as quality of farm products. It helped farmers to introduce continuity in delivery and achievable quality standards. This contributed to the farmers' knowledge the market and more stable conditions of investment. In addition, it must be said that there has always been an element of mental solidarity among co-operative members.

There is certainly a transaction cost element behind risk management and solidarity. CFs are more able to mitigate opportunistic behaviour and uncertainty. When CFs integrate with farmers, there is less fear that one of the parties will behave in an exploitative manner. Because a CFs are owned by its patrons it is less likely to default on agreements.

The Fifth Reason, finally, improvement of members' income and the rural economy. This aspect was the desired outcome of all activities mentioned above. In particular, however, it was realised by managing excess supply. The management of excess supply was in virtually all markets solely the activity of co-operatives.

Most of these reasons are not as acute as they once were. However, in many market structures the need for co-operation would reappear if CFs would disappear.

Changing Market Conditions

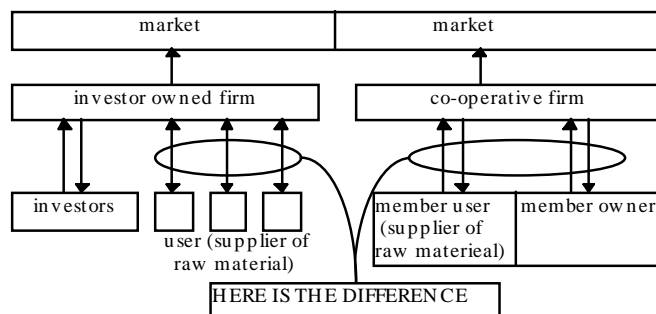
Co-operative agribusiness is operating under very different conditions in the industrialised market economies as compared with conditions when co-operatives were still social and business innovations. In, for instance, The Netherlands and Denmark co-operative agribusiness is characterised

by export-orientation, an increasingly internationalised industry and pursuit of direct foreign investments.

The CFs are commonly U-form, that is to say they do not integrate different main products into conglomerate co-operative companies. Dairy co-operatives are not involved in meat, and potatoes are not marketed together with grains by one CF. The farm supply co-operatives are usually more diversified. In countries with sparsely populated areas like Ireland, it is more common to integrate more products in one co-operative structure.

Under normal market circumstances co-operatives play the role of price leader. As a matter of fact they almost automatically become price leaders if they are founded for the reason of creating countervailing power in the market. A second reason is that they become price leaders because of their cost leadership. The costs in co-operative processing are decreased by efficiency. Efficiency-strategies always have been of key importance to co-operatives in agriculture. In most processing firms in agribusiness a one percent decrease in costs has the same effect as a 10 percent increase in demand. Co-operatives naturally would raise prices paid to members according to their performance. Henceforth the price to be paid to the farmer by the CF has a buffer function to the CF in that a price leader-CF will distribute its results on the basis of the proportionality rule. Risks are expressed in price. In other words, price performs the income and risk allocation role. When looked at from the point of view of the CF as a business, this buffer is comparable to risk bearing equity share capital in an IOF. Price being a performance allocator, it can be said that members share liability and risk on a transaction basis. Adverse market results in first instance means lower prices to the members. To them it means lower returns on investments in their farm (see Figure 1). Own equity in the CF, however, can have lower solvency than in IOFs because CFs are backed by members. Increasingly co-operatives seek for more permanent forms of risk bearing capital. Mostly the interests or dividends paid on such capital are related to capital markets. Thus they represent fixed, accountable costs to CFs, leaving risks to be born by members.

Figure 1 Difference between IOFs and Co-operatives



When markets become more international and competition more intensive, traditional co-operative price leadership in the sense of market correction loses its traditional rationale. When standardised qualities of the raw product can be imported or exported, and the EU or world markets are effective, CFs can only pay a better price than IOFs to their members when at least one of the following conditions apply: transaction costs are low, and quality is superior, in the sense that it better fits in the value-added chain system. Each of these leads to better margins for the CF and thus better dividends to the members.

If the CF has the lowest costs by far in comparison with competitors or when the CF has a market position, e. g., with branded products which brings it in a monopolistic position, this means that membership represents extra-value. Such extra-value is not likely maintained under conditions of free entry of new members. Instead CFs which enjoy monopoly powers will not continue to follow free entrance policies. Members will be accepted on the basis of market opportunities and are expected to share risks by capital investment which is proportional to the amount of product to be processed and marketed by the CF on their behalf. Members try to avoid that value added operations on behalf of themselves are diluted.

Monopoly power is mostly based on market positions in the consumer market. In agribusiness they are closely related to specialised resources. The most crucial resource is genetics. For many products the genetic basis is essentially determining costs of production, costs of managing the integrated chain, costs of processing and consumer acceptance. So monopoly power in the agro-food sector is gained by moving to either the starting point or to the end of the chain. Or to both, of course.

CFs (and their members) which have achieved such monopoly power will normally limit production and limit the entry of new members.

But the market laws also work the other way round. Farmers operating in a market with stiff competition for their products or where the suppliers of their inputs are in intense competition will judge the performance of their CF on normal market parameters: price, quality, service, new market opportunities on behalf of inputs engaged in the farm enterprise and returns on capital 'invested' by the CF's members.

Closely related to the foregoing is the observation that co-operatives by their very nature cover an over-normal transaction span in the market chain. Farmer-members begin to 'correct' their market partners at both ends of the agro-food system. They continue to seek a better position by integrating both forward and backward. It is also necessary to take into account the special nature of farming.

In farming long periods with low returns are not unusual. Therefore, farmer-members are inclined to seek continuity in their CF. Investments made in times of depression pay off in times of market booms. For co-operative members this is only realised if they commit themselves. Thus co-ops can become monopsonists due to member commitment. This phenomenon is underpinned by the fact that usually the co-ops have realised considerable economies of scale in processing which makes the

entrance of new competitors difficult because of large investments needed. That CF then has a monopoly or a monopsony position. If CFs are achieving real competitive advantage which provides them with market leader positions, members will not want to restrict their CF to the home market nor to processing and marketing the members' product only. Members rather will let their CF expand with foreign members or let it, be it partly, go as an international IOF.

When a CF becomes a monopsonist there is at first glance a danger too, namely that the CF takes on a monopsonistic position vis-à-vis its own members because there are no other firms which compete for the members' product. Should not the farmer who sees his product processed by only one CF fear that the absence of competition in the market may eventually cost him his market position? Such conditions are more likely to occur when markets are protected from foreign competition by market policies of the government. Under conditions of international trade liberalisation such situations are likely erased, however. Notably the effects of the GATT negotiations on international competition will be open markets for foods and agricultural products. The effect for farmers will be that a wider range of firms will compete for their raw material if their farming is price competitive. Competition on quality and decreasing transaction costs will likewise become more important.

There is a condition under which farmers and their CFs work in a way so that market competition is excluded. No other firms are interested in buying the farm produce and the CF is not allowed to stop processing the members' production. The reasons can essentially be twofold. One reason is that the firm is highly specialised and cost of entry at the processor's (= CFs) level is prohibitively high. In this case the competitive position of the CF in the consumer market will determine the returns on investment for the co-operative: both at the level of the farm and the CF. The other reason can be that the CF and the co-operative members have built a strong system in which transaction costs are so low as to create a monopoly power for the system as a whole. In this case the entrepreneurial power of the co-operative market system will be decisive for the future which is ultimately in the hands of the farmer-owner/investor. The land rents have an opportunity value which is determined by other productions and the willingness of farmers to invest is determined by the opportunity cost of capital outside the co-operative farming business as compared with its returns within.

The reason to co-operate under these conditions will be that otherwise the competitive farmer cannot reach the market, but because participation in his CF will yield better returns than just selling the raw product or than from stopping farming altogether.

Finally, co-operatives originally were established on the concepts of countervailing, 'negotiation-driven' power and of partial integration by which the markets between farmers and their CF were replaced by 'system-driven' markets. In the 'system-driven' markets market prices are more or less based on formula pricing, the elements in the formula being

the performance of the CF in its own market, risks, costs, quality, equity formation and member liability.

The markets in which the CFs' performance was to be realised were mostly 'negotiation-driven' markets. The members' 'system-driven' markets were normally based on homogeneous membership. Besides, as most agricultural inputs and products are of a bulky nature the economies of scale to be gained stimulated open membership and homogeneous member-business. This has changed considerably. In the first place most CFs have developed strategic alliances, joint ventures, and forward and backward integration contracts with their suppliers or buyers. The result is that the agro-food market has changed towards a 'system-driven' right through the chain. In the second place more segmentation in the market is creating member segmentation. In the study 'The Co-operative Enterprise - Perspectives of Development in Denmark Towards the Year 2010' an example is given in which eggs are segmented into cage eggs, free range eggs, non-cage eggs and ecological eggs. Each of these are produced by four different producer groups.

Such an example shows that the markets have also changed in the sense that the consumer behaviour is felt more directly at the farm level. The characteristics of investment in the CF and the farm are becoming more specialised and of a short term nature. Therefore we see that equity formation by unallocated reserves is less fashionable and is being replaced by member investments with higher rates of depreciation.

The Sixth Reason for Co-operation – The Historical Reasons Revisited

Have the historical reasons for co-operation lost their meaning for the efficient, competitive farms? From the preceding paragraphs it can be concluded that open, competitive markets for agricultural products are the effect of a trend towards globalisation and liberalisation of international trade policies. Many observers conclude from this development that there is no need for co-operatives in the classical sense, since market information is precluding monopolist behaviour. Firms cannot protect their markets and governments will remove sheltering effects by abolishing protective national trade policies.

This is not to say that farmers can survive financially without co-operation. When governmental trade policies are liberalised it is still impossible for individual farmers to influence the market behaviour of industrial trade partners in the market chain. It is hoped that international competition will create more market opportunities. On the other hand during recent years there has been a strong trend towards concentration in the food retail industry. Not only have retail organisations in their country of origin merged to the effect that three to five supermarket chains may control 50–70 percent of food retail sales, the supermarket enterprises have also become international. Moreover, there are several instances of retail chains operating in purchasing organisations and developing

products jointly. The Federation of Danish Cooperatives concludes (1996, p. 4): *“There is an increase in the use of private labels, the chains strive to differentiate in relation to each other by establishing their own individual product profiles. Often, the retail chains are at the head of a considerable portion of the development activities regarding these products. When the chains became larger and international, their strength increases face to face with the societies supplying the food”*.

There are, however, new opportunities for farmers to develop marketing structures by which farmers can keep pace with new demands of markets. Among these are differentiation, vertical integration, alliances, joint ventures and collaboration between co-operatives across the national borders. Therefore the historical First Reason has obtained a new content. This is the creation of a new interface between the highly sophisticated and globalised food industries and the primary farms, which seek sustainable methods in a sustainable rural economy.

A similar observation holds for the historical Second Reason. Co-operative banking provides us with a good example. On the one hand, with the exception of newly established market economies in Eastern Europe, farmers have all desired the bank products made available to them. So at first glance it would seem that it is no longer acutely necessary for farmers to have co-operative banks to gain access to financial markets. On the other hand, the capital markets still need re-engineering to operate efficiently towards the farm sector. This is true when looking at co-operatives themselves. Co-operatives are in need of permanent, risk-bearing capital first from members, but possibly also from non-member sources. In the last case members do not want to give away their control. Therefore, farmers would prefer other capital markets for their co-operatives rather than the stock exchange where they have to comply with general rules concerning ROI and allocations of plants and business centres.

Co-operatives are also bound to certain regions where the businesses of the members are located. This means that the Second Reason for co-operation, namely the access to capital and money markets is also supplemented by a Sixth Reason. With changing market conditions for farm products as mentioned before and the steep rise in the use of information technology, the financial markets become the heart of the economy. Each sector will make its own use of these opportunities. Farming is characterised by varying scale and by great variation in natural conditions over relatively short distances. Therefore the financial servicing has to be adjusted to the various farm sectors and to regional differences.

Co-operative banking can contribute to farm adjustment by making new services available and by assisting the members to develop strategies and to manage these. For banking the core-business will be the management of information flows on financial markets and economic developments that are relevant at individual firm level and at industry level.

Such networks need the input of both the co-operative banks and their members. A good example is provided by the German car industry BMW. They realised that individual freedom is a meaningful concept only if it is

in harmony with freedom of others. Therefore, a 'Co-operative Traffic Management System' was developed. A co-operatively financed system was installed by the car industries, government, municipalities and transport organisations to develop sophisticated computerised information system for managing the logistics of cars, buses, trains etc. The system should take into account the functioning of public and private transport under the condition of road space, public transport capacity and environment as the scarce resources. Such a co-operatively managed system can only succeed when all partners contribute. The concerns are with up-to-date information supply on plans and restrictions faced with.

So the new content of the Second Reason is the creation of a network economy by which access and keeping up with fast moving techniques can be secured – both to the CF and the member firms

Under conditions of open competitive markets the historical Third Reason does not seem to be affected. Probably it is significant for processing the farm product and inputs at lowest cost today as it was during the genesis of co-operatives. However, new requirements emerge. The new demand is that diversification and variety at the consumer level not only affects the processing but also the production methods, plant breeds and animal breeds at the farm level; 'passport' or system-integrated production is the new element added to the historical Third Reason.

Here, we should mention the role of technology, and especially that of biotechnology in reshaping the agro-industrial complex. Seed and agro-chemicals, primary agriculture, and food processing are more likely to be co-ordinated to achieve food with functional requirements matching consumer preferences for health, convenience and low cost. As governments withdraw from funding agricultural research, co-operatives have to bear the costs of R&D, if they want to reap the benefits of process and produce innovation. But it is here that economies of scale appear to be relevant. The huge costs and risks of biotechnology require large scale of operation and purposeful strategic alliances. Access to new technology is an irreversible option for co-operatives if they want to penetrate the food chain (Kyriokopoulos et al., 1996)

The historical Fourth Reason is risk management. In the past this had to do with member solidarity, especially concerning the handling of surpluses. There is little doubt that the changing conditions on the food and agricultural markets have changed the risk profiles of co-operatives and their members. As food markets become more mature, branding and market segmentation has set the scene. At consumer markets the profit margins are higher with more value added. However, risks are also higher. As CFs are becoming larger it is their 'natural' business to integrate forward and to expand geographically. The risks are born by the members. Their risk profile is changing fast with forward integration. At the same time forward integration is a means to reduce risks run by farmers as trade liberalisation decreased the effect of income protection policies by the government.

Increased risk has in some sectors stimulated new forms of ownership and special company structures with subsidiary companies and holding companies (Federation of Danish Cooperatives, 1996; van Dijk and Mackel, 1994). New forms of risk management while a variety of business alliances and abstracts emerge is the present content of the Fourth Reason.

Historically, co-operatives accepted all products delivered to them. The management's job was to find market outlets and realise the best prices possible. This need to take all produce has been dealt with in three ways (van Dijk and Mackel, 1994):

- Maximising the use of public support measures to minimise commercial risk, (e.g., grain co-operatives in France and their use of the intervention/subsidised export schemes);
- Trading freely with a range of suppliers using price as the method of procurement rather than group discipline; and
- Organising an auction system in an attempt to optimise price transparency for producers and to create a focal point for the market distribution system.

The Fifth Reason, namely to handle situations of oversupply, has taken on a different road as excess supply is less likely, farmers being contracted and markets probably operating more efficiently. The seeking of income improvement is likely to assume a more entrepreneurial character. Farmers may have to undertake more diversified entrepreneurial activities to prevent their rural economy from marginalisation.

There are a number of cases where co-operatives were transformed into corporations to finance future investments. Where the circle of owners is expanded with non-user members who also bear risks, this causes the original member-user owners to lose influence. However, it also opens new ways of entrepreneurship to members in relation to their CF.

The changing market conditions and their impact on the relationships between members and co-operatives can be illustrated by the example of flower auctions. Market gardeners invest heavily on their farm enterprises and as a result they become more demanding with respect to marketing activities of their CF. Flower auctions, limiting themselves to a "price discovery" function, are unable to take an elaborated marketing activities. Thus, dynamic and market oriented growers resort to direct agreements with private companies, surpassing the co-operative auction.

From the foregoing is concluded that the historical five reasons for co-operating have changed their nature quite considerably. The above considerations therefore gave rise to formulating the Sixth Reason. This Sixth Reason will lead to new policies concerning the relationship between the CF and the co-operative member.

The Sixth Reason - New Generation Co-operatives (NGCs)

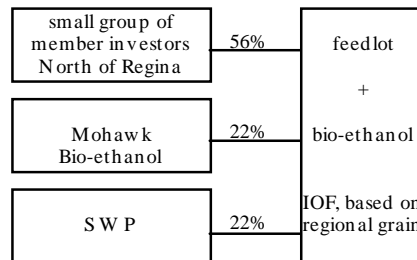
The Sixth Reason represents the need for new member strategies as a result of the changed nature of the classical reasons for co-operation.

In this section the characteristic elements are listed first. Second, examples of new member strategies are discussed in order to make the concept more comprehensible. The Sixth Reason in essence is to let CFs create new market opportunities for the co-operative members under the conditions of investor-driven membership, diversified membership and market fragmentation. The Sixth Reason is to make investments in such a way that new markets are created in which the members can add value with their land, labour, capital investments and skills. The Sixth Reason thus is the combination of the original reasons for co-operation in a state of flux. New conditions have stirred farmers to co-operate in new ways and have caused long-standing co-operatives to re-engineer. They are the so-called New Generation Co-operatives.

CFs that were set up (Nadeau and Thompson, 1996) for the Sixth Reason are called New Generation Co-operatives. Egerstrom (1996), Cook (1996), Nadeau and Thompson (1996) give a number of examples for the US, van Dijk (1996) gives examples from The Netherlands. Below some characteristic examples are described.

A group of Saskatchewan grain farmers, all members of The Saskatchewan Wheat Pool (SWP), are faced with a threat of excess supply of wheat in the lower quality ranges. Therefore they invest in a feed lot of approximately 25,000 head of cattle and a bio-ethanol plant, a by-product of which is also used as a feed-component for the beef cattle. The farmers hold 56 percent of the shares. SWP holds 22 percent and the company in the bio-ethanol business (Mohawk) holds the other 22 percent (Figure 2).

Figure 2 Co-maker Co-operative: Saskatchewan Wheat Pool



From the very start the founding farmers decided that they would sell their wheat at market prices, but that the shareholders would receive a First Right of Refusal to deliver at that price. During the starting period all required raw material was delivered by the original 'members'. The amount they could deliver was agreed to be proportional to their investment (shares). Presently this still is the case, but now far more wheat is needed than members can deliver.

As a result of the business structure, the performance of the 'CF' is expressed in the value of the shares linked by a wheat-delivery right and

their dividends. The members have reached their goal: demand for feed quality wheat is enhanced and a profit is made.

This co-operative is a joint investment activity by farmers. The CF is both a market leader and a price leader. New members cannot enter unless they buy stock and delivery rights. The Board of Directors elected democratically. The other board members are appointed by their shareholding companies. When questioned, however, it turns out that these farmers are presently more interested in expansion and profits than in having votes.

The University of Saskatchewan Centre for the Study of Co-operatives (cited in Cook, 1996) concludes that the New Generation Co-operatives have two common bonds. The first is that their major focus is value added processing, representing a departure from the main objective of commodity marketing held by their predecessors. *“Rather than acting as clearing houses for the product, a NGC is restricted to only accepting a predetermined amount of product from its members. In fact a ‘two-way’ contract exists between members and the co-operative that requires the member to deliver a certain amount of product by the co-operative and requires the co-operative to take delivery of this product”* (Cook, 1996, p. 145).

The examples of NGCs given by the authors Egerstrom, Cook, Nadeau and Thompson all have in common that open membership is not the normal rule, except in cases where people in a community co-operate to avoid its economic decline. But product oriented co-operatives have the system of limited access. Shares are coupled with delivery rights and are tradable. There is proportionality in most cases between shares and user transactions. Democracy is maintained as much as possible. There is no fundamental objection to making profits and to distribute these on the basis of share capital.

In sum, the new co-operatives follow an investor-driven strategy. ‘You have to pay to play’. There is closed membership, or it is better to say, *“there are membership-policies controlling entrance in the venture in by-laws and operating practices (...). The NGCs have resolved issues to co-operative property rights and ‘free rider’ memberships, have asset appreciation mechanisms, delivery right mechanisms, proportional patronage distribution, base equity capital plans”* (Egerstrom, 1996, p. 148).

The Sixth Reason - Re-engineering the Co-operatives

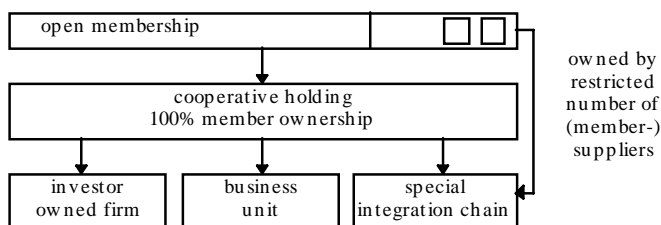
When the Sixth Reason conditions prevail co-operatives seem to follow either of these two routes: the CFs can convert to IOFs in order to gain better access to equity and pursue growth policies. There are examples in Ireland in which co-operatives members have released their control for this purpose. Or the co-operative’s member relationships are strengthened on a new basis. The latter route is inevitable when market competition makes the CF too much dependent on the members. It is also inevitable when the members have become too dependent on their CF. In both cases the balance of business between member firm (farm) and CF is lost. In

both cases members ceased to regard the CF as 'their' CF. Nor are they committed through a 'united we stand, divided we fall' attitude to their business. Instead members judge the co-operative at its competitive performance vis-à-vis the members as if it was an IOF. This holds especially in countries where CFs and IOFs exist in the same market. A timely re-engineering and re-inventing policy is then necessary. Interestingly however the CFs begin to value the membership of their clients or suppliers. It is increasingly regarded as an asset by the managers rather than a nuisance. Below some successful or at least very promising cases of re-engineering/re-inventing are described. These are Harvest States (USA), The Saskatchewan Wheat Pool (Canada), Dumeco (The Netherlands), Campina Melkunie (The Netherlands) and Friesland Dairy Foods (The Netherlands).

Harvest States changed its constitutional by-laws to give the co-operative greater flexibility in forming subsidiaries, joint ventures and strategic alliances with local co-operatives. Harvest States is transforming to a Holding Company in which farmers-investors-users can participate on their own terms. Harvest States thus does not pay so much attention to their members as the normal member-users, but as investors. The Harvest States Investment Plan provides producers and co-operatives an opportunity to increase their returns from the Harvest States food processing operations by investing in 'equity participation units' in those areas. Investments would be available on a 'per bushel' basis. Capital raised by selling the equity participation units to member-investors provides a stronger, more feasible financial base, designed to improve returns and redemption of exiting member equity. The infusion of capital also enables Harvest States to expand existing operations and launch new value-added activities.

The plan is simple. Eligible investors (producers or co-operative of producers) invest in a specific Harvest States value-added food processing activity by purchasing equity participation units. This investment carries with it a right and obligation for the member-investor to deliver the bushels involved to an authorised delivery point, normally a nearby member-co-operative or Harvest States facility. So members can choose to participate in the earnings of a specific value-added operation. In this sense the plan is quite similar to that of Canadian farmers who are also member of the Pool. The remaining earnings are divided in the traditional way over the member-users of Harvest States (Figure 3).

Figure 3 Re-engineering the Co-operative Harvest States



Equity participation is subject to depreciation and appreciation in value and shares are tradable to eligible producers and co-operatives. The background of the plan is that Harvest States' overall grain volume has increased much faster than its processing capacity. As a result returns from these value-added operations have been diluted.

A second example of re-engineering the co-operative due to the Sixth Reason is the Saskatchewan Wheat Pool. Faced with ageing membership, few new entrants and world market influences The Pool decided to go public. In this way The Pool effectively prevented a large outflow out of the agribusiness sector. Besides the new business of members with The Pool gives the right to shares options. Here again the proportionality principle is introduced. When looking at the present member administration it can be concluded that The Pool is as close to co-operative principles as a co-operative can possibly get given the Sixth Reason.

The third example is the Dutch Meat Company Dumeco that was re-engineered in 1995 out of two traditional meat co-operatives and an IOF in the meat business. The co-operatives had both been faced with unusual market circumstances. Due to over-capacity in the slaughtering plants both in The Netherlands and Germany price competition for slaughtered hogs grew very intensive. So the situation arose that members gave up the balance between delivery right and delivery obligation and the obligation required from the CFs to accept the member produce was released. The latter situation of course was natural since also the CFs were competing intensively for the hogs to be supplied by the members. The result was that the co-operatives more or less dissolved. Virtually no member commitment remained and it became increasingly difficult to finance the CF from member capital. As the CFs threatened to go broke a re-engineering plan was established.

The result was a merger between the two CFs and a successful smaller IOF. The CEO of the IOF became the CEO of the new company. This new company was set up as an IOF in which farmer-users of the former CFs were invited to become member-investors. This was realised via a new co-operative of member-suppliers to Dumeco IOF. The Dumeco co-operative became the owner of 30 percent of the shares. The other shareholders consisting of two big co-operatives operating in the feed industries (Cebeco and Cehave). The fourth and fifth parties are the IOF and a farmers' union.

The interesting feature of this operation is that the establishment of the Dumeco co-operative was very much stimulated by the management of the Dumeco IOF. The relationships are based on transaction cost reduc-

tion, investor-owned relations and co-makship between the members of Dumeco co-op and Dumeco IOF. New contracts were established stating that co-makship has the following elements:

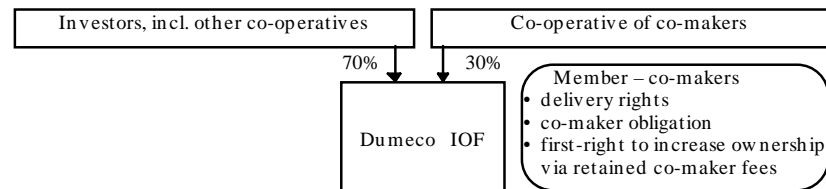
- Acceptance by the members of Dumeco IOF as a price leader;
- Delivery contracts where number of pigs to deliver, plant they shall be delivered to, and time of delivery are specified in order to achieve efficiency in logistics and smooth us of available capacity;
- Transaction cost reductions by members to be remitted to them;
- Dumeco IOF accepted as a leader of the production-marketing system concerning quality requirements, time of delivery, place of delivery.

Profits are distributed in the form of co-maker fees to members on a proportional-to-transaction basis. The co-maker fees are not paid in cash but are transferred as certificates of shares. These certificates are transferable among members but in the future non-members can be included (Figure 4).

The fourth example is Campina Melkunie, the largest dairy co-operative in The Netherlands. As a primary co-operative Campina Melkunie has maintained its role as price leader. This CF is managed on the basis of adding value to the member produce. This means that members also accept the roles of their CF. These risks are expressed in the milk price.

As the CF requires more long term equity, a new financial product was designed in the form of bonds issues by the CF to members. The bonds are compulsory and are proportional to the volume of milk delivered. However, bonds are transferable, also to non-members. In this way Campina Melkunie established market conditions for capital supplied by the members without having a situation in which the investor-relationship between the CF and the member becomes paramount.

Figure 4 Co-maker Co-operative Dumeco



A fifth example is Friesland Dairy Foods (The Netherlands). Becoming increasingly internationalised it decided that high milk prices due to good results in Asia causes distortion of incentives to farmers. Therefore the FDF follows the weighted average of the five best paying dairy firms in the country. In other words, foreseeing the Sixth Reason to become effective in a few years time also in the milk and dairy sector of Europe, FDF decided to anticipate this change. At the same time members are invited to become shareholders in the Far East activities.

In FDF the control is still exerted by members on the basis of milk transactions. The unallocated reserves were transferred in the A-shares held by the FDF co-operative. Members can have B-shares in the FDF IOF without a proportionality-to-milk restriction. B-shares are tradable to other milk supplying members only. B-shares have no voting power.

These are examples of co-operatives where the Sixth Reason caused a re-engineering. If members are looked at and treated as business partners with co-makings and investment interests they contribute to the co-operative firm and can reap the benefits. Membership is no longer undivided. It distinguishes transaction costs and how to minimise these, investment relationships and how to secure the returns (on price or on capital) and how to build a market organisation to realise continuity of the farm and the rural economy.

Co-operative Principles under the Sixth Reason - What is Left?

Like theory, co-operative principles are based on long-standing practices and experiences. People learned to introduce rules of conduct in order to strike a balance between rights and obligations, freedom and risk versus commitment and security.

Open membership and education no doubt had important effects in times when co-operatives were locally based and information was scarce. The co-operative principles were the outcome of a development towards both vertical and horizontal expansion. The co-operatives, at least most of them, were product oriented, not capital oriented. Members were seeking countervailing power and access to scarce goods and services. The common interest was to maximise the return on the resources owned by the members. The tradable product on the basis of the resources was regarded as the scarce resource. All other productive factors like labour and capital were to earn their returns on the basis of a fair price. Fair deals presuppose solidarity and democracy on a one member - one vote basis. If people live near subsistence it is important that there is no outflow of capital out of the neighbourhood. Instead the capital should remain 'in the family'. This is the basis for co-operative banking.

It seems that under present conditions members start re-engineering processes in their co-operatives because the old balances have changed. Different markets cause members to become heterogeneous. Farmers control not only fixed resources but also capital goods with higher rates of depreciation and turnover. Risk profiles differ strongly between individual entrepreneurs. Consumer pressure also contributes to the disequilibrium between farmer interests and the CF. For the scarcely populated areas it must be added that farmers see the natural end of horizontal expansion. It is only with new ventures and alliances with companies elsewhere that the rural economy can be maintained at satisfactory performance. Therefore NGCs are investor- and system-driven. Such conditions demand that acceptance of entrepreneurial risks are rewarded. Thus,

there exist closed membership and depreciation and appreciation of co-operative shares.

New balances between solidarity, democracy and competition will appear. However, it is likely that a considerable time period will have to elapse before we dare to speak of principles of NGCs and re-engineered co-operatives.

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Note

- 1 By CF is meant a co-operative firm, which is a firm like all other businesses except that it is owned, used and controlled by the members. Members are representing businesses. The Member Firm (MF) is called farm, horticultural firm, or just member, interchangeably.

7 Marketing Cooperatives as a System of Attributes

George W.J. Hendrikse and Cees P. Veerman*

Agricultural and horticultural cooperatives operate nowadays in a rapidly changing environment. The Dutch Cooperative Council (Nationale Coöperatieve Raad, 1990) distinguishes three developments. Production of a large number of products has reached self-sufficiency at the level of the European Union. Many markets are not characterized by shortages anymore, but by firms having large inventories or idle capacity. The agricultural policy of the EC tries to cope with this situation of over-production by adopting instruments like quotas, leave fallow, lower prices and less subsidized exports. The implication of these policies for firms is that expensive adjustments have to be made in order to eliminate excess capacity. A second development is that a different product assortment is required in order to be successful in a market which has changed from a seller's market to a buyer's market. Strategies like expansion of production and competition on the basis of prices are nowadays less important than product differentiation, market segmentation, specialization and diversification. Finally, the emergence of the internal market in Europe induced many merger activities which has resulted in a few large, multinational private corporations. These developments are not uniquely Dutch or European. Californian cooperatives also face consumers demanding more variety and markets which expand rapidly by transcending national borders due to trade agreements like NAFTA.

These developments have increased the demand for funds by cooperatives. First, product differentiation and diversification are necessary to meet the changing demand by consumers. It requires large sums of money. Second, the increasing size of markets has resulted in a few large players. Cooperatives try to prevent that the strength of their bargaining position decreases in favor of multinationals and concentrated retailers. However, they have problems to adopt the same policy as multinational corporations because financial funds are mostly acquired by retained earnings. This way of financing expansions is viable in slowly growing markets, but it has a hard time to deal with a jump in market size of the extent of European integration or NAFTA. They have been able to generate these funds up till now mainly by designing new internal financial instruments through relaxing the requirements regarding liability and exit. However, empirical evidence (van Dijk and Poppe, 1992) indicates that the limits to the sources of self-financing seem to be almost reached. The use of external funds like bank debt and outside equity seems inevi-

table. External funds may be acquired by issuing equity or using debt or some hybrid source of funds.

The Nationale Coöperatieve Raad (1990) identifies the domination of control by the members of the cooperative as the prime distinguishing feature of this organizational form. Dutch law provides possibilities for securing control by members (ter Woorst, 1989) because it provides the possibility that the members write in their charter that “*up to two thirds of the boards of directors may be appointed from the members of the cooperative*”. This definition allows for more cooperative forms than the ones surveyed in Bonin et al. (1993). They distinguish the labor managed firm or production cooperative (PC) and the investor owned or conventional firm (CF). A PC is characterized by worker participation in firm decision making, profit sharing and employee ownership. Worker's decision-making right is a necessary condition in their definition. However, PCs are relatively rare in the Netherlands, whereas the agricultural and horticultural cooperatives are common.¹ These latter cooperatives are like a CF, with the difference that it is mainly financed by the input suppliers or buyers of the output. One way of defining an agricultural or horticultural cooperative is that it is either a certain group of input suppliers or a certain group of customers which owns a CF at another stage in the production column (marketing chain), either upstream (a purchasing cooperative) or downstream (a marketing cooperative). We restrict ourselves to marketing cooperatives in this article and refer to them as MC. Notice that the members of an MC own and decide upon the assets of an MC, but that the MC doesn't have any ownership rights regarding the assets of individual members which are used at the upstream stage. Another way of formulating this feature is that each member of an MC owns assets at two stages of production. First, the farmer makes his own investment decisions and owns the resulting assets at his farm (the upstream stage). Second, the ownership of the assets which are used to process the produce of farmers at the downstream stage is in the hands of all the members of the MC together. Figure 1 summarizes the differences between the PC, MC and CF mode of organization. This article analyses the differences between an MC and a CF.

Figure 1 Organizational Forms

Residual claimant	Organizational form		
	PC	MC	CF
Input suppliers	no	yes	no
Employees	yes	no	no

The implications of the feature of member domination in MCs is analyzed from a contract theoretic perspective. The starting point in the economic theory of contracts is a conflict of interest between the parties (owner of the firm and supplier of external financial funds) and asymmetric information (firm has superior information regarding the circumstances of

stances of production). The guiding principle is that differences between financial instruments can be explained best by analyzing the incentives of the various parties. Financial instruments differ because they imply different incentives for the parties involved. The relationship between financial structure and organizational form is established by the observation that both involve a certain allocation of control rights. This implies that the choice of financial structure and organizational form will respond to a change in the optimal level of asset specificity, which is due to changing market circumstances.

Already Nourse (1922) explained the vertical integration aspect of an MC along the nowadays familiar lines of transactions-related costs associated with asset specificity² or sunk costs of investments at the farm (Williamson, 1985):

“Let us say that a small fruit-producing section has just been brought to bearing. The area is far from any large market, the product is perishable, and hence both risk and expense are high. Volume is not large enough to attract a private distributor. But success or failure, the salvaging of their investment, or the continuance of their life work may be at stake on the part of the growers. Hence it is argued (and demonstrated in practice) that the cooperative association of producers frequently achieves results where private outside entrepreneurship fails.”

Ex post opportunistic behavior regarding the contract terms by one's trading partners (i.e. post-harvest 'hold-ups') is reduced by vertical integration (Klein et al., 1978). Another advantage is that the downstream part of the MC has lower transaction costs in acquiring inputs.

There are also issues of asset specificity regarding the investments of the MC. MCs face a trade off between reducing post-harvest holdups of highly perishable farm products at the upstream part and getting attractive terms on outside funds for the investments of the downstream part of the MC. We will focus on the investments at the downstream part of the MC and argue that the increasing level of asset specificity, especially investments in brand names, has reduced the viability of the MC.³

Another way of characterizing our results is to formulate them as a contribution to the Coase program. The celebrated Coase theorem (1960) states that every assignment of property rights results in a Pareto efficient allocation in the absence of bargaining inefficiencies and wealth constraints. The implied research agenda is that a fruitful starting point for research on organizations consists of the investigation of the assumptions of efficient bargaining and/or no wealth constraints. This paper addresses the viability of the MC by analyzing the impact of the lack of sufficient funds (wealth constraint) of MC members on the outcome of an efficient bargaining process between the parties associated with an MC regarding the level of asset specificity of new investments. Insufficient funds may prevent that an MC realizes a Pareto improvement in the allocation of control rights.

A successful cooperative is a unique construction: the triad of (common) interest, (common) finance and (common) control, realized in a twofold construction: a society (of members) and a company (economic

institution). Organizations are viewed as a cluster of attributes between which complementarities have to be realized (Milgrom and Roberts, 1990; Holmstrom and Milgrom, 1994).

The next two sections characterize an MC and a CF as two distinct clusters of attributes. Thereafter, several stylized facts of an MC are identified. Organizational attributes are distinguished, while the two following sections identify the circumstances in which a particular system of attributes (i.e. either a CF or an MC) is more efficient than the other cluster of attributes. An incomplete contracting account of MCs and CFs is formulated. The next section addresses the viability of the MC. Conclusions and some avenues for future research are formulated at the end.

Stylized Facts of MCs

MCs exist in many variations. This is to a large extent due to differences in the nature of their produce, e.g. milk is collected every day, whereas potatoes are harvested only during a certain season. However, there are also quite a few commonalities between MCs. This section lists several stylized facts of MCs and provides an account of its governing bodies.

The residual claimants of MC (i.e. the input suppliers) are usually faced with a number of obligations that differ from those of residual claimants of a CF. Five financial differences are distinguished. Members of an MC ...

- have a large personal financial stake in the MC, because a considerable share of the profits is added to the internal financial reserves of the MC each year;
- are to a certain extent personally responsible for financial losses⁴;
- are faced with the non-transferability of return claims during the membership period (i.e. 'money in the dead hand');
- don't face in general financial barriers to acquire membership. New members have immediately costless access to the resources of the MC and have the same rights as established members to the returns when the MC is liquidated;
- do face exit barriers.

Two closely related differences regarding the product portfolio are distinguished. Members of an MC...

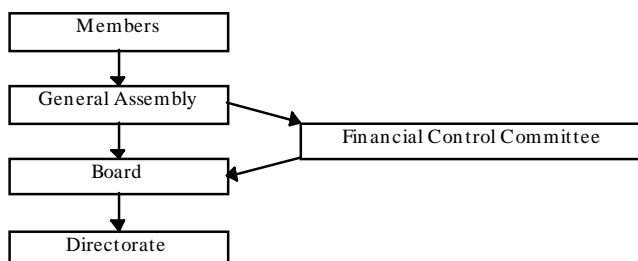
- are usually organized around one raw material, e.g. potatoes, sugar, beets, wheat, milk, etc.⁵;
- are reluctant to diversify the product portfolio of the MC.

Five organizational differences are observed. Members of an MC ...

- have in many cases 100% delivery requirement of their inputs to the MC;
- enjoy 100% purchase assurance of their produce by the MC;
- are faced with an increasing average age of their members due to declining entry of new, young members;

- allocate voting power according to one member, one vote;
- face institutional differences regarding the Board of Directors.

Figure 2 The Organization of an MC



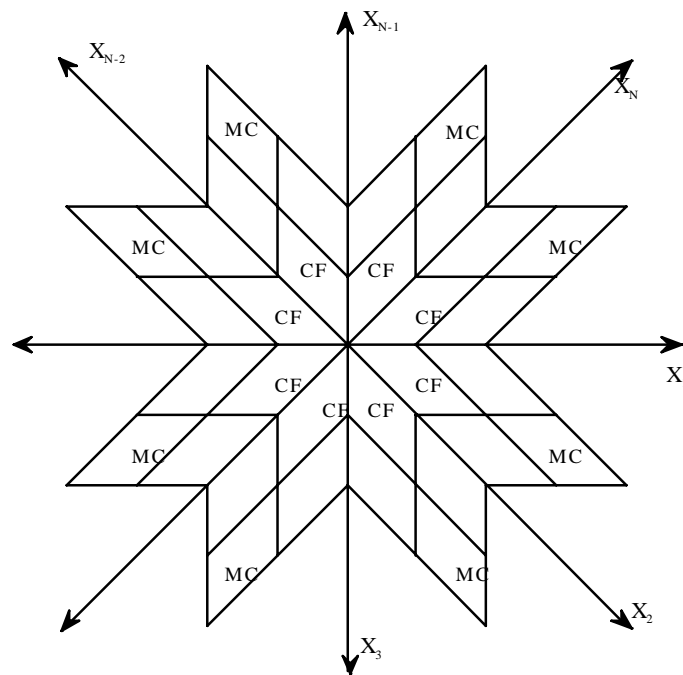
Ter Woorst (1989) describes several institutional differences between an MC and a CF. The Dutch law requires that the MC has a General Assembly, a Board of Directors and a Financial Control Committee. The General Assembly is the most important, because ultimately it determines the policy of the MC and evaluates the execution of the policy by the Board. In many cases, because of the large number of members and the vast region of the MC, regional committees are elected which form together the General Assembly. (This is often called the Members Council⁶.) The General Assembly chooses the members of the Board and the Financial Control Committee and has the power to replace them. Members of the Board and the Financial Control Committee are almost always members of the MC. One explanation is that their own financial interest coincides with that of the other members. This secures members' trust in the Board. The Board is ultimately responsible for the governance of the MC, culminating in the exclusive authority to determine the prices, dividends, or tariffs paid to or by the members. However, though the Board actively determines the strategic decisions and interferes with major organizational ones if necessary, a Directorate is appointed to run the MC in its day to day operational business. In regular joint meetings the Board monitors the Directorate, discusses possible options, decides on those and gives clear instructions to the Directorate. Figure 2 illustrates the relationships between the different bodies in an MC.

System of Attributes

Enterprises can be considered as a system of attributes.⁷ Good performance requires that the attributes/decisions are matched. Each specific system of matched decisions is considered an organization and carries a specific name. For example, an MC is considered as a system of matched attributes regarding the allocation of control, democratic decision making, culture, and so on. A CF is a system with the same attributes as an MC, but the value of each attribute differs.

Enterprises with two attributes can be represented by a matrix with the two decisions as entries and the payoffs in the cells of the matrix. However, an enterprise consists usually of more than two attributes, which is problematic from the viewpoint of graphical representation. This is resolved in Figure 3 by flattening an n-dimensional representation into two dimensions. The symbols x_1, \dots, x_N indicate the various decisions/attributes of an enterprise and the MCs (CFs) indicate the match of decisions which comprises an MC (CF). The rest of this section identifies attributes of an enterprise, either an MC or a CF, which are related and therefore have to be matched. The definition of each attribute is chosen such that a CF is associated with a low value and an MC with a high value.

Figure 3 CF and MC



Control by Providers of Input

An MC has (by definition) a high level of control by input suppliers, whereas a CF has not. Enterprises have to take into account which other parties are associated with it, like owners, suppliers, financiers, consumers and labor. MCs and CFs are expected to react differently to their environment due to their different objectives. The members of an MC are special in the sense that they are both suppliers of raw materials and

capital. A member of a cooperative in his role of supplier of raw materials is interested in receiving a high price for his input, a high price for the produce of the MC and a high return on the invested capital and likes to pay a low remuneration to the suppliers of outside capital. Their interests as a provider of funds are different, i.e. low prices of raw materials and a high return on capital. These considerations result in a different objective function of members of an MC than those of shareholders of a CF.

One-Member-One-Vote

Voting power in an MC has traditionally been allocated according to the one-member-one-vote principle. It is often seen as a crucial ingredient in strengthening the 'organized trust' perception of an MC because all members are treated equally. However, differences in size between members have gradually resulted in differentiated voting rights, although there is still a maximum number of votes per (big) member. Voting power in a CF is allocated according to one-share-one-vote.

One Product

MCs are usually organized around one product. This is viewed as a basic element for a successful cooperative, because it creates a common clearly perceived interest and a resulting common willingness of producers with a weak market position to work together. In case: combined processing of products realizes economies of scale and substantially combined product supply realizes higher prices. It enhances a very clear and straightforward way of accounting costs and benefits and of distributing the results, so that members can control the company effectively. The one product feature supports and strengthens the 'organized trust' perception of an MC, which facilitates decision making.

Democratic Decision Making and Internal Control Systems

A preceding section described the prominent role of the General Assembly in an MC. A number of arguments can be made in favor of democratic decision making. First, democratic decision making is likely to generate a merging of opinions along the lines of the Blackwell and Dubins' (1962) result. Second, democratic decision making is less vulnerable to successful politicking because bad proposals are winnowed out (Tullock, 1992). Third, the huge financial involvement of the financiers in the success of the cooperative is in general a strong commitment to acquire substantial information in order to evaluate policy decisions.

MCs seem to have a well functioning internal control system. Four aspects of the input suppliers are responsible. First, input suppliers have a large personal financial stake in the downstream firm. It turns out that

third parties are even willing to provide debt without any liability of the input suppliers when they have generated a high level of 'inside' equity. This equity stake held by agents provides a credible signal that they will do their job of policing internal decision making well.

Second, the preceding section pointed out institutional features of the Board of Directors. They are favorable for the functioning of the Board of Directors in an MC. This is enhanced by the feature of personal liability of (internal) financiers of the MC. This provides input suppliers with strong incentives to collect information and force the Board of Directors to take decisions in their interest. These incentives seem to provide a setting in which the internal control system will work well. Both the organization of the Board of Directors and the personal liability of their members imply that the incentives to put forth effort in the internal control system of an MC are superior to those of a CF. Members of the Board of Directors of a CF face much weaker financial incentives to implement good policies, which opens the door for managers and members on the Board of Directors to realize certain personal goals at the expense of the value of the firm.⁸

Third, the lack of the market for corporate control enhances the incentives for members in an MC to generate a well functioning internal control system. Shares of an MC are not traded in the stock market. Members therefore face difficulties in trading their financial stakes. Stockholders can easily get out of a CF by selling their stock in the market. Members of an MC can't and therefore pay more attention to the way the MC is being run.⁹

Finally, a similar incentive is provided by the relatively bad developed market for inputs.¹⁰ This reduces the possibility for an MC of comparing its own performance with those of rivals. It becomes therefore more attractive to put forth effort in the internal control system in order to compensate for the absence of the yardstick of the market. The lack of the market for corporate control and the largely absent market for inputs provides a commitment to participate in the internal control system.¹¹

External Control System

Internal as well as external control systems serve a role in disciplining corporate decision making. Examples of external control systems are the capital market, the market for corporate control and the input market. The capital market and the market for corporate control are addressed in this section, whereas footnote 9 provides references regarding the input market.

MCs seem to have a different portfolio of banks from which they attract financial funds than CFs. It is usually much narrower. Aoki (1990) has pointed out the advantageous monitoring effects of having a main bank instead of many banks in an analysis between different economic systems. It seems that the same arguments can be applied to different

organizational forms in one economic system. A closer relationship between an investor and an entrepreneur implies that the investor receives a better signal regarding the bad state. It reduces the degree of incompleteness of ex-ante contracts. It will be argued in the next section that this increases the range of projects which will be implemented.

The recent curbing of the disciplinary functions of the capital market in the USA frustrates corporate decision making. It is obvious that the importance of organizational processes and procedures has increased in order to compensate for the reduced disciplinary power of the MC. However, Jensen (1993) argues that they often fail in CFs. He posits that this is also due to the restrictions which have been imposed on capital markets. One of the reasons for the failure of internal control systems is *"the curbing of what I call active investors. Active investors are individuals or institutions that simultaneously hold large debt and/or equity positions in a company and actively participate in its strategic direction. Active investors are important to a well-functioning governance system because they have the financial interest and independence to view firm management and policies in an unbiased way. They have the incentives to buck the system to correct problems early rather than late when the problems are obvious but difficult to correct."*

Capital markets in Europe and especially in the Netherlands have traditionally been more curbed than those in the USA (Boot, 1994). The rights of outside equity-holders are extensively curtailed in the Netherlands and new members of the board of directors are usually appointed by the principle of co-optation.

Delivery/Purchase Requirement

The delivery/purchase requirement assures the MC of raw materials, whereas CFs have to compete for inputs in the market. Another feature is that it used to be an important instrument in generating retained earnings. There was no market for inputs, because all input suppliers were member of an MC. This implied that the Board of Directors of an MC could exercise some discretion in the determination of the input price paid to the members in order to build up the retained earnings. This situation was prevalent in the fifties and sixties in Europe. Third, the delivery and purchase requirement prevents adverse selection problems regarding the quality of inputs. Fourth, it enhances the continuity of the MC and reduces the fluctuations in the rate of return.

Free Entry

New members of an MC have free entry, but members face an exit barrier. Free entry entails not only that a new member has the same access to resources of the MC as the established members, but also that he has gained equal rights to the returns in the liquidation contingency. They have to either pay a fee when leaving (the Netherlands) or stay for a

minimum number of years with the MC (Germany).¹² This exit barrier strengthens the continuity and the predictability of the MC. Its main purpose, however, seems to be to prevent attracting members whose only intention is to free ride on the existing resources of the MC. It is a scheme similar to Lazear (1979) in the sense that wealth constraints regarding an entry fee in order to obtain membership of an MC are circumvented by having payments spread out over the membership period.

Retained Earnings

Fourth, members of an MC are usually required to pay every year a financial contribution (by withholding part of the paid out price) in order to increase the reserves of the MC. This enhances the ability of an MC to acquire debt at favorable terms.

Non-Transferability

Transferability differences between CFs and MCs are likely to affect investment and capital formation. Equity shares of a CF can at every instant of time be traded in the stock market, i.e. they are transferable. Members of an MC have only claims to the returns of assets during the membership period. They often do not have individual and transferable ownership rights in the assets of the MC. Returns during the membership period have therefore to be at least as high as returns elsewhere. This limited appropriability problem requires that the internal rate of return on the assets of MCs must be higher than that of CFs if internally financed investment is to be chosen when the median membership duration is shorter than the project's recoupment period (Bonin et al., 1993). MCs using mainly internal funds to finance capital will therefore 'underinvest' relative to comparable CFs when a member's individual claim to the returns is non-transferable. The problem is getting worse due to adverse changes in the demographic composition of the member population. Retained earnings are also under pressure because the delivery/purchase requirement is harder to maintain in the current market.

Personal Liability

Members are (to a certain extent or even completely) liable for the losses of the MC, depending on the structure of the MC. Several advantages are associated with this feature. First, the solvency of the MC becomes more sound, which creates extra possibilities to increase the amount of debt (Diamond, 1989). Second, it makes the MC less vulnerable to adverse shocks than a CF, i.e. MCs seem to have the ability to survive a longer period of temporary losses than CFs. Personal liability reduces the prob-

ability of liquidation. This will enhance the ability of an MC to get debt finance for new investment projects.

Cost of Equity

The cost of outside equity for an MC will in general be above those of a CF. Members of an MC have by definition the decision making power. It is not attractive for outside financiers to carry financial risks in an MC, because people with (partially) different interests are allowed to spend the money of outside financiers in ways they like best. Providers of equity have to be compensated for the lack of decision-making rights, which is due to the requirement of member control.

Rights of Control

This section will analyze the choice of organizational form and financial instruments from a rights of control perspective. The main ingredients are a conflict of interests and the observation that not every possible contingency can realistically be described in a contract. Williamson (1985) and Grossman and Hart (1986) argue that ownership structure can be best understood in terms of the control rights that it confers. Debt and equity are besides financial instruments also governance instruments in this approach.

The starting point in the incomplete contracts literature is that it is too expensive to describe all possible contingencies in a contract and to formulate an agreement for every possible situation. Contracts are incomplete in the sense that only the most prominent eventualities are usually described in the real world. Unforeseen contingencies are covered in an incomplete contract by assigning somebody the rights of control. This implies that contracts will not only consist of financial instruments based on verifiable information, but will also specify decision power in situations which are not explicitly covered by the contract.¹³ Each financial instrument specifies certain control rights and how returns depend on outcomes.

An organization is viewed as a nexus of incomplete contracts with employees, managers, suppliers, buyers, financiers, and so on. The incompleteness of contracts causes ex post bargaining problems (transaction costs) in situations where parties make irreversible, specific investments, i.e. choose assets which have a higher value within the relationship than outside it. The extent to which an asset is irreversible and specific to a particular activity is referred to as the level of asset specificity. The ex post bargaining positions will depend on the particular organizational form. Markets and hierarchies are the two extremes on a continuum of possible organizational forms. A following section will distinguish an MC and a CF as two different hierarchies.

Aghion and Bolton (1992) stress in their analysis of the choice of financial instruments a conflict of interest, the incompleteness of ex ante

financial contracts and a wealth constraint. The allocation of control rights is important from an efficiency point of view in a world of incomplete contracts when there is a conflict of interest between the investor (provider of funds) and the members of the MC (entrepreneurs). It entails a trade-off between the optimality of ex ante investments and ex post efficiency. Each financial structure implies a certain control structure. Three financial instruments are distinguished.¹⁴

Investor control (voting equity) is attractive in satisfying ex ante investment constraints regarding the provision of funds. However, it doesn't guarantee ex post efficiency, because the wealth constrained entrepreneur is not always able to establish Pareto improvements in the ex post renegotiation process. (The wealth constraint reflects the need of the members of an MC to borrow funds.)

The attractive feature of entrepreneurial control (non-voting equity) is that nothing inhibits the efficiency of the ex post renegotiation process, because the investor doesn't face any wealth constraints. However, the investor might not recoup his ex ante investment and therefore not adopt surplus generating projects. The reason is that the members of the MC may advance their own interest at the expense of the outside financiers. They are able to do this to a certain extent because non-voting equity allocates control to them in contingencies not covered by the contract.

Debt is the third financial instrument. It involves contingent control because the results determine who is allowed to decide. The entrepreneur decides as long as things go well, whereas decision power switches to the debtor when financial obligations can't be met. Contingent control may be a desirable financial instrument because it may improve upon either the ex post efficiency problem of investor control or the ex ante participation problem associated with entrepreneurial control.

The size of inefficiencies differs between financial instruments and determines the range of projects, in terms of the level of asset specificity k , which will be carried out by a particular form of finance. The optimal financial structure consists of a combination of financial instruments such that the residual decision rights are allocated in each unforeseen contingency to the right person.

MCs have less freedom in their choice of financial structure than CFs, because their charter requires member control, which precludes the design of an efficient number of contingencies regarding the allocation of decision power. MCs are restricted to the use of non-voting equity and debt as sources of funds, because MC members feel strongly that the integrity of the MC is destroyed when control has to be shared with non-members. However, internal financial constraints may force them to acquire outside funds.¹⁵ This is problematic in the competition with other organizations, because the domination of control requirement will most likely result in a higher premium for outside funds. Two crucial aspects of financial instruments are responsible for this: the financial risk and the allocation of decision rights regarding the use of funds. Asset ownership, i.e. those who carry the business risk, does in itself not confer any decision making

rights. However, CFs assign these two aspects in the design of their financial instruments to their outside equity holders. The reason is that there is usually a negative relationship in financial contracts between the extent of decision-making rights and the premium received for providing outside capital. External financiers must be compensated with a higher premium when control rights are denied to them, in order to have them provide significant funds. The domination of control requirement puts MCs at a disadvantage compared to CFs in the competition for external funds, because they do not allocate the decision-making rights regarding the use of outside funds to the outside financiers. An inefficient level of asset specificity of new investments may be the result. Another way of formulating this result is that there are investment projects with levels of asset specificity k for which a CF will use outside equity, whereas it is efficient (but only second best) for an MC to use other financial instruments.

One of the stylized facts of an MC is that a significant amount of inside equity is provided by keeping a considerable share of the profits as retained earnings each year. This is often seen as a major advantage of the MC, because it provides an inexpensive source of funds. However, it also has a disadvantage in the sense that it is a governance structure which is more 'forgiving' than debt. Inside equity provides weaker incentives than debt to perform well.

MC versus CF

Markets for agricultural and horticultural products have evolved from a growth period to a period of saturation. Current markets require specific investments of an MC in order to meet the specific demands in the many niches of the market. The optimal value of asset specificity of the MC investments is increasing. The choice of organization will be analyzed with respect to the change in market conditions, i.e. the viability of the MC-cluster of attributes will be addressed as a function of the level of asset specificity k of the investments of an MC.

The delivery/purchase requirement of many MCs seems to be attractive in shortage markets. However, markets for raw materials of MCs are quite different today. Excess supply is common, which is especially problematic for MC. In processing and in selling, growing output made high investments in new capacity necessary in order to absorb the deliveries of their members. This made MCs especially vulnerable to downward changes in input volumes, resulting in lower prices paid to members.¹⁶ Another effect is that it undermines the 'organized trust' perception of the members, which may result in more cumbersome democratic decision making and a reduced willingness to approve investment projects with a long horizon. It is further undermined by the tendency of MCs to respond to these new circumstances by restricting free entry into the MC, limiting personal liability, relaxing the one-member-one-vote

feature and reducing the non-transferability of return claims. The viability of the MC seems therefore questionable when the attractiveness of the purchase/delivery requirement is reduced.

A disadvantage of democratic decision making in an MC is that the process of opinion- and decision-making regarding important policy shifts is more time consuming than in other organizational forms. This problem seems to be increasing when markets become more complex. There are also problems in a strategic context. First, a consequence of the time consuming democratic decision making process is the wide spread practice of MCs to determine and fix their input price once a year. Members want to know and cash this price, which is the remuneration of their deliveries to the MC, as soon as possible. A first mover disadvantage in the competition with rivals is implied, especially when an MC has a high market share. A rival CF finds itself in a comfortable position in that it is able to choose its price later, sometimes at a different level. Second, an increase in the degree of asset specificity (k) exacerbates the disadvantages an MC has to face. Investments with a higher k entail less involvement of the members, because they lack the specific knowledge to form an opinion and give their fiat. Higher outlays are therefore required for a well functioning democratic process of decision making and the preservation of the 'organized trust'. The process of decision-making will also take more time because the degree of complexity probably increases with a higher level of asset specificity, especially in a globalizing economy. Third, if k increases without a direct relation with the original activities of the MC (and thereby with the basic activities of the members), members will be more pessimistic regarding the corresponding value and risks than shareholders of a CF.

This causes reluctance amongst members to accept that a large part of the surplus will be kept as retained earnings, unless an acceptable rate of profitability on other investments (including their own farm) will be realized.

The driving force behind the choice of financial instruments mentioned above is that the impact of the wealth constraint of entrepreneurs differs for each financial instrument. It is obvious that a relaxation of this constraint by the internal generation of funds reduces the hold-up problem of the use of non-voting equity by the MC. There are two sources of internal MC funds: financial contributions by MC members and retained earnings. These sources are under pressure in surplus markets.

The delivery/purchase requirement and the personal liability features are in principle able to compensate for disadvantages of the MC, but the change in market circumstances has undermined the strength of these two mechanisms. An inefficient level of asset specificity of new investments may be the result. This applies especially to situations where the size of the market grows faster, due to e.g. European integration, than the growth of organizations based on internal means.¹⁷ The limited transferability of ownership rights by the members of an MC will result in underinvestment when mainly internal funds have to generate the required capital. The

problem is getting worse due to adverse changes in the demographic composition of the member population. Retained earnings are also under pressure because the delivery/purchase requirement is harder to maintain in the current market.

Notice that the superior functioning internal control system of the MC either creates some leeway for either the input suppliers to advance an input price which is above the market price, or not to provide the efficient level of attention in the internal control system, or slack, or increase the financial reserves of the MC. However, the extent to which these activities are allowed by the market depends on the level of asset specificity. Figure 4 summarizes our account of the differences between MCs and CFs. Two hierarchical governance modes are distinguished: an MC and a CF. A hierarchy is a cost minimizing governance structure when the degree of asset specificity of investments is higher than k_1 .¹⁸ The MC and CF are examples of hierarchies and have therefore to be analyzed in this domain. The curve of an MC is below (above) the curve of a CF when the advantages of a cooperative outweigh (are smaller than) the disadvantages. The curve of an MC is steeper than curve of a CF.

Figure 4 MC versus CF

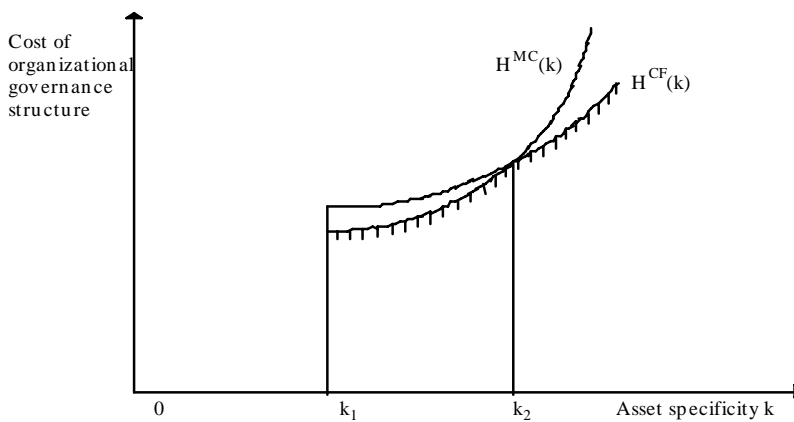


Figure 4 reflects a situation in which an MC may be an efficient governance structure. The conclusion is that MCs may be a viable organizational form for intermediate levels of asset specificity, i.e. $k_1 \leq k \leq k_2$.¹⁹ (An MC will not emerge or disappear when the costs of its governance structure are higher than those of a CF for every value of k higher than k_1 , i.e. $k_2 \leq k$.) Figure 4 also indicates that the members of MC have some leeway to advance their interests as input suppliers when $k_1 < k_2$. This is costly for this governance structure. However, market demand and competition by CFs provides an upperbound to the achievement of these interests (Hart, 1983; Scharfstein, 1988). The robust hypothesis which emerges is that an increase in the level of asset specificity will not result in a switch from the CF-cluster of attributes to the MC-cluster of attributes.

Conclusions and Further Research

This article has investigated some aspects of the viability and financial structure of the MC. Contract theoretic notions and system complementarities have been used to analyze MCs. We have argued that an increase in the level of asset specificity of the investments of an MC will never result in a switch from a CF to an MC. The MC is likely to be an efficient, even superior, governance structure for intermediate levels of asset specificity in markets which are characterized by shortages. However, it seems that the transition of an economy from shortage to surplus markets together with the limited financial capabilities of the MC members reduces the (contract theoretic) viability of the MC. First, the disappearance of the shortage situation makes members less indispensable for the MC. Second, the delivery/purchase requirement can't be maintained anymore, which results in cream skimming by downstream firms and undermines the triad of (common) interest, (common) finance and (common) control. Third, lower margins and technological advances have had an adverse effect on the demographic composition of the member population, which drives MC into activities with an emphasis on short run returns. Finally, the twofold construction of a society (of members) and a company (economic institution), i.e. ownership of an adjacent stage in the production column with the requirement of member control, limits the asset specificity range of projects which outside financiers are willing to fund.

An important topic for future research is to investigate the possibility of designing financial instruments which on the one hand maintain the special cooperative character and on the other hand eliminate the inefficiencies associated with this organizational form. Section *Rights of Control* has addressed in this respect some interesting developments in the financial literature. This seems not only applicable to the feature of domination of control by the members of the MC, but also to the feature of the voting power of the members and the Board of Directors. Voting power in an MC is usually not related to the amount of money invested but to membership. Shares in a privately owned company determine the voting power of the owners, but this strong link between financing and voting is missing in an MC. Each member in an MC has one vote, regardless of the financial stake of a member. This seems problematic with respect to maintaining the largest, and usually most efficient, farmers as members. However, they are a crucial element in the viability of the MC. Most solutions which are nowadays considered within the MC structure consist of some differentiation in the financial terms being offered to members. Examples are participating preferences share and quantum discounts. It takes account of the variety between the members and may resolve the horizon problem. This seems inevitable, even though it undermines the principle of equity of members.

However, the MC will most likely continue to face problems in competing successfully with a CF. Both the low degree of indispensability of MC members in markets without shortages and the low degree of complementarity (Hart and Moore, 1990) between the post-harvest holdup problem and the specificity of assets regarding the final product renders the vertical integration aspect of an MC as an unlikely outcome from an efficiency point of view. Other solutions for the problems of MC challenge the viability of the structure of the MC. Different organizational arrangements (association, participation company) may have to be considered to address the specific problems of enterprises in agricultural and horticultural markets, such as the lack of countervailing power when the MC is abandoned. It is obvious that an integrated approach to organizational form and financial structure has in addition not only to take issues like those mentioned in footnote 3 into account, but also fiscal and judicial aspects.

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Notes

- * The first author would like to thank the Center for Research in Management of the University of California at Berkeley for its hospitality during which parts of this paper were completed. The comments by and/or discussions with participants at the 1994 EARIE conference, Masahiko Aoki, Lee Garoyan, Piet Moerland, Aswin van Oijen and Adrie Zwanenberg are gratefully acknowledged.
- 1 There are nowadays substantial differences in market share, from 100% in potato starch production, 90% in credit, 85% for coops in dairy processing to \pm 38% in meat processing and purchase coops. Purchase and selling coops play a dominating role in trading and processing of agricultural products in the Netherlands. Due to economies of scale and scope in production and marketing as well as the need to decrease the costs of governance and control, there has been a big concentration tendency. In the period 1975-1993 the number of coops dropped by more than 40% to 1048 (Zwanenberg, 1993). The value of current sales is around \$ 37 billion. (The credit cooperative accounts for 744 cooperatives with annual sales around \$ 17 billion.)
 - 2 Williamson (1985) distinguishes four kinds of asset specificity: site specificity, physical asset specificity, human asset specificity and dedicated assets.
 - 3 Many aspects of MCs are not dealt with in this article, but are addressed in the literature, e.g. competitive yardstick (Nourse, 1922), stability (Sexton, 1986), entry (Sexton and Sexton, 1987), spatial dimensions (Sexton, 1990) and ethical attitudes (Zusman, 1993).
 - 4 MCs in the USA don't have this feature. A recent Dutch example in which this feature was exercised is in the dairy MC Heino Krause (NRC Handelsblad, 1994). Each member had to pay about \$ 200.000 to banks in order to relinquish a huge debt, which was mainly due to mismanagement.

- 5 MCs in California and the Netherlands have this feature, whereas MCs in de Midwest of the USA don't. The focus of this paper is on the former MCs.
- 6 Its size varies between 80 and 150 persons and it consists of members only.⁷ The notion of an organization as a system of attributes (Milgrom and Roberts, 1990) can be introduced by an example. Suppose an orchestra consists of a string and a wind section. Each section has to decide about the speed, either slow or fast, at which they are going to play. There are four possible combinations of these two decisions: (slow, slow), (slow, fast), (fast, slow) and (fast, fast), where the first component is the decision of the string section and the second component the decision of the wind section. The decisions (slow, fast) and (fast, slow) are considered terrible, whereas (slow, slow) and (fast, fast) are both enjoyable. (Technically, (slow, slow) and (fast, fast) are each a Nash equilibrium in pure strategies.) The ranking of (slow, slow) versus (fast, fast) depends on the circumstances, e.g. an old audience may prefer the former, whereas a young audience may like the latter better. There are two important aspects of this example. First, good performance by the orchestra/system requires that individual decisions fit/match/coordinate. The combination (slow, fast) as well as (fast, slow) don't fit internally, whereas (slow, slow) and (fast, fast) do. Second, there are several combinations of decisions which form a mutual fit. The specific circumstances, e.g. type of audience or type of market, determine which one is best.
- 8 These attractive features of an MC don't imply that an MC necessarily functions better than a CF, because its shares are not traded in the stock market. A CF with a listing on the stock market has committed itself to report regularly and according to certain standards about its state of affairs. Another attractive feature of the publicly traded CF is that additional external funds can be obtained by issuing new shares, whereas an MC often has to go thru cumbersome negotiations with the providers of external funds.
- 9 Holmstrom and Tirole (1993) model the relationship between the liquidity of a market and the informational content of prices. Markets with MCs are less liquid, because its shares are by definition not traded. Informed traders (speculators) will spend less time on monitoring in these markets because it is harder for them to disguise their private information. An implication is that the ability to design more efficient contracts to discipline managers is reduced. Notice that this doesn't affect an MC or a CF differently, because they have access to the same public information, i.e. the stock price of CFs with a listing on the stock market. However, the MC is free riding on this information, which seems to reduce the importance of the competitive yardstick argument in favor of MCs (Nourse, 1922; Sexton, 1990). Observe that this argument has probably more bite in the USA than in the Netherlands, because the market for corporate control hardly exists in the latter country.
- 10 Markets for inputs are hardly completely absent, because MCs almost never have a 100% market share.
- 11 The incentives in an MC to participate heavily in the internal control system do not only have favorable consequences for its functioning. The concluding section will point out that an often observed disadvantage of the MC is that they are rather slow and conservative in their decision making processes compared with CF. This reduces their flexibility and creates inertia with respect to their reaction to changing market circumstances. (An advantage of a slow, democratic process with conservative voters may be that the approval of a policy decision will be carried out fast and without much sabotage.) The additional problem of attracting new funds is addressed in section *Rights of Control*.
- 12 Recent court cases in the Netherlands have forbidden several exit fees, whereas cancellation clauses are allowed.
- 13 The similarity between the complete and incomplete contract literature is that incentive considerations are the main issue. Complete contracting analyses emphasize the return aspects of financial instruments. An example is the model by Jensen and Meckling (1976) in which securities only vary in terms of income streams. The manager decides (i.e. has control rights) in all circumstances, regardless of the composition of the capital structure. This is in sharp contrast with the incomplete contracting framework, where issues of property rights and rights of control are the focus of analysis.

The complete contracting approach has implications for the financial structure of MCs. Jensen and Meckling (1976) argue that external equity is not attractive from a cost minimization point of view. External financiers know that their provision of funds will

reduce the marginal costs of non-profit maximizing activities of managers. Their response is to increase the rate at which funds will be made available. This observation applies to the members of an MC because their objective function is not completely aligned with those of external financiers, as pointed out in the introductory section. The right incentives for cost minimization are provided when the cooperative members are the sole residual claimants. This is established by external funds completely consisting of debt. Debt requires a fixed amount of money which has to be paid back after some time. The remaining loss or profit is on account of the cooperative. Financial structure also affects investment. A feature of debt associated with a CF is limited liability, i.e. shareholders are not personally responsible for paying back the loan when the organization goes bankrupt. This encourages the choice of unnecessarily risky projects. Bankruptcy costs are carried by the providers of the external funds, whereas successes accrue to the owners. These considerations reduce the attractiveness of debt in favor of equity. Members of an MC have personal liability, i.e. they are to some extent personally responsible for payments in the case of bankruptcy. This limits the adoption of risky projects by MC. (This is one explanation for the stylized fact that an MC usually concentrate on one input, because it reduces the portfolio of candidate projects.) The optimal financial structure takes both cost minimization and investment selection issues into account. Both aspects point towards a higher debt/equity ratio for MCs than CFs.

- 14 Hendrikse and Veerman (1995) formulate differences and similarities between the transaction costs economics account of financial instruments (Williamson, 1988) and the incomplete contracting approach of Aghion and Bolton (1992).
- 15 Notice that the personal liability feature of an MC reduces the probability of liquidation because it reduces the wealth constraint in the ex post renegotiation process.
- 16 The Dutch cooperative pig slaughter houses provide an example. The 100% purchase requirement necessitated increasing slaughter capacity in order to process the growing pig production in the eighties, which absorbed thereby the largest part of the internally generated financial means. Investments in product and market development with high levels of asset specificity in the form of products with brand names could not be realized. Nowadays at low pork prices the MC face a tradeoff: if they pay too little for the pigs, they have to face underutilisation losses because farmers sell the pigs to the private slaughter houses, if they want to utilize capacity fully, they have to pay too much for the pigs. This results in a disastrous financial situation. This could be partly offset by reducing the 100% delivery requirement, but will result in adverse selection problems (Akerlof, 1970). Members sell the inputs with the highest quality in the open market, whereas the remaining production is delivered to the MC (NRC Handelsblad, 1992).
- 17 The low financial reserves of Irish dairy cooperatives, which is due to the poor financial situation of their members, forced them to drop their requirement of member control in order to get a listing on the stock exchange (Nationale Coöperatieve Raad, 1990). They were not able to generate sufficient capital in order to finance the expansion of scale and investments for product improvements.
- 18 Market or hybrid governance is efficient when $k < k_1$ (Williamson, 1985).
- 19 MCs are predicted in the above analysis from an efficiency point of view, with asset specificity as the main determining variable. This hypothesis contrasts sharply with an evolutionary account of MCs. MCs emerge in the framework of Arthur (1989) as historical accidents and their perseverance is due to increasing returns in the form of path dependencies. MCs which were originally chosen became gradually locked in and were improved upon little by little. The notion of long run efficiency doesn't play a role in such an analysis because natural selection processes focus on short run survival.

8 The Position of Agricultural Cooperatives in the Changing Food Industry of Europe

Petri Ollila and Jerker Nilsson

In connection with the decision to establish the internal market of the European Community, there was a wave of mergers and acquisitions in the food processing industry of Western Europe. This has meant a radical increase in the level of *horizontal integration*, i.e., concentration into a number of large conglomerates dominating many markets. Likewise, a trend towards concentration in the food retailing industry is on its way, leading to some strong Pan-European chains as well as strategic alliances.

Special arrangements to coordinate vertical stages of the food production-distribution chain have also increased. Long term contracts, franchising, quality control through several stages, etc. are increasingly found. In some fields of the food industry it also has led to *vertical integration*, i.e. common ownership in several stages. There are signs that the primary production to an increasing degree is included in vertically integrated firms. This trend towards industrialization of agricultural production is more evident in North America but is seen also in Europe (Coffey, 1993).

A specific type of vertical integration is that of *cooperative business*. A large part of the food processing industry in Western Europe is owned by agricultural cooperatives. There is, however, a considerable variation between different industries. The cooperatives are, understandably, strongest in industries in which the major portion of the raw products is produced by European agriculture. Another difference concerns the cooperatives' stage in the production chain. The stronghold of the cooperatives is, of course, mainly the first stages. Nevertheless, in some industries agricultural cooperatives dominate far downstream along the chain, even in the production of ready-made consumer products such as yogurt, bread, wine and sausages. The dairy industry is especially worth noting.

There are interesting differences between the European countries regarding the position of agricultural cooperatives, just as there are between Europe and the USA. American dairy cooperatives are almost as strong as the European ones in the first stages of the production chain, while their role decreases considerably in the later stages. They often sell the products to other processing industries, while their European counterparts take care of the processing themselves.

This article is devoted to the forces which determine the structural development of the European food sector, and especially the role that agricultural cooperatives might have in this system. As these firms are very strong in many markets, this question is important to the entire

European food processing industry. Furthermore, the issue is especially topical in these years as European business life is changing character. With the introduction of the internal market, various trade hindrances were reduced. The food processing industry has responded through a wave of mergers that has resulted in large conglomerates. Within a few years, Western Europe might have a common currency and a common economic policy, and that will bring further changes to the conditions for the industry.

With all these changes taken into consideration, it is justified to wonder if European agricultural cooperatives will develop in a direction similar to the American ones. As EU approaches 'The United States of Europe' it might, for example, be difficult for European cooperatives to retain their far-reaching degree of vertical integration and their large market shares. Will the agricultural cooperatives go back to their origin, i.e. collection of products and primary processing, and leave further processing to other firms?

Determinants of Institutional Change

Analyses of Vertical Integration

In standard economic theory, prices are assumed to provide the signals necessary to regulate and synchronize economic activity in the market economy. *"The realities of commodity subsectors, however, suggest that vertical coordination is one of the central dimensions of the organization and conduct of economic activity. Prices perform part of the coordinating task, but only part. A variety of other institutions and arrangements such as government programs, marketing orders, contracts, and vertical integration often replace or supplement prices in the coordination task"*. (Marion, 1986, p. 53)

Vertical integration is invoked to mean coordinating arrangements in which markets are replaced by contractual or ownership arrangements between successive stages in the production-distribution chain. Marion presents five dimensions of performance associated with vertical integration: efficiency (technical and allocative), equity, access to the markets and market information, stability, and transaction costs.

The process of vertical integration in the food processing industry is a complex phenomenon. In order to achieve an understanding of this process, a large number of conceptual starting points could be used. In this paper three factors influencing vertical coordination are examined, each of them analyzed with different conceptual tools. Evidently, these factors are closely related, though this is taken into consideration in the concluding section. The three categories of variables are:

- *Institutional factors*, policy and political reasons, as well as properties of consumption and circumstances at various stages in the production-distribution chain. Hence, institutional factors include conditions that constitute the framework for the food processing industry at different

levels, viz. government, type of cooperative model, cultural differences between the countries and regions of Europe, etc.

- *Production cost*, referring to production itself, but also including costs for transportation, capital, administration, and other related functions. Technical and allocative efficiency including economies of scale and scope are considered as production cost factors.
- *Transaction costs*, consisting of all costs that a firm, a consumer, or any other actor has when exchanging goods, services and information with other actors. Economizing transaction costs are examined according to dimensions of transactions: asset specificity, uncertainty, frequency and externalities.

Production Costs

When explaining the organization of businesses in production cost terms, the core concept is economies of scale. Business activities will be conducted by those organizations that are most successful to reduce their cost levels. The lowest costs are attained at a certain scale of operations where cost reductions due to increase in size are balanced by increasing administrative or bureaucratic costs. As economies of scale refer to all kinds of production activities, including transportation, financing, etc., this reasoning could also contribute to the understanding of localization, ownership structure and many other aspects of business organization.

Dixon and Wilkinson (1986) suggest some principles to explain the phenomenon of economies of scale, the most essential being the following four.

Principle of Bulk Transformations

A product can most often be manufactured within the realm of different technologies, ranging from handicrafts to fully automated processes of production. As there are differences between the technologies concerning the distribution between fixed and variable costs, the cost curves have different shapes. A large producer has an advantage to the extent that he can choose between all available technologies while a small producer has only a few alternative choices. Hence a large producer is able to attain the critical mass that is necessary for a certain production – a smaller one can perhaps not. A large producer can choose such a technology that the fixed costs are divided over a large number of produced items, thereby reducing the unit costs more than the small producer is able to do. For example, a common motive for mergers is that double work may be eliminated – fewer resources are need to produce a larger volume.

Principle of Massed Reserves

Every production process is characterized by uncertainties and fluctuations. As these uncertainties and fluctuations are combined, some of them

will level off one another, with the effect being that the input of production factors can be reduced. For example, a large firm's warehouse can be smaller than the totality of the warehouses of some smaller firms whose combined turnover is equal to that of the large firm. A large firm can invest in measures that reduce the market uncertainties, even though it must acknowledge that there are uncertainties as to how these measures will succeed. The small firm is not able to conduct the same measures due to its limited financial strength.

Principle of Multiples

A production process is composed of a number of interlinked subprocesses where production factors with a certain indivisibility are used. The cost curves of the various subprocesses have normally different shapes, i.e., the cost minimum is attained at different volumes. Hence, the producer who has such a large volume that it enables him to combine a number of production processes will get the most cost effective production, e.g., he chooses the least common denominator for the various machines with different production capacities. So there is no unused capacity which causes costs without generating revenues. All volumes below this point mean that there is free capacity in at least one production process.

Economies of Scope

Economies of scale concern how cost levels are affected by volumes for a specific product while the concept of economies of scope refers to the links between different types of products. They support one another or substitute for each other whereby costs and revenues are affected. They have these kinds of interrelations in various types of processes: development, production, storage, marketing, delivery, administration, etc. Thus, the large firms get more market power than the smaller ones, i.e., they become more attractive as trading partners as they can offer a broader product range.

Transaction Costs

Williamson (1985, p. 103) argues that although other reasons for vertical integration exist, transaction cost economizing is the main factor responsible for decisions to integrate. Despite the production and transaction cost reasons, surrounding conditions such as political and legislative structure, and conditions of demand, may also affect decisions for vertical integration. It should also be borne in mind that production costs and transaction costs are interrelated.

Explanations for vertical integration having transaction cost origin may be examined through the dimensions of transactions, which are: asset specificity, uncertainty, frequency, and externalities. By *transaction specific assets* is meant such assets/investments whose value in every other purpose is much lower than in their intended use. Agricultural production

contains much such investments and assets. For example, an investment in a cow shed and milking machinery has little value in activities other than producing milk. Protection of such assets has universally induced dairy farmers to make special arrangements for downstream integration into milk processing.

Agricultural production is always open to *uncertainty* caused by nature. Because of many agricultural products being rather inelastic in demand, the effects of production fluctuations caused by the weather may result in the over-reaction of prices. The uncertainty is also harmful for production processes requiring stable capacity in order to utilize economies of scale with an acceptable capacity utilization rate. Forms of vertical integration have been beneficial to both production and processing.

The pace of production determines the *frequency* of transactions. In milk production, transactions have to occur many times per week. Instead of making a bidding round several times per week, some longer term contracts are likely to develop just for time-saving reasons.

Externalities means the effects of production having an impact on other parties not directly involved in the exchange. For example, lower quality milk of one producer may spoil all the milk if mixed in the same parlor. Joint responsibility of quality maintenance tends to increase the need for integration. Quality maintenance of such products has created cooled delivery chains all the way to the consumers.

Williamson (1985) argues that dimensions of transactions have considerable explanatory power in examining current organizational arrangements in exchange. Vertical integration as a mode of improving coordination is assumed to have transaction cost origin.

"The cooperative is a special kind of transaction and coordination mode. The members of the cooperative, who, in principle, rule the cooperative, have a relationship with it which is close to integration, at least as a group. Thus, the cooperative has obligations toward its members. But the obligation is not reciprocal. The cooperative usually has no authority that it can exercise over its members (Rhodes, 1985). This means that it is not a question of vertical integration between member firms and the cooperative. Nor is the cooperative a mode of horizontal integration – although a bargaining cooperative may be close to it. The member firms are independently owned, represent independent profit centers and act independently, except when they have agreed on the joint ownership of the cooperative's firm(s) or have negotiated agreements to act collectively (Shaffer, 1986)". (Ollila, 1989, p. 165)

Institutional Factors

Public Policy

Most countries in the world have an agricultural policy, aiming at giving national support and protection to the country's agriculture and food production on the domestic market, as well as obtaining some social benefits such as rural development. As is evident from the Common Agricultural Policy, the agricultural sector becomes larger than it would have been without support, i.e. larger volumes are produced by a larger number of farmers. It can be argued that such market protection benefits the position of the agricultural cooperatives. The farmers do not have a very strong incitement for rationalization and they feel more secure. So, their possibilities and motives to act individually on the markets decline.

Agricultural cooperatives have traditionally also acted as interest organizations influencing agricultural policy. In some cases, they were also used as top-down organizations. These roles have been sharply diminished.

In the large EU market no specific type of food processing firm is protected or favored. Rather, there is intense competition. The establishment of the borderless internal market has significantly increased the competitive pressure and the eventual introduction of a common currency will lead to still stronger competition. This hampers the agricultural cooperatives' possibilities to build up a large amount of capital, to be used for far-reaching vertical integration, for product development, and for brand positioning. It should, however, be mentioned that the present strong position of the agricultural cooperatives gives them market power and market protection and these strengths could last also into the far future. The possibility to earn money lies mainly in a strong market position acquired through low prices, attractive products and effective marketing. Another key to market power is the satisfaction of consumer preferences for domestic, locally produced food, and here the cooperatives are most often strong.

A future extension of the European Union to include also some of the former East Block countries is contingent upon a reformation of the Common Agricultural Policy, implying a sharp reduction of the level of support. Thereby, the competition pressure increases sharply both for the primary producers and for the processing firms. The following structural changes in primary production might affect the cooperatives negatively as the farmers become more inclined to do business directly with the processing firms, are more mobile on the markets and are less willing and able to finance the cooperatives.

Food Processing Industry

The wave of mergers and acquisitions following the establishment of the internal market has given the multinational enterprises a strong market

position. This position is further strengthened by intense product development and effective marketing. As the multinationals are working in many markets, are strongly consumer oriented and purchase their raw products from several countries, they pose a threat to the agricultural cooperative firms. Being owned by farmers of a specific country or region, the cooperatives' task is to sell the produce of these members. Thus, the cooperative firms tend to be production oriented; they are less advanced in product development in the later stages of the production chain, and they have often difficulties attaining a sufficient capital base.

These differences affect the balance between the multinational enterprises (MNEs) and the agricultural cooperatives. The MNEs select the most profitable products and markets all over the EU. They market attractive products at high prices. They manufacture products at lower costs as they are free to choose any kind of raw products from any kind of producer. The cooperative firms might be left with the less attractive markets, selling less advanced products with a given fixed raw product base.

Food Retailing Industry

Just as the food processing industry, the food retailing industry also becomes multinational, though with a few years delay and not to the same extent. That affects the working conditions of the processing firms. Retailers' increasing interest in private brands is problematic for most manufacturers as they lose control of the market. To compensate for this, they could engage in heavy and expensive product development and marketing efforts. Furthermore, very large retailers demand huge supplies of products with an even quality. All this means that the national and production oriented cooperatives face increasing difficulties in their competition with the large multinational food processors. The cooperatives might very well be left as manufacturing only private brand goods to the large retail chains, even though this type of business implies low profitability due to the exchangeability of suppliers.

There is, however, also a counter movement to the extent that a growing group of consumers want to buy their food directly from the growers or from the wholesalers. The latter, i.e. buying clubs with a number of households as members, is a phenomenon under rapid growth in the USA.

Consumer Markets

Consumer food habits are changing, though slowly. At present there are trends towards ecological and health products and towards convenience. In the USA the convenience trend takes the form of fresh prepared foods – consumers want to eat at home but not cook. This seems to be the fastest

growing single trend in food consumption. Food items prepared in large scale kitchens are consumed outside these places. Already, two-thirds from fast foods and one-third from supermarket sales are consumed as such.

Food cultures in the various EU countries do not, contrary to projections, show strong signs of equalization. Likewise, migration within the common market is less than was expected a few decades ago. Consequently, there is a reason to believe that the differences concerning consumption and purchasing behavior in the various regions of Europe will largely remain. Lessons from America confirm this – in spite of two hundred years of history and a common language there are still large differences in food culture between the various regions.

Nevertheless, it is probable that the process towards homogenization becomes somewhat stronger. Among the reasons are that the markets are more and more controlled by the large MNEs, retail trade becomes more Pan-European, and market communication does not respect any borders.

Agricultural Cooperative Food Processing Industry

Cooperative firms are organized and function in quite different ways in the different countries of Europe, as a consequence of the national legislation on cooperation and the fact that different so-called cooperative principles are applied, i.e., ways of conceiving cooperative business. In some countries, mainly in southern Europe, the cooperatives are considered to play a social role apart from its member-orientation. To the extent that this ideological basis restricts their degree of freedom of action, and thereby the economic performance, the state could grant them certain compensation, e.g., in the form of tax reductions. In other countries, e.g. Benelux, the cooperatives are working under strict commercial conditions. In between these extremes there are several combinations and variants.

Among the differences between the various cooperative models, one could mention those concerning financing. Quite often the equity capital of the cooperatives consists to a large degree of collective funds, i.e., capital in which the members can not claim individual ownership, and so, does not require payment of any dividends. Hence, the decision-makers may underestimate the cost of capital. Because of this, agricultural cooperatives tend to gather further collective capital and to utilize this capital in a less than optimal way. The price signals that the cooperatives send to their members become distorted, thereby causing a production volume larger than the economic optimum.

Production Costs

Economies of Scale in the Food Processing Industry

Who is the best owner of a business depends on how the properties of this business are related to the properties of various owner-types. If European food processing industry is to be run by agricultural cooperatives, by multinationals, by national companies, or by local entrepreneurs is decided according to the production conditions of the industry, i.e., which economies of scale exist and how pronounced these are. It follows from the competition between the different types of owners, i.e., how their costs and price levels are at different production volumes and techniques.

Principle of Bulk Transformations

Still 30–40 years ago, processing of perishable items such as milk was in most Western countries quite dispersed. The development of cooled trucks allowed longer transportation and thus made it possible to utilize economies of scale in processing. Today's technological development also causes economies of scale to be more pronounced. Now it is a matter of various kinds of technologies, most of which are efficient at large volumes. It concerns proper production technology but also transportation, product development, administration, marketing, etc. For example, the newest developments in the long-life milk technology might give the largest producers a substantial competitive advantage. After heavy investments the producer could attain a superior quality at very large volumes. Because of low perishability and no need for refrigerated transport, the haulage costs become low, thereby increasing the geographical markets considerably.

Apart from the technological development, there are also political changes to promote economies of scale, not the least the fact that the borders within the EU have disappeared. Without customs and other administrative hindrances, the transport becomes cheaper and faster which means that the markets are increasing in size, giving rise to further economies of scale. As a common currency is introduced all over the EU, the costs for trading will decrease even more.

Hence, the large enterprises have competitive advantages because of all kinds of lower production and marketing costs. Due to the European integration, the largest firms are able to operate in all markets simultaneously and this will improve their chances to reap the benefits of their large scale in all possible technologies.

Principle of Multiples

Food processing is characterized by increasing technological content in the products as well as in production and marketing. Added to this is the development towards a Pan-European industry. A consequence of these circumstances is that the number of production processes increases and that many production processes become very specialized. As the demand on the enterprises' ability to create good coordination between their different activities become higher, large enterprises will have better conditions than smaller ones.

If a large firm has unused capacity in a certain production, it can easily make use of this capacity to produce for a new market segment. The small firm has greater difficulties to do the same. A large firm with its larger product mix is better able to fill its production capacity by producing different products in its plants, while the small firm runs a greater risk that its plants are not fully utilized. Arguments of this kind are valid for all types of processes, i.e., production, storage, distribution, marketing, etc.

Principle of Massed Reserves

A firm that can spread its risks is better off in a competitive situation. Hence, a broad assortment is advantageous, as uncertainties and variations in the sales balance one another. The same is true for a firm serving many markets, especially if these markets exhibit differences as to their level of development – as one market is saturated, one can proceed to another, etc.

Thus, the European integration gives advantages to the largest firms which are able to work in many countries. The advantages are enhanced by technological development as this brings up many products that are quite unique and demanded only by a small consumer segment in each country. Actually, the technological development of products is so quick that technological innovativeness often overruns consumer preferences for unique products. As a large enough number of customers is a prerequisite for the possibility to utilize economies of scale, it is decisive that the total market is very large. This reduces the risk; if one fails on one market there is a chance for success on another. Furthermore, the various markets may supplement each other.

Following from above, large enterprises have substantial advantages over small firms. First, they may be ahead in adopting new technologies and thereby be the first ones to present new products and production techniques. The fruits of these efforts can be divided over many markets, and it is easy to transfer innovations from one market to the other. Second, this kind of firm has an opportunity to use international and very efficient market communication.

Economies of Scope

Increased economies of scale has made the trade impersonal, which has increased the need of communication. Modern information technology provides large economies of scale in advertising and public relations. Branded products provide a means of connecting these abstract messages to physical goods. This is evident today; the number of eurobrands increases, the satellites provide the same advertising to all television viewers, food retailing becomes more and more multinational, etc. Hence, the cost per consumer contact will be sharply reduced, to the benefit of mainly the largest producers.

Economies of Scale in Agricultural Cooperatives

According to some cost production theoretical arguments, agricultural cooperative enterprises should not run food processing industries very far ahead in the production chain, i.e., be involved in far-reaching vertical integration. Some arguments support the opposite view.

It should be noted that agricultural cooperatives can have different roles within a food sector, characterized by an increasing degree of large scale. On the one hand there are cooperatives which try to follow this development, i.e., investing in large scale production, product development, international marketing, etc. On the other hand, other cooperatives choose a supplementary strategy. They realize that their resources are insufficient, and try to manage on their local or regional market, or they find a role as a sub-supplier to other industries, or they supplement large producers with some kind of niche production.

Agricultural cooperatives have certain limitations as it comes to extremely large-scale operations. This is because agricultural cooperation has by necessity its root in the primary production as their owners are a group of farmers. Thereby, a certain *production orientation* is inherent in this business form, as expressed in different ways:

- The farmers have invested in their cooperatives for the purpose of getting their products marketed, and if this should be possible a certain degree of further processing might be needed. The further processed the products become, the higher are the demands for capital from the farmers. If the farmers themselves were to raise all the needed capital for very far-reaching processing, they would consider this capital very expensive. This is more true as the number of farmers decreases while food processing becomes still more capital intensive.
- The cooperatives are geographically bound to the country or region where the members are living. Even though production conditions were more favorable somewhere else, the production can not move there, except under special conditions. For example, certain agricultural cooperative dairies have established production plants in other countries, whereby they obtain sales channels for products produced in the home countries. This concerns, e.g., MD Foods of Denmark which has substantial production in the U.K., and Dutch Campina-Melkunie with factories in Belgium and Germany.
- The agricultural cooperatives are bound to the very types of product that the members are producing. These raw products are the starting point of all other production. Thus, alternative raw products, that competing food processing industries are working with, are rejected. It is not in the interest of the farmers that their cooperatives should operate in a variety of industries like the MNEs do.
- Furthermore, the agricultural cooperatives can hardly reach such a large size and such a high degree of diversification as achieved by the multinationals. Mergers between cooperatives crossing borders are almost nonexistent today. The future might bring some multinational cooperatives, but such firms would be difficult to control.

- Some agricultural cooperatives are based on an ideological element, whereby they are involved in certain social activities even though this is cost demanding. This could concern equal treatment, democracy or support to weaker member groups.

There are, however, also production cost theoretical arguments to support agricultural cooperative firms' vertical integration far ahead in the production chain:

- Many agricultural cooperatives have solved their financial problems by building up a large amount of collective capital. The cost of this capital is low. But also the individual equity capital is cheap, as the members often reap the benefits of their membership in the form of good product prices instead of as dividends on the invested capital.
- The fact that suppliers are also owners implies that it is possible to coordinate certain functions and thereby reduce some costs. The members are often willing to adjust their operations according to those of the cooperative enterprise.
- If it is necessary, the farmers are willing to accept lower prices when selling to their own cooperative, at least for a limited period of time.

Transaction Costs

Explanations to Vertical Integration

Transaction-Specific Assets

Agricultural production has typically investments which have characteristics of transaction specificity. Investments such as animal facilities, possible preparation of fields to a specific purpose, knowledge about specific conditions of such fields, etc., have very little value in any other purpose than in the production of the intended product. Because such investments may lose their value if the circumstances change, the possibility of these kinds of situations is likely to be prevented by special arrangements, often by vertical integration.

At the processing level, large transaction specific investments are sometimes made for research and product development not having alternative value. In order to safeguard these investments, special arrangements with packaging, advertising, etc. are made. Some products such as certain dairy products, prepared foods and other perishable products may also have special, processor-owned equipment in the stores to guarantee the desired quality.

Another investment is the establishment of brand name. In some products the environment in the retail outlets needs manufacturer control to guarantee the promise included in the brand name. However, reasons for vertical integration stemming from transaction specific investments seem to be stronger closer to the production level than closer to the consumer.

Uncertainty

As mentioned above, a considerable source of uncertainty in agricultural production comes from nature. Uncertainty in agricultural production also has induced activities for political safeguards. Agricultural and food policy has increased in importance in all the Western countries which in turn has made it advantageous to integrate the production and processing to gain political influence. The influence has become even more important when the risk of political uncertainty in agriculture is increasing. The risk is large because of the comprehensive role of political influence in agriculture, and because of the decreasing political influence of the farmer population.

Another source of uncertainty favoring integration in agriculture concerns product specification. Especially considering perishable agricultural products, the specification at the stage of purchase may be difficult. Harmful effects of quality deterioration may become visible much later.

Investments made in factors mentioned in the category of transaction specific investments, such as R&D and building a brand name, are long-term commitments. Development of a new product may take years. Uncertainty concerning changes in the environment during that period (change in consumer tastes, new legislature, etc.) must be safeguarded by reducing this kind of uncertainty (technological imperatives, see Galbraith, 1967). Vertical integration is a powerful tool to control the entire production-distribution chain against such uncertainties. Market power, gained from such kinds of concentration, may be used also as a political tool in order to influence political decision-making.

Frequency

In the case of varying frequencies between the production and the need for processing, some forms of integrating arrangements are likely to be borne as well. If the crop ripens once a year, while the processing level needs products throughout the year, this may make it beneficial to both parties to make a contractual arrangement in order to secure the delivery for the producer, and the availability of raw materials for the processor. The importance of such arrangements even increases if the product in question is very purpose-specific or the need of special quality properties is high.

New consumer preferences to eat at home but not cook change the demand towards fresh prepared foods. Manufacturing of fresh prepared foods requires high-frequency deliveries close to consumers. Freshness of products has beaten the large-scale economies in delivery, and items are delivered by the processor directly to the retail outlets. The need for the right environment has created special arrangements for deliveries. For example, Stouffer's, a leading U.S. manufacturer of fresh and refrigerated foods, has 15 different cool chains from the processors to the selling outlets. The maximum time from processors to consumers is eight hours. This development has also increased the integration of processors to restaurant businesses as is the case of Domino's Pizza.

Externalities

Milk as raw material is a bundle of raw materials, butterfat, protein, liquid, etc., which are interrelated but used for different purposes by varying their proportions. Coordination of various components to uses for different products has been easier to arrange in integrated production.

Vertical integration because of the increase of fresh prepared foods may also be explained under the category of externalities. In order to prevent external effects, special arrangements between processors and retail outlets are needed.

One of the fundamental prerequisites for the utilization of both market coordination through vertical integration and the economies of scale has been the fact that there have been enough customers sharing similar tastes. The development of one customer's preferences' external effects to others is crucial to the future organizational evolution in the European food systems.

Observations Critical to Vertical Integration

Transaction-Specific Assets

The fast development of computer technology has made many transaction-specific assets much more redeployable. Similar kinds of such technology may often be easily converted into other purposes. Improved transportation, conservation, and packaging technology have significantly decreased the site-specificity of production.

There are also signs of decreasing importance of brand label strategy. Consumer loyalty seems to be fading in products where the uncertainty of expectations is becoming less important. Despite the fact that Coca-Cola and Pepsi are very strong brand names, consumers are more and more choosing the one which happens to be on sale in the store. Another reason is the fast development of consumer tastes. In the U.S. the sales of salsa is higher than the sales of ketchup. What can a strong ketchup brand name such as Heinz do in the salsa market?

Uncertainty

As the consumer markets become more ethnically diversified as well as less predictable, large and well controlled organizations run into difficulties; the consumers are continually changing their minds. If flexibility becomes the main indicator of successful food industries, vertical integration may be in trouble.

Increasing impersonality in fresh food markets such as vegetables and fruits has resulted in the decreasing identity of products. For a customer, it is difficult to utilize experiences from past purchases while buying e.g. nameless vegetables. Because of the large number of producers and difficulties in preserving the quality, attempts to overcome this problem by branding the products have not always succeeded. Personalization of such

products may require local deliveries and personal knowledge of the initial producer. Such deliveries are likely to by-pass an integrated system.

Frequency

Frequent transactions have created questions about the real efficiency of large machineries in dealing with such food items. Questions have considered e.g. the meaning of transporting agricultural products to a central warehouse and back, perhaps to the same village. Integrated systems have been good in defending their well planned and complex structures.

Certain consumer groups have organized systems of buying items by circumventing the entire system. Direct sales and farmer's markets in Finland are examples of such organizations. The price clubs in the U.S. have forced the established delivery systems to provide portions of retail store areas for the use of such price clubs. This movement may have an effect of increasing the variety of delivery alternatives in currently integrated delivery systems.

Externalities

The possible further diversification of tastes and ways of consuming food items creates a real challenge to the vertically integrated systems. Ethical mixtures through migration, impulses coming from increased traveling, and information acquired from foreign countries by TV are increasingly challenging the prevailing relatively homogeneous food tastes and consumption patterns.

Stronger attitudes against preservatives and industrial production, towards animal rights, sustainable technology, etc., favor in many respects smaller, non-integrated units. An increased danger of animal and plant diseases may also limit the extent of integrated and large scale units.

Factors Supporting Cooperative Form of Integration

In the section above, factors supporting vertical integration in general have been considered. It should be remembered that the cooperative is a special kind of integration mode. However, it is easily observed that in agriculture the cooperative form of vertical integration is widely used. In this section, reasons for choosing this form of integration are examined.

Differing economies of scale in agricultural production and processing make it difficult to establish a large enough agricultural production unit to be able to utilize economies of scale in food processing. Experiences of large farms have not been supportive, e.g., in former socialistic countries. A natural way of integrating smaller scale production and larger scale processing has been the cooperative form. Cooperatives have been favored over farmer-owned share companies because of the cooperative property of controlling the firm according to use instead of capital invested.

It is typical in food production that there are transaction specific assets on both sides, in production and in processing, and simultaneously

differing economies of scale. Safeguards against such assets would hardly be possible in any other form of governance except in a cooperative.

The high proportion of collective equity capital in many agricultural cooperatives can be regarded as a transaction-specific asset. This capital is fixed, i.e., it can hardly be invested for many alternative purposes. The cooperative would have difficulties to distribute it to the members or anyone else, so it must remain in the cooperative. The firm can not invest the capital in any other assets than those which are linked to the members' production.

This all means that barriers to exit are extremely high in agricultural cooperatives, especially if their equity consists of a high share of collective capital. Barriers to exit also include a resistance to major changes, such as decreasing the size or restructuring the activities of the firm.

Other transaction-specific assets are those that the management, elected officials, and members have made as they decided to take part in the agricultural cooperatives. These are investments which these people have made in themselves: their knowledge, feelings and values. For these people, it would therefore be disastrous if the cooperatives were to be dissolved, shrink, change business form, reorient their activities, or undergo other drastic changes.

In a cooperative the various sources of uncertainties mentioned above have been possible to transform into risk distributed to the entire membership instead of overwhelmingly affecting a few. This has been possible because of the relational contract nature of the cooperative, in which the final result is divided afterwards according to actual performance.

Being also enhanced by political decisions, agriculture has supported the development of joint political efforts of agricultural producers, which properties have been built into cooperatives. The cooperative role as an interest organization is very important in many countries, as well as in many fields of agricultural production and processing. Along with the decline of the agricultural population, the need for collective action is expected to increase.

There are signs that a proportion of the value added to the food items may be shifting back to the rural areas, even to the farms. High transaction costs for such small enterprises reaching distant, or even international markets, may be predicted. Cooperatives are effective institutions in lowering these kinds of transaction cost.

Limits of the Cooperative Mode in Food Marketing Systems

Many of the present food products are the outcome of combining a variety of inputs through complex processes. Knowledge as an input is increasing, while the relative importance of a single raw material is decreasing. Hence, the control of the entire processing according to the interests of one type of raw material producer becomes increasingly difficult. It becomes even more difficult because of the diminishing

capabilities of cooperative members to comprehend and govern complex processing and management processes of modern, large food processing enterprises.

Increasing varieties of complex food items also require special raw material properties (van Dijk and Mackel, 1994). Grain, milk or meat can not be 'all purpose' raw material, but its fractions have special properties for very specific uses. This may lead to increasing heterogeneity of interests among producers who formerly produced identical products. The interests of a farmer producing milk for a special cheese variant may be different from the one producing milk for consumption. These two variants also require differing incentive structures, mainly prices. Such differential treatment within increasingly heterogeneous memberships might be a germ to conflicts, hampering member control. As primary production tends to become still more specialized, there are also increased risks in the production. For smaller cooperatives which are not able to spread their risks over several product lines, this specialization might pose a threat.

While there might be strong arguments for vertical integration in the food processing chain, there are alternative ways to reach this high degree of coordination, other than the cooperative business form. The clear evidence of this is seen in the poultry industry where the primary production in many countries is controlled by large enterprises with their bases in the fodder industry or in food processing. A similar development is now well under way in the American pork sector, and there are also some European experiences of the same kind (Coffey, 1993).

To be successful in the market, a processor should establish himself in this particular market. This may require decisions concerning the form of subsidiaries which could help the integration into the local networks of that market. It is very difficult for the head-quarters, located far away from the market, to have a sufficiently high level of knowledge about what is happening in various markets.

A cooperative firm has difficulties in this respect. Firstly, foreign establishments require heavy investments which the members/farmers are hardly willing to accept. Secondly, increasing market orientation makes it difficult for the cooperative management to decide whether to listen to the members or the consumers. If the enterprise establishes a close connection to the markets, the effect might be that its connection to the members becomes weaker. It is hardly possible to have strong links in both directions at the same time. Observations from the USA indicate this. For example, an agricultural cooperative in the Midwest can easily sell its raw products to a processor in California, while it would have great problems in selling consumer products to California due to a lack of knowledge about the characteristics of this remote market.

Consumer demand becomes increasingly diversified and fragmented, i.e., the market segments increase in number. The rising standard of living contributes to this heterogenization, as does technological development, making products still more specific and unique. Nevertheless, it is possible to serve these small-buyer categories, due to the fact that the total

market is expanding. As the small market segments in various countries or regions are added, the volume could become sufficiently large. However, agricultural cooperatives have greater difficulties to practice such a segmentation strategy than the large MNEs have. Among reasons for the favoring of MNEs are differences in sizes, capital base, technological level, and management, all of which favor advanced marketing procedures on international markets.

Already today there is a tendency of declining vertical integration; the complex food processing stages are changing into share companies while the cooperatives, often owners of these companies, are increasingly concentrating on operations close to them, i.e., collecting and collective bargaining. Thus, the farmers' cooperatives get back to the basics. Such a development is observed e.g. in the Finnish milk processing industry.

The farmers would have difficulties to control the cooperative firms if these were as large as the multinationals and had the same complex structure, including technological and marketing skills. The competencies of the farmers lie in the control of cooperatives that are working with tasks close to the farmers' own production.

Especially in southern Europe, the cooperative business form is considered to contain certain ideological elements, implying, e.g., that cooperatives should play a role for society at large. Such ideology could prevent price differentiation, regulate members' voting rights, limit the rate of interest on individual equity capital, distort market signals, etc. It is evident that these cooperatives suffer from such demands as it prevents them from adapting perfectly to market conditions and their long-term viability as business firms is at stake (Knutson, 1985; Nilsson, 1996; Cosgrave, 1994). To compensate for these losses in efficiency, the governments in some countries give beneficial treatment to the cooperatives, e.g. in the form of tax reductions. These cooperatives are also at risk, i.e. strains on the state budgets might cause the governments to reduce their support and so, the cooperatives' relative competitive disadvantage in terms of efficiency will threaten their existence. No matter what type and nationality of the cooperative, the success of agricultural cooperatives is contingent upon their ability to adapt to market signals.

Conclusions

The developments in today's European food processing industry are clearly in favor of very large firms, not least the multinational enterprises. The on-going integration within the European Community, as well as the technological development, are fostering large scale production and marketing. In this process the agricultural cooperatives have a problematic position as they are inherently production-oriented, have often weak capital bases, and have difficulties in becoming very large.

Still, the cooperative business form will survive because of its governance structure being superior in coordinating the primary production.

Regarding the first levels of the production process, i.e., the collection of products and primary processing, the cooperatives will keep their leading position also in the future. After the first stages of processing, i.e., getting the products into a non-perishable form, the relative advantage of the cooperative mode decreases. In addition to this, the increasing complexity of processing and management of a large firm makes it difficult to control the enterprise in the cooperative form.

It might be expected, however, that the strong position that many agricultural cooperatives have today in the food processing industry can to a great extent be preserved. Those cooperatives which are large at present, will find alternative organizational set-ups in their efforts to preserve strength. Among these, one may imagine new financial instruments, jointly-owned subsidiaries, and choice of specific types of businesses.

Other agricultural cooperatives, which are relatively large but are not able to keep the pace with multinational enterprises, will choose a role as suppliers of private brand products to the large retail chains. This strategy does, however, involve great strains as the level of profitability will be squeezed. Hence, they are withdrawing from the most advanced levels of the processing chain. An attractive position for many cooperatives could be the one of supplier of raw or semi-processed products to investor-owned processing firms. This strategy is a promising one as agricultural cooperatives have a marked competitive advantage in producing large volumes of products of high and stable quality (Søgaard, 1994). The trend of breaking up the agro-industrial system into a collecting cooperative and a processing share company owned by the cooperative may also be reinforced.

The rest of the cooperatives, mainly the smaller ones, will try to adapt to their local or regional markets. They will lose a part of their sales volumes in the competition with the larger processors, especially the most profitable parts of the sales, but they will be able to survive with the standard, low margin products. Their resources will not suffice to develop very sophisticated products and to use advanced marketing techniques. In this category, there will probably be a wave of mergers between the cooperative societies.

The development towards multinational agricultural cooperatives, i.e., mergers across borders, is less probable because this will create considerable problems concerning the control of firms and the distribution of their results. Also, the degree of membership heterogeneity will increase to a level where it is difficult to satisfy the differing interests of all the members. Nevertheless, a certain number of such multinational cooperatives might be created.

To the extent that the cooperatives grow extremely large, their cooperative character might be threatened. The membership will face increasing difficulties in controlling the enterprise according to the 'voice' principle, and instead their influence is reduced to 'exit' possibilities, i.e., the members' relationship to the cooperative will resemble that of their

relationship to investor-owned firms. This will also reduce their willingness to contribute with financial resources unless they receive market-rate interests.

Considering the disadvantages that agricultural cooperatives have in relation to the large multinationals, one could expect that there will be many bankruptcies among the cooperatives. However, one should bear in mind that there are very high barriers to exit in the cooperative businesses. They will keep on struggling for many years, and thus changes in the structure of the European food processing industries will not take place very rapidly.

One might also expect differences between cooperatives in other respects. The cooperatives will face the greatest problems in industries where products and production are highly technological, capital intense, large scale, and complex. Likewise there might be geographical differences; cooperatives operating in markets which are less attractive for large companies will have greater chances for continued success, while those facing stiff competition from the multinationals will have a more problematic future.

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Part III

Performance in Business Sectors

9 Impact of Mergers and Acquisitions on Structure and Performance in U.S. Food Industries in the 1980s

Francis Declerck

Since the early 1980s, an important wave of mergers and acquisitions has occurred in the U.S. food industries. That wave of transactions in the market for corporate control may have altered industrial structure and corporate performance. Mergers and acquisitions among competing firms in the same market lead toward more concentration. However, Ravenscraft and Scherer (1987) note that Peter Drucker observed in 1982 that “two mergers out of five are outright disasters, two neither live or die, and one works.” Assuming profit maximizing firms, and observing the current heavy financial losses faced by very concentrated industries such as U.S. automaking or world airlines, it seems that food companies' behavior is difficult to understand.

Moreover, articles in business magazines allege excessive premiums paid to acquire food companies – a premium is the difference between a target firm's takeover value and pretakeover value. These firms operate in industries characterized by a high level of concentration. Acquirers may pay a higher premium because they expect higher profits. However, such a theme has not been studied yet.

Theoretical and Empirical Considerations

The U.S. food industries experienced slow growth in the 1980s. During the years 1977 to 1987, the number of companies declined in nine of the ten food sectors defined at the three-digit level of SIC code, as shown in Table 1. These reorganizations are contrary to the general movements in other manufacturing industries. They were motivated by slow growth in the demand for food. It is also likely that they resulted in operating efficiency gains.

In the 1980s, acquisitions have been followed by the sell-off of numerous target company divisions. On average, there were 45 divestitures recorded by *Mergerstat Review* each year in the U.S. food industries for 71.7 acquisitions per year from 1981 to 1990. That is about 63 divestitures for 100 takeovers, which is a very high proportion relative to the proportion of 39 divestitures for 100 takeovers in all U.S. industries. The proportion of divestitures varied between 43% and 81% in the years 1981 to 1989. Data about divestitures are published by W.T. Grimm & Co. In the sample of 114 mainly cash takeovers drawn from the *Mergerstat Review* records, 35 of

them involved divestitures. The proportion of divestitures also seems similar in both the early and late 1980s, since it varies between 15% and 43% in the years 1981 to 1984 and between 7% and 86% in the years 1985 to 1989. The average proportion of divestitures in the sample is about 31%. It is smaller than the proportion recorded for the population of takeovers mentioned above, because *Mergerstat Review* only publishes the transactions for which both a purchase price and the seller's earnings were available, while it records the number of deals on a larger basis by including those without price and earning information. In fact, a lot of takeovers involving a divestiture were friendly and no information was released about the terms of the transactions.

Table 1 Number of U.S. Food Processing Companies at the 3-digit Level of SIC Code, 1977–1987

SIC code	Industry	1977	1982	1987
	All manufacturing industries	279777	281616	310341
20	Food and kindred products	20616	16813	15692
201	Meat products	3967	3218	2767
202	Dairy products	2837	2103	1700
203	Preserved fruits and vegetables	1752	1642	1438
204	Grain mill products	2094	1915	1722
205	Bakery products	2797	2165	2349
206	Sugar and confectionery products	990	880	918
207	Fats and oils	591	474	340
208	Beverages	2440	2019	1697
209	Miscellaneous food and kindred products	3794	3469	3271

Source: Bureau of the Census. 'Census of manufactures: General summary'. U.S. Department of Commerce, Washington, D.C., 1977, 1982 and 1987.

Those divestitures may have been motivated by two major reasons, i.e. a need to repay loans incurred to finance the takeover, and efficiency gains. Some divested parts that were acquired under the acquirer's management, have low expected profitability because of lack of skills and expertise in several different types of business. Consequently, the reduction in the number of food companies has led to an increasing concentration of sales and assets in the hands of fewer and fewer corporations. As a result of horizontal takeovers and competition, aggregate concentration has increased sharply in U.S. food industries in the 1980s (USDA and ERS, 1990; Marion and Kim, 1991). Marion and Kim (1991) estimated that concentration in six food industries (flour milling, soybean crushing, wet corn milling, cottonseed oil milling, beef packing, and broiler processing industries) increased an average 23 points during the period 1977 through 1988. Internal growth accounted for 7.6 points, that is about one-third of the increase in industry concentration, and mergers and acquisitions accounted for 15.6 points, that is about two-thirds of the rise in concentration. Studying U.S. food industries, Connor et al. (1985) conclude that "*structural oligopoly is the rule rather than the exception*". Cotterill and Iton (1991) evaluated the structure profit relationship in food

manufacturing using the Profit Impact Market Strategy (PIMS) data base with observations covering the 1972 to 1987 period. They reject the "hypotheses that relative efficiency is the source of profits for large market share firms, and that increased rivalry among large firms results in lower industry profits". In accordance with previous studies, they reiterate that market share and concentration are the primary indicators of market power in a market. Declerck and Sherrick (1993) show that for industries with a top-4-firm concentration ratio (CR4) greater than 38%, profit appears to be increasing at an increasing rate with the degree of concentration. Throughout the decade, food firms in highly concentrated sectors may have been bought to take advantage of operating synergies (efficiency gains) and/or market power.

Food companies may pay higher premiums to acquire food firms in highly concentrated food industries because they expect higher profits coming from efficiency gains and/or market power benefits.

Methodology

The hypothesis of higher premiums paid for targets in highly concentrated sectors than for targets in less concentrated sectors is tested by an event-study approach, as is usually done in corporate finance. Event-studies are based on the fact that market prices respond quickly to new information according to the change in investors' expectations. Stock markets are assumed to be semi-strong form efficient, in accordance with most studies (Weston and Copeland, 1986). Stock and bond prices quickly and fully incorporate all available public information. Therefore, it is essential to know the date of takeover announcements. Investors expect to earn a predicted (or expected) rate of return specific to each stock. However, expected stock performance also depends on industry and macroeconomic events; they are correlated with the rate of return for all market stocks because of firms' interdependence. Moreover, there may be some leak of information a few days before the official announcement. Some consequences of a takeover announcement may be grasped by all investors not immediately but over some days. Therefore, the deviation of a stock price from its expected price in case of a takeover announcement should be evaluated over a few days instead of a single day to capture most effects of the event.

An acquisition premium can be estimated by measuring abnormal stock market performance returns for target firms. A return is the change in the total value of an investment in a common stock over some period of time per dollar of initial investment. The return of a stock on day t is based on a purchase on the preceding trading day ($t-1$) when the security had a valid price. The problem to solve in every event-study is to separate the expected return in the absence of the event from the abnormal return caused by the event, namely by the new information made available to the market regarding firm value. An event period (or event window) is defined in order to capture all the firm's stock returns that are associated

with the event, namely the takeover announcement. It is centered on the announcement date called day 0. For each day t in the event period and for each target firm i studied, expected or 'normal' return $E(r_i)$ is computed as if there is no event. Expected return can be estimated by two different methodologies as given in the literature: the market model approach and the market adjusted return approach. Those methods usually produce similar outcomes about cumulative abnormal returns due to the takeover, but the market-adjusted return approach is less likely to be subject to substantial errors (Brown and Warner, 1980; Weston et al., 1990). Another method can be used to estimate the premium paid over the market price. It is the offer to market price approach.

Measurement of abnormal returns is made for a short term horizon, namely a short event period in order to capture investors' short term reaction to the unanticipated information included in a particular event. The event window (-20 to +20) seems relevant. It is extended over a period from 20 trading days before to 20 trading days after the announcement date. It covers $D = 41$ trading days, i.e. one month before and one month after the takeover announcement. The period may allow for capturing abnormal returns without too much noise due to other events. In the selected sample, 13 out of 55 target firm stocks are no longer traded between the twenty-first and the fortieth day following the announcement day. A window (-40,+40) is not appropriate because of too many missing data. Moreover, such a long event period may capture most of the effects of the event, but stock price data includes a lot of noise. In contrast, a shorter window than the period (-20,+20) would capture the effects of a takeover announcement only partially. The pre-event period include days not affected by the event. It must be as 'clean' as possible, that is without price changes reflecting information about the takeover. This seems to be the case before the fortieth day preceding a takeover announcement. The period (-40,-20) does not seem 'clean' enough to be included. A pre-event period of $T = 253$ days is determined to cover all cyclical and seasonal patterns over a calendar year. The pre-event period (-293,-41) is chosen with respect to the takeover announcement date.

The market model approach and the market-adjusted return method are chosen because they have largely shown their usefulness and good power. The daily return of the market is estimated by the daily return of the Standard and Poor's 500 Composite index which is a type of market value index (including all distributions) on the NYSE and AMEX exchanges.

Procedures with the Market Model Method

In the market model approach, the return for each firm i is determined from the co-movement of a firm's return with the market return. A pre-event period, before the event period, is chosen to estimate the specific firm parameter b_i required to compute the daily expected returns during the event-period.

The market model of Fama (1973) is used to eliminate the elements of each firm's price change that depend on the market. In market equilibrium, the market model expresses a linear ex-ante function between the return on the shares of firm i and the return of the market portfolio.

$$(1) R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

where,

- $i = 1 \dots N$, is a firm index,
- $t = 1 \dots T$, is a day index in the event-period,
- R_{it} is the rate of return on firm i for day t ,
- R_{mt} is the rate of return on the market portfolio for day t ,
- β_i measures the sensitivity of firm i to changes in the market portfolio's rate of return, this is a measure of systematic risk on firm i ,
- α_i measures the mean return over the event period not explained by the market,
- and ε_{it} is a statistical error term, $\sum \varepsilon_{it} = 0$.

The market model has its foundations in the Markowitz's micro model of portfolio choice. It requires restrictive assumptions on characteristics of assets markets and investors:

- One period model;
- Markets are highly efficient, information is freely available, assets are perfectly divisible, and there are no transaction costs and no tax;
- The market portfolio is efficient;
- Investors are risk-averse and well diversified;
- Investors have the same expectations and can choose between assets on the basis of expected return and variance. Then, probability distributions for asset returns are all normally distributed or the investor's utility function is quadratic.

In most previous works, the market portfolio is estimated by the S&P 500 Composite Index. Furthermore, if the estimates a_i and/or b_i evaluated in the pre-event period are very different from zero and one respectively, they may reflect that the firm i did exceptionally well or bad. The predicted return of firm i in the event period is estimated conditionally on what happened to the market in the pre-event period. Consequently, the estimation of the predicted return of firm i in the event-period assumes a similar firm's behavior in that period even if such a benchmark may be biased. Consequently, the difference between the actual rate of return R_{it} and the predicted return $E(R_{it})$ yields an abnormal return (AR_{it}), which is also biased.

$$(2) (AR_{it}) = R_{it} - E(R_{it}) = R_{it} - [a_i + b_i R_{mt}]$$

For example, if alpha is estimated greater than zero ($a_i > 0$) because firm i was overperforming in the pre-event period, then the abnormal return (AR_{it}) computed in the event-period with such a positive a_i tends to be negative. Inversely, if alpha is estimated inferior to zero ($a_i < 0$) because firm i was underperforming in the pre-event period, then the abnormal return (AR_{it}) tends to be positive.

Despite its shortcomings, the market model provides a simple and straightforward measurement and plausible results that lead to meaningful benchmarks by taking account of the risk (associated with the market) – return relationships for firm stocks. It is the most widely used method.

For the market model approach, estimates of the historic parameters a and b in the pre-event period are obtained by regressing $T = 253$ trading days of data beginning before the announcement period, in order to cover all cyclical patterns related to a calendar year. For each day t in the event period and for each studied target firm i , the residual or abnormal return, $(AR_{it}) = R_{it} - E(R_{it})$, is the part of the return that is not predicted by the market. Then, it represents the stock price change caused by the event for target firm i on day t .

The abnormal returns (AR_{it}) are cumulated over all days during the event period. The cumulated abnormal returns (CAR_i) are produced for each firm in the two groups of studied firms: $(CAR_i) = \sum (AR_{it})$ for $t = 1$ to D days in the event-period. The (CAR_i) measures the total effect of the event, here takeover, for firm i .

The abnormal return (AR_{it}) is distributed independently of S_i^2 . Its variance is $(\sigma_i^2 C_{it})$, estimated by $(S_i^2 C_{it})$. The cumulative abnormal return (CAR_i) equals $\sum (AR_{it})$ for $t = 1$ to D days in the event-period. Its variance is $(\sigma_i^2 (\sum C_{it}))$, estimated by $(S_i^2 (\sum C_{it}))$ for $t = 1$ to D . The statistic ω_i can be constructed:

$$(3a) \omega_i = \sum (AR_{it}) / \sigma_i (\sum C_{it})^{1/2} \text{ follows a Normal distribution } N(0,1) \text{ and}$$

$$(3b) (T-2) S_i^2 / \sigma_i^2 \text{ follows a Chi-square distribution with } (T-2) \text{ degrees of freedom, where } t = 1 \text{ to } D, \text{ day index in the forecast (event) period.}$$

The average cumulative abnormal return (ACAR) of a sample of N firms is formed:

$$(4) (ACAR) = 1/N \sum (CAR_i) \text{ for } i = 1 \text{ to } N \text{ firms in the studied group.}$$

Assuming that the cumulative abnormal returns (CAR_i) are distributed normally and independently across a sample of N firms, the variance of $(ACAR)$ is $[1/N \sum (\sigma_i^2 (\sum C_{it}))]$, estimated by $[1/N \sum (S_i^2 (\sum C_{it}))]$ for i varying from 1 to N . The statistic Z is constructed to test the significance of the average cumulative abnormal return $(ACAR)$ of the N firms:

$$(5) Z = (ACAR) / [1/N \sum (S_i^2 (\sum C_{it}))]^{1/2}$$

The statistic Z follows a Student distribution with $(N-2)$ degrees of freedom and tends to the unit Normal $N(0,1)$ for large N . The statistic Z can be used to test the significance of average cumulative abnormal return (CAR) of N firms.

It is also possible to compare the average cumulative abnormal returns $(ACAR)$ of two samples of firms $(ACAR)_1$ for a sample 1 of (N_1) food firms in highly concentrated industries and $(ACAR)_2$ for a sample of (N_2) food firms in less concentrated industries. The two samples are independent. The statistic Z_{1-2} is constructed:

$$(6) Z_{1-2} = [(ACAR)_1 - (ACAR)_2] / (V_1 + V_2)^{1/2}$$

where $V_1 = [1/N_1 \Sigma (S_{i2} (\Sigma C_{it}))]$ is the variance of $(ACAR)_1$, and $V_2 = [1/N_2 \Sigma (S_i^2 (\Sigma C_{it}))]$ is the variance of $(ACAR)_2$.

The statistic Z_{1-2} follows a Student distribution with $[N_1 + N_2 - 2]$ degrees of freedom and tends to the unit Normal $N(0,1)$ for large $[N_1 + N_2 - 2]$. The statistic Z_{1-2} can provide a two- (or one-) sided test of the following hypotheses:

H_0 : the average cumulative abnormal return (ACAR) of the firms in the two samples 1 and 2 are equal;

H_a : the average cumulative abnormal return (ACAR) of the firms in sample 1 is not equal to (is greater than/less than) the (ACAR) of the firms in sample 2.

Procedures with the Market-Adjusted Return Method

The market-adjusted return approach differs from the market model method in the definition of predicted return. The predicted return for firm i on day t in the event period is the return on the market index for that day:

$$(7) R_{it} = R_{mt}$$

This method is an approximation to the market model where $a_i = 0$ and $b_i = 1$ for each firm i . There is no bias associated with estimates a_i and/or b_i evaluated different from zero and one respectively. Usually by the market model method, the estimate of a_i is close to zero and the average estimate of b_i over all firms is one, then the approximation used in the market-adjusted return approach produces reasonably good outcomes (Weston et al., 1990).

In applying the market adjusted return method, the abnormal return of firm i for each day t in the event-period is:

$$(8) (AR_{it}) = [(R_{it}) - (R_{mt})].$$

Its variance is $(\sigma_{it})^2$.

The average abnormal return (AAR_i) of firm i during the event-period is:

$$(9) (AAR_i) = (1/D) \Sigma (AR_{it})$$

where $t = 1$ to D , day index in the event period.

The cumulative abnormal return (CAR_i) are obtained for each firm i :

$$(10) (CAR_i) = \Sigma (AR_{it})$$

where $t = 1$ to D , day index in the event period. Assuming that the abnormal returns (AR_i) are distributed normally and independently across the D days in the event-period, the variance of (CAR_i) is $(\sigma_i)^2 = \Sigma(\sigma_{it})^2$.

The average cumulative abnormal return (ACAR) of a sample of N firms is formed:

$$(11) (ACAR) = 1/N \Sigma (CAR_i) \text{ for } i = 1 \text{ to } N \text{ firms in the studied group.}$$

The cumulative abnormal returns (CAR_i) are assumed to be distributed normally and independently across a sample of N firms. The variance of (ACAR) is estimated by $[1/N \Sigma(S_i^2)]$ for i varying from 1 to N . The statistic

Z is constructed to test the significance of the average cumulative abnormal return (ACAR) of the N firms:

$$(12) Z = (\text{ACAR}) / [1/N \Sigma(S_i^2)]^{1/2}$$

The statistic Z follows a Student distribution with (N-2) degrees of freedom and tends to the unit Normal N(0,1) for large N. The statistic Z can be used to test the significance of average cumulative abnormal return (CAR) of N firms.

It is possible to compare the average cumulative abnormal returns (ACAR) of two samples of firms (ACAR)₁ for a sample 1 of (N₁) food firms and (ACAR)₂ for a sample of (N₂) other food firms. The two samples are independent. The statistic Z₁₋₂ is constructed:

$$(13) Z_{1-2} = [(\text{ACAR})_1 - (\text{ACAR})_2] / (V_1 + V_2)^{1/2}$$

where V₁ = [1/N₁ Σ(S_i²)] is the estimated variance of (ACAR)₁, and V₂ = [1/N₂ Σ(S_i²)] is the estimated variance of (ACAR)₂.

The statistic Z₁₋₂ follows a Student distribution with [N₁ + N₂ - 2] degrees of freedom and tends to the unit Normal N(0,1) for large [N₁ + N₂ - 2]. The statistic Z₁₋₂ can provide a two- (or one-) sided test of the following hypotheses:

H₀: the average cumulative abnormal return (ACAR) of the firms in the two samples 1 and 2 are equal;

H_a: the average cumulative abnormal return (ACAR) of the firms in sample 1 is not equal to (is greater than/less than) the (ACAR) of the firms in sample 2.

The Offer to Market Price Approach and Measurement of Premium

In the offer to market price approach, the premium paid over the market price is measured as a percent of the final offer price over the closing price 5 trading days before the announcement date. The estimation of the premium by this method is usually simple because there is no computation of daily abnormal return during an event period. This method can only be used for target firms. For the firm i, the premium P_i is computed as followed:

$$(14) \text{Premium } P_i = \text{Offer Price} / \text{Market Price at day } (-5)$$

The average premium (AP) of a sample of N target firms is formed:

$$(15) \text{AP} = 1/N \Sigma (P_i) \text{ for } i = 1 \text{ to } N \text{ target firms.}$$

The variance V of the average premium is estimated by:

$$(16) V = [1/(N-1) \Sigma (P_i - \text{AP})^2] / N \text{ for } i \text{ varying from } 1 \text{ to } N.$$

The statistic Z is constructed to test the significance of the average premium (AP) of the N firms:

$$(17) Z = (\text{AP}) / V^{1/2}$$

The statistic Z follows a Student distribution with (N-2) degrees of freedom and tends to the unit Normal N(0,1) for large N. The statistic Z can provide a one sided test of the following hypotheses:

H₀: the average premium (AP) of the N target firms is equal to zero;

H_a: the average premium (AP) of the N target firms is greater than zero.

It is also possible to compare the average premium (AP) of two samples of target firms (AP)₁ for a sample 1 of (N₁) target firms and (AP)₂ for a sample of (N₂) other target firms. The two samples are independent. The statistic Z₁₋₂ is constructed:

$$(18) Z_{1-2} = [(AP)_1 - (AP)_2] / (V_1 + V_2)^{1/2}$$

where V₁ is the estimated variance of (AP)₁, and V₂ is the estimated variance of (AP)₂.

The statistic Z₁₋₂ follows a Student distribution with [N₁ + N₂ - 2] degrees of freedom and tends to the unit Normal N(0,1) for large [N₁ + N₂ - 2]. The statistic Z₁₋₂ can provide a one-sided test of the following hypotheses:

H₀: the average premiums (AP) of the firms in the two samples 1 and 2 are equal;

H_a: the average premium (AP)₁ of the firms in sample 1 is greater than the average premium (AP)₂ of the firms in sample 2.

The statistical procedure used in the offer to market price approach to test differences in premiums paid is also employed to test differences in multiples of purchase price to book value of the acquired firms.

Data

In order to test the hypotheses, data are gathered from the W.T. Grimm series. The Grimm series is published in the *Mergerstat Review*. It reports all public transactions announced that involved at least 10% of a firm's assets and was valued at \$500,000 or more. One party of the transaction must be a U.S. company, hence foreign acquisitions of U.S. companies and U.S. acquisitions of foreign companies are provided. Information is available about the number and the size at the announcement time, not at the completion time. Note that it usually takes five to ten months for mergers to be achieved after their announcements. Canceled and divested transfers of ownership, medium of payment, and type of industry are included. Tender offers are recorded since 1974. For target firms, the series also report the premium paid over the market according to the offer to market price approach above-mentioned. The series are given both per year since 1963 and per quarter since 1974. Moreover, some comments and analyses are expressed on takeovers.

Takeovers selected are those for which the purchase price is at least 5% of the market value of the acquiring firm's value. The data come from public announcements of tender offers or mergers, which are mainly paid by cash in order to control for medium of payment. A tender offer is recognized as successful if the bidder acquires an interest of more than 50% of the target firm's common equity. A sample of successful takeovers is drawn between January 1981 and December 1989. It has not been possible to get the W.T. Grimm series for the year 1980.

The announcement date of the takeover is the initial date of the first public proposed bid in the *Wall Street Journal Index*. The completion date of the takeover is also given in the *Wall Street Journal Index*, in *Mergerstat*

Review, or in *Mergers & Acquisitions*. Daily target stock prices observed in the NYSE, AMEX and NASDAQ exchanges are available on the tapes of the Center for Research in Security Prices (CRSP) and are used to estimate abnormal returns due to takeover announcements. Daily acquirer, and target, if possible, stock prices are used to estimate any shift in systematic risk associated with the takeover transaction. Target data may not be available because some targets are divisions of a public company that is making a divestiture, and because many targets are not publicly traded and not recorded on the tapes of the CRSP.

The population under consideration was defined as all U.S.-based acquired and acquiring corporations involved in a successful tender offer where there were no prior significant shareholdings in the target firm from 1981 to 1989. Out of 161 takeovers announced in the food industries during that period in the *Mergerstat Review*, 126 bids were identified as mainly cash offers properly classified in the food manufacturing. Among those 126 deals, 114 succeeded. Among those 114 successful takeovers, 55 target firms and 36 acquiring firms with complete information about announcement and completion date were publicly traded in the NYSE, or AMEX or NASDAQ exchanges.

Target firms in the sample are divided into two groups according to the level of industry concentration at the four-digit level of SIC code. One group gathers the corporations which operate in sectors with a concentration ratio that is greater than 38.2% and the other group gathers the companies operating in sectors with a concentration ratio that is lower than 38.2%. A food firm is in a sector with a high concentration ratio if it mainly operates in food industries with a top-4-firm concentration ratio greater than 38% at the four-digit SIC code, according to the data published in the 1982 Census of manufactures (Bureau of the Census, 1982). In order to minimize some arbitrary assignment of firms to one of the two categories, the activities and SIC codes of the firms are obtained in three different sources of information the W.T. Grimm series reported in the *Mergerstat Review*, the *Standard & Poor's Register of U.S. Corporations*, and the files of the Center for Research in Security Prices (CRSP). Among the 55 selected target firms, 26 are in sectors with a high concentration ratio (namely a top-4-firm concentration ratio which is greater than 38%), called 'highly concentrated industries', and 29 are in sectors with a low concentration ratio, called 'less concentrated industries'. For the offer to market price approach, the *Mergerstat Review* reports the premium per firm for 25 out of the 26 targets which are in sectors with a high concentration ratio and 28 out of the 29 in sectors with a low concentration ratio. The premium paid over the market price is measured as a percent of the final offer price over the closing price 5 trading days before the announcement date. The announcement date recorded in the *Mergerstat Review* may differ from the date mentioned in the *Wall Street Journal Index*. However, since a lot of offer prices are not reported, it is not possible to compute the average premium of the targets in the sample accurately. Then, the premiums retained in this study are the per firm premiums

which are calculated and published by the *Mergerstat Review*. Their aggregation and treatment has been performed according to the methodological procedures mentioned above.

Acquiring firms in the sample are classified into three categories. The classification is used to estimate if acquirers overpaid targets in highly and/or less concentrated sectors. For each takeover, the acquiring firm is assigned, according to the characteristics of the acquired firm: 1) acquirers of food company in highly concentrated industries, the target food being included in the targets' sample; 2) acquirers of food companies in less concentrated industries, the target food being included in the targets' sample; and 3) acquirers of other food companies which are not selected in the targets' sample. Among the 36 selected acquirers, 10 acquired a firm selected in a highly concentrated industry, 10 acquired a firm selected in a less concentrated industry, and 16 acquired a firm not selected in the targets' sample.

Some observations of the firms' returns are missing in the estimation periods, namely the pre-event period in order to measure abnormal returns, and the pre-event and post-event periods in order to measure shifts in the systematic risk. The days with missing data are dropped from analysis. Moreover, the first observation following missing data is dropped in order to avoid problems of synchronicity between the firm's return and the return of the market index. For the firm, the observation following missing data is a return which reflects both the change in stock price during that day and the price movements during the former days with missing observations. In contrast, the return of the market index for the first day following missing observations of a firm's stock price only reflects the market return for that day. Then, the first observation following missing data is dropped in order to get returns of a firm which are synchronous with returns of the market. Seven out of fifty-five target firms have one to six missing observations in the pre-event period. Two acquiring firms have been eliminated from the sample because more than 50 observations were missing.

In contrast, problems of the firms' missing data is handled differently during the event-period. In that case, the first observation following missing data is kept. The objective is to capture any abnormal change in a firm's return. The problem of synchronicity between a firm's return and the return of the market is less important relative to any loss of information about the firm's abnormal returns. Eleven target firms experience from one to three missing observations during the event-period. Most of these firms have one missing observation on the day before the takeover announcement. In case of missing observations, the program used to measure abnormal returns and shift in systematic risk is adjusted to get accurate estimates and statistics.

Abnormal returns for an acquirer could be attributed to more than one acquisition. For example, in 1987 the firm Kraft, Inc. acquired All American Gourmet Co. for \$ 295.2 million and three divisions of Quaker Oats Co. for \$ 235 million. The event-period (-20, +20) around the takeover

announcement of All American Gourmet Co. lasted from 1987/05/07 to 1987/07/06. The event-period (-20, +20) around the takeover announcement of the three divisions of Quaker Oats Co. started on 1987/04/30 and ended on 1987/06/26. From 1987/05/07 to 1987/06/26, abnormal returns for Kraft, Inc. could be attributed to both acquisitions. Consequently, these two takeovers are dropped from the samples of acquirers.

Results

The following section provides and analyzes the abnormal returns of the 55 targets in the selected sample. Since acquirers may have overpaid their targets, the abnormal returns of 36 acquiring firms in the sample are presented and analyzed in the subsequent section.

Analysis of the Target Firms

Most of the 55 targets selected in the sample were bought by acquirers in a related business or went private through a leveraged buyout and divested unrelated businesses as demonstrated above.

Among the 55 targets selected, 26 were operating in food industries with a concentration ratio greater than 38%. Six of the 26 targets experienced a leveraged buyout. Seventeen of the 26 targets were acquired by food firms. The three remaining of the 26 targets were bought by firms without major activity in the food industries.

Among the 55 targets selected, 29 were operating in food industries with a concentration ratio lower than 38%. Ten of the 29 targets experienced a leveraged buyout. Sixteen of the 29 targets were acquired by food firms. The 3 remaining of the 26 targets were bought by firms without major activity in the food industries.

Average cumulative abnormal returns (ACAR) of target firms due to takeover are presented in Table 2. Results are provided using the market adjusted return method and the market model method. ACAR of the 26 target firms in highly concentrated sectors, that is with top-4-firm concentration ratio higher than 38%, is 37.83% by the first method and 36.80% by the second method. Both figures are significantly different from zero at the 5% and 1% levels. The p-value of the t-statistics is zero in both cases. ACAR of the 29 target firms in less concentrated sectors, that is with top-4-firm concentration ratio lower than 38%, is 30.52% by the first method and 27.07% by the second method. Both figures are significantly different from zero at the 5% and 1% levels. The p-value of the t-statistics is zero in both cases.

The difference in average cumulative abnormal returns between targets in highly concentrated sectors and targets in less concentrated sectors is 7.31% by the first method and 9.73% by the second method. Both figures are significantly different from zero at the 5% level. The p-value of the t-

statistics is 4.8% by the market adjusted return method and 1.3% by the market model method.

Table 2 Average Cumulative Abnormal Returns (ACAR) of Target Firms

	Market-adjusted return method	Market model method
1) <i>In sectors with top-4-firm concentration ratio HIGHER than 38% (26 target firms)</i>		
ACAR _{con} (average cumulative abnormal return) for the event period (-20, +20) around the first public announcement (t-statistic to test H ₀ : ACAR=0 vs H _a : ACAR>0)	37.83% (11.18)	36.80% (10.97)
2) <i>In sectors with top-4-firm concentration ratio LOWER than 38% (29 target firms)</i>		
ACAR _{nc} (average cumulative abnormal return) for the event period (-20, +20) around the first public announcement (t-statistic to test H ₀ : ACAR=0 vs H _a : ACAR>0)	30.52% (11.33)	27.07% (10.40)
3) <i>Difference in average cumulative abnormal returns between targets in highly concentrated sectors and target in less concentrated sectors</i>		
ACAR _{con} - ACAR _{nc} = (t-statistic to test H ₀ : ACAR _{con} = ACAR _{nc} versus H _a : ACAR _{con} > ACAR _{nc})	7.31% (1.69)	9.73% (2.29)

Premiums paid as a percent of the offer price over the closing market price 5 trading days before the announcement date are shown in Table 3. The average premium for 25 target firms in highly concentrated sectors is 52.05%, which is significantly different from zero at the 5% and 1% levels. The p-value of the t-statistic is zero. The average premium for 28 target firms in less concentrated sectors is 36.51%, which is significantly different from zero at the 5% and 1% levels. The p-value of the t-statistic is zero. The difference in average premium between targets in highly concentrated sectors and targets in less concentrated sectors is 15.54%. That figure is significantly different from zero at the 5% level. The p-value of the t-statistic is 2.0%.

The average cumulative abnormal returns are around 30% for target firms acquired in tender offers mainly paid by cash. That is consistent with previous works (Jensen and Ruback, 1983; Jarrell et al., 1988). The average cumulative abnormal returns as well as the average premium as a percent of the offer price over the market price are significantly greater for target food companies in sectors with a high concentration ratio than they are for other food firms. It can be inferred that there has been an extra premium for targets acquired through takeover in highly concentrated

food industries during the 1980s. Therefore, such an extra premium may be explained by the hypothesis of future increasing efficiency and market power in declining markets. But, acquiring firms of targets in highly concentrated food industries may have overpaid them with respect to the amount paid for other food target firms. This objection can be tested by comparing the cumulative abnormal returns of the acquirers of targets in highly concentrated sectors with the CAR of the acquirers of targets in less concentrated sectors.

Table 3 Premium (Offer To Market Price), High Versus Low Industry Concentration

	Premium paid over market as a percentage of the offer price over the closing price 5 business days before the announcement date
1) <i>In sectors with top-4-firm concentration ratio HIGHER than 38% (25 target firms, no computation provided for 1 target)</i>	
AP _{con} (average premium)	52.05%
(t-statistic to test H ₀ : AP _{con} =0 vs H _a : AP _{con} >0)	(9.50)
MP _{con} (median premium)	43.20%
(AN-statistic to test H ₀ : MP _{con} =0 vs H _a : MP _{con} >0)	(6.29)
2) <i>In sectors with top-4-firm concentration ratio LOWER than 38% (28 target firms, no computation provided for 1 target)</i>	
AP _{nc} (average premium)	36.51%
(t-statistic to test H ₀ : AP _{nc} =0 vs H _a : AP _{nc} >0)	(7.35)
MP _{nc} (median premium)	30.90%
(AN-statistic to test H ₀ : MP _{nc} =0 vs H _a : MP _{nc} >0)	(4.96)
3) <i>Difference in premium over market for targets in highly concentrated sectors and targets in less concentrated sectors</i>	
For average premiums AP _{con} - AP _{nc} =	15.54%
(t-statistic to test H ₀ : AP _{con} = AP _{nc} versus H _a : AP _{con} > AP _{nc})	(2.10)
For median premiums MP _{con} - MP _{nc} =	12.30%
(AN-statistic to test H ₀ : MP _{con} = MP _{nc} versus H _a : MP _{con} > MP _{nc})	(1.33)

AN means 'asymptotic normal'

Analysis of the Acquiring Firms

Average cumulative abnormal returns (ACAR) of acquirers of target firms included in the sample are presented in Table 4. Results are provided using the market-adjusted return method and the market model method.

ACAR of the 10 acquirers of target firms in highly concentrated sectors, that is with top-4-firm concentration ratio higher than 38%, is 0.76% by the first method and -1.52% by the second method. Both figures are not significantly different from zero at the 10% level. The p-value of the t-statistics is greater than 0.60 in both cases. ACAR of the 10 acquirers of target firms in less concentrated sectors, that is with top-4-firm concentration ratio lower than 38%, is 2.21% by the first method and 0.49% by the second method. Both figures are not significantly different from zero at the 10% level. The p-value of the t-statistics is equal or superior to 0.60 in both cases.

Table 4 Average Cumulative Abnormal Returns (ACAR) of Acquirers of Targets Included in the Sample

	Market adjusted return method	Market model method
1) <i>Acquirers of target firms in sectors top-4-firm concentration ratio HIGHER than 38% (10 acquiring firms)</i>		
ACAR _{con} (average cumulative abnormal return) for the event period (-20, +20) around the first public announcement (t-statistic to test H ₀ : ACAR _{con} = 0 versus H _a : ACAR _{con} different from zero)	0.76% (0.25)	-1.52% (-0.52)
2) <i>Acquirers of target firms in sectors top-4-firm concentration ratio LOWER than 38% (10 acquiring firms)</i>		
ACAR _{nc} (average cumulative abnormal return) for the event period (-20, +20) around the first public announcement (t-statistic to test H ₀ : ACAR _{nc} = 0 versus H _a : ACAR _{nc} different from zero)	2.21% (0.55)	0.49% (0.13)
3) <i>Difference in average cumulative abnormal returns between acquirers of targets in highly concentrated sectors and acquirers of targets in less concentrated sectors</i>		
ACAR _{con} - ACAR _{nc} = (t-statistic to test H ₀ : ACAR _{con} = ACAR _{nc} versus H _a : ACAR _{con} different from ACAR _{nc})	-1.45% (-0.29)	-2.01% (-0.42)

The difference in average cumulative abnormal returns between the 10 acquirers of targets in highly concentrated sectors and the 10 acquirers of targets in less concentrated sectors is -1.45% by the first method and -2.01% by the second method. Both figures are not significantly different from zero at the 10% level. The p-value of the t-statistics is 78% by the market adjusted return method and 68% by the market model method.

Then, the acquirers of targets in highly concentrated sectors do not experience lower cumulative abnormal returns (CAR) caused by their con-

concentrated sectors. The null hypotheses that their average CAR are equal cannot be rejected by both the market-adjusted return method and by the market model method. Moreover, their average CAR are not significantly different from zero. That is consistent with most previous studies showing no gain or loss for acquiring firm's shareholders (Jensen and Ruback, 1983; Jarrell et al., 1988).

Average cumulative abnormal returns (ACAR) of the 16 acquirers of target firms not included in the sample are presented in Table 5. Results are provided using the market-adjusted return method and the market model method. ACAR of the 16 acquirers is 2.36% by the first method and -1.37% by the second method. Both figures are not significantly different from zero at the 10% level. The p-value of the t-statistics is 35% by the market adjusted return method and 60% by the market model method. Then, the cumulative abnormal returns for the acquirers of targets not included in the sample are not significantly different from zero. This result is similar to the result for the acquirers of targets included in the sample.

Table 5 Average and Median Cumulative Abnormal Returns of the 16 Acquirers of Targets not Included in the Sample

	Market-adjusted return method	Market model method
ACAR (average cumulative abnormal return) for the event period (-20, +20) around the first public announcement (t-statistic to test H_0 : ACAR = 0 versus H_a : ACAR different from zero)	2.36% (0.96)	-1.37% (-0.54)

Average cumulative abnormal returns (ACAR) of all acquirers (of target firms included or not included in the sample) are presented in Table 6. Results are provided using the market-adjusted return method and the market model method. ACAR of the 36 acquirers is 1.87% by the first method and -0.89% by the second method. Both figures are not significantly different from zero at the 10% level. The p-value of the t-statistics is 30% by the market adjusted return method and 61% by the market model method. Globally, the abnormal returns for all 36 acquirers of targets are not significantly different from zero. That is consistent with most previous studies (Jensen and Ruback, 1983; Jarrell et al., 1988).

Table 6 Average Cumulative Abnormal Returns (ACAR) of Acquirers of Targets Included in the Sample

	Market adjusted return method	Market model method
ACAR (average cumulative abnormal return) for the event period (-20, +20) around the first public announcement (t-statistic to test H_0 : ACAR = 0 versus	1.87%	-0.89%

H _a : ACAR different from zero)	(1.05)	(-0.51)
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Conclusion

Throughout the 1980s, the acquiring firms have been motivated by managerial synergies, operating synergies, and market power in order to focus on businesses they know and manage best. They have paid more to acquire food firms in highly concentrated markets because synergies and market power profits are expected from those companies. The results document that shareholders of targets in highly concentrated food industries obtained higher cumulative abnormal returns (CAR) and offer to market price than shareholders of targets in less concentrated food industries in the 1980s. Shareholders of targets in highly concentrated food industries obtained an extra-cumulative abnormal return between 7 and 9% on average, an extra-premium as a percentage of offer to market price of 15% on average. This premium is related to efficiency gains and/or market power benefits that can be obtained by food firms in industries with high top-4-firm concentration ratios.

Investors on the stock market did not think that the acquirers paid excessively large premiums to shareholders of targets in highly concentrated food industries relative to shareholders of targets in less concentrated food industries. The findings about the acquirers indicate that they did not get any abnormal returns significantly different from zero either when they purchased a target in highly concentrated food industries or a target in less concentrated food industries. Consequently, the hypothesis is confirmed.

The results provide evidence that explain some remarks in the financial press and enlarge theoretical literature. Some articles in business magazines argue that premiums paid for food companies are excessive, but the findings show that larger premiums are justified by profit opportunities in highly concentrated food industries. This is the first academic study demonstrating significantly larger cumulative abnormal returns and premiums in highly food concentrated industries than those in less concentrated food industries. Efficiency gains and market power benefits have not been emphasized enough in the existing literature, since this is the first time a study proves that cumulative abnormal returns and premiums significantly differ among firms according to the degree of industry concentration.

Further study could try to separate efficiency gains from market power benefits in food industries, taking into account the fact that those industries are heterogeneous. Moreover, consumer wealth created by food firms under the protection of some market power could be evaluated and compared with consumer loss due to allocation inefficiencies.

The results may be useful to shed light on the takeover activity in food industries in the 1990s, especially in the framework of the European Single Market.

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10 Economic and Financial Performance of Cooperatives and Investor-Owned Firms: An Empirical Study

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Economists and financial analysts have long been preoccupied by the question of evaluating performance of economic organizations. Although their tools for evaluating performance differ, they generally agree that market transactions are much easier to evaluate than non-market ones. Cooperatives offer a number of services to their members for which no price exists. The performance of cooperatives is thus more difficult to evaluate than that of investor-owned firms (IOFs). Given, however, the changing economic and financial structure of cooperatives, it is now possible to proceed in an evaluation of their performance using the traditional economic and financial tools¹.

Traditionally, cooperatives have been considered as being 'equity bound'. However, they have undergone many structural changes in the 1980s. They have used internal and external sources of financing more intensively, realizing high growth rates and equity accumulation. Preliminary statistics indicate that the equity base of cooperatives in the U.S. has increased at an annual average rate of 14.7% while that of IOFs at only 7.6% between 1971-87² (at least for the sample examined by Parliament et al., 1990).

The financial restructuring of cooperatives during the past decade or so reflects sweeping changes that have occurred worldwide. Government regulations, environmental factors, business strategies, the appearance of new financial instruments, etc., have all changed dramatically, altering economic conditions and the business environment. The tendency towards more economic integration accentuates the adjustments undertaken lately by both cooperatives and IOFs especially in the context of the European Union and the North America Free Trade Agreement (NAFTA).

In this unstable and unpredictable business environment economic agents, including cooperatives, must reconsider their strategies. The formation of strategic alliances, joint ventures, R&D (the development of new products and production techniques), mergers and acquisitions, downsizing, etc., are some of the strategies employed by firms for getting a competitive advantage against their competitors. Lower aggregate demand, increased competition and increases in costs arising from the restructuring process of many organizations have reduced firms' profit margins and increased the number of bankruptcies of less efficient firms. Innovative firms able to bring new products or production processes into

existing markets and/or develop new market niches are rewarded with extra profits and high growth rates. Survival and eventually growth is the immediate goal of most firms. An evaluation and a comparison of the cooperatives' performance with that of IOFs is becoming imperative under these circumstances. One wonders whether cooperative principles give rise to performance differences between these two types of organizations.

This study examines empirically the economic and financial performance of cooperatives and compares it to the performance of IOFs. A number of important financial ratios from 1986 to 1991 are calculated and one-way variance analysis is applied to a sample of data composed of six major cooperatives and six IOFs both belonging to the dairy industry in Canada. To the best of our knowledge this study is the first one to apply financial ratio analysis to cooperatives and IOFs in the Canadian context. Moreover, the results of this study are compared to the earlier studies (European and the U.S.) offering thereby an integrated approach to the problem examined. Such studies which investigate the issue of cooperative performance serve two major purposes. First, they lead to a better understanding of the present cooperative debate, i.e., whether cooperatives perform as well as IOFs (Sexton and Iskow, 1993). Second, they identify policy options which, if adopted, may increase productive efficiencies and competitiveness in an industry where the pace of deregulation and its integration into the global economy poses tremendous challenges to both managers and policy makers as well.

The paper is organized as follows. The following section examines the theoretical analysis employed for comparing economic and financial performance of cooperatives and IOFs. The description of the sample used and the comparison of the main characteristics of cooperatives and IOFs are presented in the next section. The following section presents the methodology and comments and compares, in some detail, the results of this study with the ones obtained from previous studies. The final section concludes and provides policy recommendations.

Theoretical Analysis and Performance Comparisons of Cooperatives and IOFs

It is widely accepted that traditional principles and values of cooperatives give rise to a financial performance that may differ significantly from that of IOFs (Staatz, 1984; Caves and Peterson, 1986). Contrary to IOFs, cooperatives are generally regarded as a separate form of business organization. They are dealing directly with their owners/member-patrons, they serve them and distribute profits or surpluses according to patronage and not according to investment. Furthermore, they provide services and goods for which market values may not exist (for instance, education to their members, community development and the like). These distinctive characteristics make cooperatives different from the other

forms of organizations suggesting thereby that their objectives may be entirely different from the ones pursued by the IOFs.

It is generally believed that differences in goals may be reflected in the strategies adopted by cooperatives and IOFs³ and give rise to different financial performances⁴. Ratio analysis is widely used to evaluate financial performance. Within the theory of industrial organization there exists formal measures of performance which are well established (Porter and Scully, 1987; Ferrier and Porter, 1991); however, their application is difficult because of the unavailability of required data. Despite its limitations⁵, ratio analysis is a solid tool commonly used in finance to provide valuable comparisons between economic and financial analyses. We rely therefore on the analysis of financial ratios and on the comparison of these ratios between cooperatives and IOFs.

Financial ratio analysis is extensively used by short-term and long-term lenders, banks and other financial institutions to evaluate the future capacity of a borrower to repay its debt. It is also one of the most important tools used by Moody's, Standard & Poor's, and Canadian Bonds Rating Service in rating the bonds of corporations.

Ratio analysis conveys information on certain crucial facts about a firm's operations and financial situation. The people whose job it is to analyze a firm's financial position will differ in the ratios they find useful. Short-term creditors are primarily interested in the firm's short-run performance and its holdings of liquid assets that can provide a ready source of cash to meet current cash requirements. Long-term creditors and stockholders, on the other hand, are concerned with the long-term as well as short-term outlook. Management is able to use activity and profitability ratios as well as liquidity and leverage ratios to measure its own performance. Ratio analysis is therefore a useful managerial tool.

Theoretical economic and financial analysis demonstrate that the performance of cooperatives, measured in terms of profitability, leverage, solvency, liquidity, and efficiency, may be entirely different from the one of IOFs. A number of reasons have been advanced to explain this phenomenon⁶.

Cooperatives are generally considered to be service-to-members maximizers subject to a profit constraint, while IOFs are rate of return to equity (at a given risk level) maximizers⁷. This difference in objectives results in a lower rate of return to equity for the cooperatives. This outcome, however, should not be considered particularly bad for the cooperatives since members still can receive a rewarding payoff in terms of higher prices for their product, lower input prices or better marketing channels.

Cooperatives also tend to have higher leverage⁸ ratios than IOFs. This is so because cooperatives are 'equity bound' and therefore rely more on debt financing in order to finance growth. Moreover, cooperatives, especially the small ones, tend to use more leverage compared to IOFs for reasons of moral hazard⁹. That is to say, due to the cooperative principles of 'risk sharing' and 'mutual responsibility', financially weaker

cooperatives may use debt extensively, knowing that the cooperative principles provide them an 'insurance policy' (stronger cooperatives would bail them out) in case of adverse business outcomes. Cooperatives could thus use more leverage than IOFs given that the latter do not have this type of insurance policy. Higher risks are thus assumed by the cooperatives.

Given that cooperatives have the tendency to use more debt than IOFs, their solvency¹⁰ ratios should differ as well. High solvency ratios imply that cooperatives would have a high likelihood of default on debt service payments and higher prospects of bankruptcy¹¹. The moral hazard behaviour of the cooperatives' managers may also affect the degree of liquidity¹². Generally, cooperatives would accept lower liquidity ratios than IOFs. This again increases the risk of default.

Cooperatives and IOFs tend to have different efficiency ratios¹³ because the former, due to moral hazard behaviour, tend to overinvest in fixed assets resulting thereby in a greater asset base for the same sales. A less efficient use of the assets results from this type of cooperative behaviour. These measures and their expected relationship between cooperatives and IOFs are presented in Table 1.

Thus, theoretical analysis indicates that financial and economic performance of cooperatives may be greatly determined by the cooperative principles of risk sharing and mutual responsibility and may affect productive and economic efficiencies in a manner such that their financial performance would be different from the one realized by IOFs.

An empirical evaluation of the performance of cooperatives and IOFs should be of value to creditors, lenders, financial analysts and firms' managers as well as to governments and to those who are interested in the financial and economic performance of cooperatives.

The question whether cooperatives perform indeed differently from IOFs is central to the current debate. In a recent article, Sexton and Iskow (1993) argue that "*more research in this area is clearly needed*". This research by examining and identifying empirically the differences and similarities in performance between dairy cooperatives and IOFs in Canada is shedding new light on the current debate. The statistical information provided thereby should be of great value to policy makers and the organizations concerned.

The Sample

Two groups of companies were identified for the purposes of this study. The first one includes six major Canadian cooperatives belonging to the dairy sector. The second contains six Canadian IOFs belonging to the same industrial sector.

The common characteristics of the two groups of companies are the following. They both belong to the same industrial sector and both produce similar products. They mainly process fluid milk for wholesale and retail

distribution and they specialize in the production of value-added dairy products, such as fine yogurt, ice cream, cheese and butter. Second, they both use the same raw materials and similar production methods.

Table 1 Economic and Financial Performance of Cooperatives and IOFs

Performance criteria	Ratio	Definition	Expected relationship
Liquidity	Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	co-op<IOF
	Quick or acid ratio	$\frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}}$	co-op<IOF
	Coverage of current assets with working capital ratio	$\frac{\text{Current assets} - \text{Current liabilities}}{\text{Current assets}}$	co-op<IOF
	Cash ratio	$\frac{\text{Cash}}{\text{Current liabilities}}$	co-op<IOF
	Undepreciated fixed assets to total capital employed ratio	$\frac{\text{Undepreciated fixed assets}}{\text{Total capital employed}}$	co-op>IOF
Leverage	Debt to equity	$\frac{\text{Total debt}}{\text{Equity}}$	co-op>IOF
	Debt ratio	$\frac{\text{Total debt}}{\text{Total capital employed}}$	co-op>IOF
Solvency	Coverage ratio	$\frac{\text{EBIT}}{\text{Interest}}$	co-op<IOF
Profitability	Rate of return to equity after taxes	$\frac{\text{Net profit after taxes}}{\text{Equity}}$	co-op<IOF
	Rate of total capital employed before interest and taxes ratio	$\frac{\text{Net profit before interest and taxes}}{\text{Total capital employed}}$	co-op<IOF
	Return on total capital employed after taxes ratio	$\frac{\text{Net profit after taxes}}{\text{Total capital employed}}$	co-op<IOF

Third, they both function more or less in the same economic and business environment. Fourth, most of the companies in the sample are vertically integrated. Fifth, their size measured in terms of assets is comparable, as indicated in Table 2. Indeed, between 1986–1991, the sample period under investigation, the mean value of the assets for the six cooperatives was \$89 million, while the mean value of the assets for the six IOFs was \$95 million. It is worth noticing that for both the cooperatives and IOFs the largest firm possessed about two thirds of the group's total assets. Table 2 reports some simple descriptive statistics for the two groups of firms.

The analysis is restricted to the dairy industry for a number of reasons. First, appropriate levels for financial ratios depend to a large part upon the risk characteristics of the industrial sector in which the firm operates.

Thus, financial ratio analysis is industry-specific. Second, several prior U.S. studies have examined the financial performance of the dairy industry. Consequently, our results will be more comparable to these prior studies. Third, many Canadian cooperatives are concentrated in the dairy sector. Thus data is relatively abundant and easily attainable. Fourth, dairy cooperatives are quite large (measured in terms of assets) and easily comparable to the IOFs of the same industry.

Table 2 Assets, Sales and Earnings of Cooperatives and IOFs in the Canadian Dairy Industries (Mean Values, 1986–1991, in \$1000)

	Assets: Mean Values	Earnings: Mean Values	Sales: Mean Values
Co-ops:			
Agropur	352 943	5 785	782 577
Gay Lea	43 152	1 525	152 974
Agrinove	32 024	1 799	153 998
Purdel	44 122	3 737	247 388
Nutrinor	34 135	1 337	79 681
Scotsburn	30 013	928	117 123
<i>Grand Mean</i>	<i>89 398</i>	<i>2 518</i>	<i>255 649</i>
IOFs:			
Delisle	388 825	5 450	501 742
Guaranteed	32 543	351	45 395
Eplett	31 424	899	136 114
Becker	35 421	3 753	391 292
Saputo	49 124	1 926	62 389
Champlain	33 175	949	30 536
<i>Grand Mean</i>	<i>95 085</i>	<i>2 221</i>	<i>194 578</i>

The data used to calculate financial ratios are obtained from the annual reports of the cooperatives while for the IOFs they come from Dun & Bradstreet, as well as from CANCORP service. The financial ratios calculated from these data are indicated in Table 3.

For the purposes of our investigation only large-sized cooperatives and IOFs were chosen, given that they typically use similar financial instruments to fund their operations. This makes it possible to compute financial ratios which are consistent between the two groups. Smaller organizations often do not have the same financial instruments available to them, consequently the calculation of certain financial ratios is often impossible.

The list of the Top 50 Canadian cooperatives, published annually by the Government of Canada, was used to choose nine (9) dairy cooperatives from a list of twelve (12). Three (3) of them were excluded on the basis that they were too diversified to be included in the sample. Two (2) dairy cooperatives responded negatively to our request for their Annual Reports on the pretext that they do not release this information to the public. A merger of two cooperatives further reduced our sample to six (6) dairy cooperatives.

Data for IOFs were collected from Dun & Bradstreet and CANCORP applying the same criteria. That is, to make the sample comparable, IOFs with less than \$ 30 million dollars in assets in 1991 and more than \$ 500 million were excluded from the sample. Their main activity was in the dairy industry. Thus, purely diversified IOFs were excluded from the sample. Twelve (12) IOFs could satisfy our criteria. The restructuring process reduced the number of firms either because some of them were converted to private firms at the end of our sample period, or because they merged with others. Therefore, no data was available for them for the whole time period under investigation. Finally, six (6) IOFs were chosen for which the complete series of data was available.

Table 3 Ratio Analysis

<i>A. Liquidity ratios</i>		
V1 = Current assets	R1 = Current ratio	$V1/V2$
V2 = Current liabilities	R2 = Quick or acid ratio	$(V1-V3)/V2$
V3 = Inventories	R3 = Coverage of current assets with working capital ratio	$(V1-V2)/V1$
V4 = Cash	R4 = Cash ratio	$V4/V2$
V5 = Undepreciated fixed assets	R5 = Undepreciated fixed assets to total capital employed ratio	$V5/V6$
<i>B. Leverage ratios</i>		
V6 = Total capital employed	R6 = Debt ratio	$V7/V6$
V7 = Total debt	R7 = Debt to equity ratio	$V7/V8$
<i>C. Profitability ratios</i>		
V8 = Equity	R8 = Return on equity after taxes ratio	$V9/V8$
V9 = Net profit after taxes	R9 = Return on total capital employed before interest and taxes ratio	$V10/V6$
V10 = Net profit before interest and taxes	R10 = Return on total capital employed after taxes ratio	$V9/V6$

Methodology and Results

Appropriate values collected from published balance sheets and income statements for both cooperatives and IOFs were used to calculate liquidity, leverage (gearing), and profitability ratios. Means for the two groups of companies were compared for each financial ratio by using one-way analysis of variance (Koutsoyiannis, 1983). Table 4 presents results of the tests.

Table 4 Results of the Analysis of Variance

Variables Ratio	Group means (1986–1991)		Level of significance (5%)
	co-operatives	IOFs	
R1	1.016	1.227	Y
R2	.893	1.117	Y
R3	.277	.128	Y
R4	.180	.395	Y
R5	.617	.645	N
R6	.946	.659	Y
R7	1.118	1.555	Y
R8	.089	.071	N
R9	.081	.081	N
R10	.063	.050	N

The results are revealing. It is found that dairy IOFs and cooperatives differ significantly in a number of ratios, such as the liquidity ratio (current and acid ratio), cash ratio, and finally total debt, and total debt to equity ratio. The differences found in liquidity may be explained by the fact that IOFs and cooperatives follow a different working capital management. Apparently, IOFs use low levels of inventories and other-than-inventories current assets. On the contrary, cooperatives hold high levels of inventories and overinvest in other-than-inventories current assets. This seems to confirm the theoretical assertion presented in Table 1.

Cooperatives' and IOFs' indebtedness differs significantly. IOFs are using less debt than cooperatives, for the sample examined, confirming the theoretical relationship established in Table 1. This difference is nonetheless surprising given that cooperatives have more difficulties in obtaining loans and/or are generally more risk averse than IOFs (Gentzoglani, 1993; 1996). It should be noted, however, that the period under investigation was characterized by a frenetic use of junk bonds but there is no evidence that the IOFs under investigation have used this type of financing. This may explain why the differences in profitability ratios of cooperatives and IOFs are not statistically significant¹⁴.

As far as the ratio of undepreciated fixed assets to total capital employed ratio is concerned, it seems that both cooperatives and IOFs invest more or less the same proportion of total capital to fixed assets. This may suggest that both groups of companies use good quality equipment and are keeping up with the evolution in technologies. Their objectives to become more export-oriented and the fierce competitive forces in domestic and international (U.S.) markets may be the reasons explaining this phenomenon. Moreover, this may reflect the similarity of long-term development and growth objectives of their managements. This probably explains as well why the differences in profitability ratios between cooperatives and IOFs are not statistically significant.

Table 5 compares the results of this study to earlier ones which have used a similar methodology and have examined the same industrial sector (Venieris' study, however, employed a different industry, the wine industry in Greece)¹⁵. Empirical estimates made by Chen et al. (1985) and Schrader et al. (1985) confirm the theoretical hypotheses exposed in Table

1. It should be noted, however, that Parliament et al. (1990) found that cooperatives' and IOFs' performance differ in terms of liquidity and sales-to-total-assets and indebtedness, while their performance was comparable in terms of the return on equity. The present study demonstrates that cooperatives' and IOFs' performance indices such as profitability and technological abreast, do not differ significantly, while for others such as liquidity and leverage, there is a statistical difference. These results are comparable as well to the ones obtained by Lerman and Parliament (1990) for fruit and vegetable processors in the U.S.

The results of Chen et al (1985) and Venieris (1989) are also quite similar. Surprisingly, these studies refer to cooperatives involved in different economic activities (dairy and wine respectively) and in different business environments and corporate cultures (U.S.A. and Greece respectively). According to Venieris, cooperatives in Greece are overgeared because they use borrowed capital interest-free from government agencies, while IOFs borrow at the market interest rate. It is then not surprising to observe that Venieris' empirical findings confirm the theoretical ones (as exposed in Table 1). *"The reasons of the differences found in profitability among the various groups of companies examined are due to the different borrowing conditions and fiscal policy regulations that public companies have to put up with"* (Venieris, 1989, p. 134).

Table 5 Comparison and Evaluation of the Economic and Financial Performance of Cooperatives and IOFs

Performance criteria	Ratio	Theoretical Expected Relationship	Empirical findings as expected theoretically			
			Parliament- et al, 1990	Chen et al. 1985	Venieris 1989	Present study
Liquidity	Current ratio	Co-op<IOF	--	--	N	Y
	Quick or acid ratio	Co-op<IOF	N	--	Y	Y
	Coverage of current assets with working capital ratio	Co-op<IOF	N	--	N	N
	Cash ratio	Co-op<IOF	--	--	N	N
	Undepreciated fixed assets to total capital employed ratio	Co-op>IOF	--	--	Y	N
Leverage	Debt to equity	Co-op>IOF	N	Y	Y	N
	Debt ratio	Co-op>IOF	N	Y	Y	N
Solvency	Coverage ratio	Co-op<IOF	N	--	--	--
Profitability	Rate of return to equity after taxes	Co-op<IOF	N	Y	Y	N
	Return on total capital employed before interest and taxes ratio	Co-op<IOF	N	Y	Y	N
	Return on total capital employed after taxes ratio	Co-op<IOF	N	Y	Y	N

Our results are comparable to the ones found by Parliament et al. (1990). Probably, the similarity of government regulations in the two countries, as far as cooperatives are concerned, the closeness of business and economic environment, and the geographic proximity of the two countries as well as the level of competition exercised between them in the dairy sector may explain these similarities.

It would appear that the dairy cooperatives in the sample examined have learned rapidly from the changing economic and business environment and have managed quite well during the transitional period. It remains to be seen whether they will be able to keep up with economic evolution and fierce competition. Nevertheless, the results of this study are encouraging. They show that cooperatives adjust themselves to new

challenges by adopting management methods which permit them to perform not differently from IOFs.

Conclusions and Policy Recommendations

This study has examined empirically the financial and economic performance of cooperatives and IOFs. The goals were to verify whether the traditional cooperative principles give rise to different financial performance between cooperatives and IOFs and to examine and compare their differences in performance.

For the sample and period examined, the results indicate that the economic and financial performance of cooperatives and IOFs are comparable. The two groups of companies show no major differences in profitability, productivity and the use of new technologies, while significant differences seem to exist in liquidity and working capital management. It should be noted that this analysis does not take into account the non-market dimensions of cooperatives. Should they have been taken into account, significant differences in performance might have been observed.

These findings corroborate the growing recognition that the financial performance of cooperatives may be comparable to the one of IOFs despite the differences in their organizational structure. All in all, the traditional cooperative principles are not as stringent as is commonly believed. They do not represent a burden to cooperatives and they do not hinder them in achieving productive efficiencies and good financial performance. An explanation of this phenomenon may be that cooperatives have, in the last decade or so, accumulated equity at a faster rate than the one experienced by IOFs. Although there is no evidence that the IOFs in our sample have used debt excessively, many IOFs have nonetheless, in the 1980s, accumulated debt due chiefly to the emergence of new financial instruments such as junk bonds¹⁶. It can then be concluded that the use of equity capital and other forms of market instruments have provided cooperatives with a competitive advantage permitting them to show year-end performance not different than the one realized by IOFs.

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Notes

- 1 Some care should be taken, however, to allow for the non-market transactions of cooperatives (See Parliament et al., 1990, for an excellent presentation on this point).
- 2 Since 1979 IOFs have increasingly turned to long-term financing through the high-yield bond market (junk bonds). In the U.S.A. the value of this market was \$85 billion in 1988.
- 3 The debate concerning how differences in goals and strategies affect firms' performance is well known and can be found in many writings of many traditional neoclassical theorists.
- 4 It is important to notice that available economic and financial tools do not allow complete evaluation of the performance of cooperatives. This is mainly due to the fact that there are not as yet tools allowing for the non-market dimensions of cooperatives (See Sexton and Iskow, 1993, for an excellent critique of studies failing to take into account the non-market dimensions of cooperatives and the bias they introduce into the relative performance calculations of IOFs).
- 5 See Sexton and Iskow (1993) for a critique of the ratio analysis.
- 6 For a review of the literature on this issue see Sexton and Iskow (1993).
- 7 The rate of return to investors' equity is the most widely used measure of profitability.
- 8 Leverage is calculated as the ratio of debt to equity in a firm's capital structure. It results from the use of external sources of financing.
- 9 The problem of moral hazard can best be viewed in the case of insurances. When one gets full insurance and the insurance company with limited information cannot accurately monitor the behaviour of the insured, the latter, by changing its behaviour, may affect the probability or the magnitude of the event that triggers payment.
- 10 A firm's capacity to service debt, which is measured by the ratio of earnings before interest and taxes (EBIT) to annual interest expense, indicates its solvency ratio.
- 11 There are more reasons to expect that cooperatives would have a higher likelihood of default than IOFs. For details see Parliament et al. (1990).
- 12 The adequacy of current assets to meet current liabilities is measured by liquidity.
- 13 The ratio of sales to total assets is a measure of efficiency.
- 14 If we take into account the additional services cooperatives may provide to their members, we may conclude that cooperatives' and IOFs' profitability differ significantly.
- 15 There is a number of other empirical studies comparing the economic performance of cooperatives and IOFs, but they use a completely different methodology and occasionally different industrial sectors. Their results therefore are not directly comparable to ours (see for example the studies by Porter and Scully, 1987; Ferrier and Porter, 1991; Stafford and Roof, 1984; Babb and Boynton, 1981; Hollas and Stansel, 1988; Schrader et al, 1985; etc.).
- 16 Junk bonds have substituted for bank lending and during the 1980s a lot of IOFs have become more leveraged. While greater leverage reduces a firm's tax burden (due to the tax deductibility of interest payments), it increases its probability of default as well. This riskier capital structure may negatively affect a firm's profitability performance.

11 Mergers and Structural Reorganization of Agricultural Co-operatives in Japan

Hideki Tanaka

The food self-sufficiency rate (in calories) in Japan declined to 37% in 1993. Japan is probably one of the largest importers of agricultural products in the advanced countries. In addition, the Japanese Diet ratified the WTO agreements which included the liberalization of rice imports. That will deal a serious blow to Japanese farmers and agricultural co-operatives.

Under the import-liberalized process for agricultural products, the Central Union of Agricultural Co-operatives in Japan decided in 1988 to promote mergers and structural reorganization. About 4,000 multi-purpose co-operative societies were in existence in 1988. The number, however, has been sharply declining, and a target figure for the year 2000 is 1,000 societies. As the primary co-operative societies are enlarged by mergers, their affiliated organizations are going to be reorganized by being reduced from three tiers to two tiers.

With the mergers and structural reorganization, the characteristics of Japanese agricultural co-operatives are changing. Multi-purpose co-operatives, by which Japanese agricultural co-operatives have often been characterized, are advancing in a direction by which their multi-purpose characteristic in itself will be lost, despite Dr. Laidlaw's praise for this feature in his report 'Co-operatives in the year 2000' (1980). A balance among the functions of each business, such as marketing, finance and supply, has already been lost, and financial business has become a central business because of its profit-making. As marketing business and farm guidance activities are showing a tendency to be neglected, the gap between co-operative businesses and the needs of farmers is expanding. The model of amalgamation, which is presented now, is based on one as reasonable as a financial company's. This trend will furthermore expand the imbalance among the functions of businesses. In addition, structural reorganization into two tiers is advancing separately in each business, and is being carried out by the vertical system of two tiers.

In this paper, the distinctive features of recent mergers and structural reorganization of agricultural co-operatives in Japan are clarified. (Fujitani, 1991; Madane, 1992; Ienohikari, 1994)

What was the Japanese Type of Agricultural Co-operative?

Agricultural co-operatives in Japan are classified into multi-purpose societies and single-purpose ones. Table 1 indicates the change in the number of multi- and single-purpose societies. Though there are more single-purpose societies than multi-purpose ones, the latter have had a dominant position in Japan, because multi-purpose co-operatives are found in virtually all municipalities across the country, and also cover all farmers in their districts. They have carried out a wide range of business, including guidance in farming and better living, marketing, purchasing, credit service and mutual insurance, and the handling of all major crops, especially rice, in their respective districts. Such multi-phase activities are geared to the actual needs of Japanese farmers who are often engaged in mixed farming. On the other hand, single-purpose societies are organized by farmers of specific crops and in specific areas, and marketing is their principal business. Almost all members of single-purpose societies are concurrently members of multi-purpose societies.

Table 1 Change in the Number of Agricultural Co-operative Societies

	Multi-purpose co-ops	Single-purpose co-operatives						Total	Total
		Seri-culture	Live-stock	Horti-culture	Sett-lers	Rural industry	Others		
1960	12,050	6,293	3,052	679	4,789	597	1,436	16,846	28,896
1970	6,049	2,557	2,670	571	3,484	334	925	10,541	16,590
1980	4,528	1,190	2,216	557	452	214	562	5,191	9,719
1990	3,574	533	1,947	523	323	191	506	4,023	7,597
1991	3,373	515	1,934	521	318	192	497	3,977	7,350
1992	3,073	503	1,908	513	315	192	490	3,921	6,994
*	3,073	33	1,054	461	186	172	181	2,087	5,160
**	--	470	854	52	129	20	309	1,834	1,834
1992/60	26%	8%	63%	68%	7%	32%	34%	23%	24%

Source: 'Statistics on multi-purpose agricultural co-operatives', Ministry of Agriculture, Forestry and Fisheries (MAFF).

* 1992 with share capital

** 1992 without share capital

The Japanese type of agricultural co-operatives (i.e. multi-purpose co-operatives) had a variety of features (Otawara, 1992). Firstly, they were involved in wide-range and comprehensive businesses. There were linkages and integrated approaches among businesses to improve farm production and the life of their members. The farming and life cycle of members, i.e. farm plans, procurement of funds and materials, production, marketing, savings, and the purchase of consumer goods corresponds to this wide range of co-operative businesses.

Secondly, each multi-purpose co-operative had its territorial zone that coincided with a municipality, and covered all farmers in its zone. At the time of the establishment of co-operatives, a hamlet had been the initial unit of each co-operative society, and this unit became the base of the organization of membership after mergers. Therefore, these past multi-

purpose co-operatives had been characterized as traditional co-operatives based on a village community. Thirdly, multi-purpose co-operatives had functioned as a governmental administrative institution. They had been exclusively located in the government's control system for rice as a collection agency, under the recently abolished Staple Food Control Law, and they had also been a financing agency located in the government-programmed loans for agriculture. This feature of agricultural co-operatives was the background of territorial coincidence between a co-operative society and a municipality.

The three features described above had a mutual linkage, and, in general, we could also say that traditional '*sociality*' and '*collectivity*' were characteristics of Japanese agricultural co-operatives. However, with enlargement of co-operative business and diversification of members' needs, '*individuality*' (Nilsson, 1986) has gained force over and above traditional '*sociality*', and a new bureaucracy of modern business enterprise is being generated to replace the old one as a governmental administrative institution.

Table 2 indicates that, during the three decades from the 1950s, agricultural co-operative amalgamation reached the size of a municipality. In 1950, the number of multi-purpose societies almost corresponded to the number of municipalities. But owing to the Town and Village Merger Acceleration Act, the number of municipalities decreased drastically to less than half by 1955. The number of multi-purpose societies also decreased under the Amalgamation Aid Law, and was almost as low in number as the municipalities by the 1980s. So, during the one decade from the mid-1970s, the number of cases and societies participating in amalgamation had decreased. But, at the end of the 1980s, it increased again because the Central Union of Agricultural Co-operatives decided to promote the merger. The recent amalgamation, which goes beyond the extent of a municipality, is different from the previous one in its aim as mentioned above. Therefore we have a new stage of mergers, and agricultural co-operatives are also losing their third feature as an administrative institution.

Regarding the first feature, multi-purpose co-operatives have already lost their balance of functions within businesses. Figure 1 demonstrates the differential growth in co-operative businesses. Mutual insurance and credit businesses have grown vigorously, while marketing business has been stagnant.

The same point is shown in Table 3. The number of employees in charge of financial and purchasing businesses has increased rapidly from the 1970s to the aggregate of 67% in 1992, while marketing and guidance have been stagnant, only 14%. Financial business has become a central business because of its profit-making, while marketing business and farm guidance activities have shown a tendency to be neglected because of their low profit, in spite of their importance as co-operative businesses.

Table 2 Change of Amalgamation in Multi-Purpose Societies

	No. of cases of amalgamation	No. of societies participating in amalgamation	No. of multi-purpose societies	No. of cities, towns and villages
1950			13,314	10,414
1955			12,985	4,813 ¹
1960	211	947	12,050	3,511
1961	137	541	11,586 ²	
1962	210	912	10,813	
1963	216	967	10,083	
1964	237	1,066	9,135	
1965	578	2,599	7,320	3,376
1966	35	135	7,209	
1967	58	169	7,074	
1968	218	829	6,470	
1969	99	378	6,185	
1970	42	162	6,049	3,276
1971	102	439	5,688	
1972	101	393	5,488	
1973	67	285	5,198	
1974	119	434	4,942	
1975	60	225	4,803	3,257
1976	25	65	4,763	
1977	56	160	4,657	
1978	31	101	4,583	
1979	18	54	4,546	
1980	35	85	4,528	3,256
1981	65	172	4,473	
1982	44	116	4,373 ³	
1983	27	77	4,317	
1984	17	49	4,303	
1985	19	55	4,267	3,254
1986	24	75	4,214	
1987	38	126	4,072	
1988	62	250	3,898 ⁴	
1989	92	306	3,685	
1990	60	187	3,574	3,246
1991	54	221	3,294	
1992	94	385	3,105	

Source: Yearbook of Agricultural Co-operative and the Population Census.

¹ Owing to the merger of towns and villages under the Town and Village Merger Acceleration Law.

² Amalgamation Aid Law was enacted.

³ Amalgamation Aid Law expired.

⁴ The Central Union of Agricultural Co-operatives decided to promote amalgamation.

Figure 1 Growth in Multi-Purpose Co-operative Businesses (1970=1)

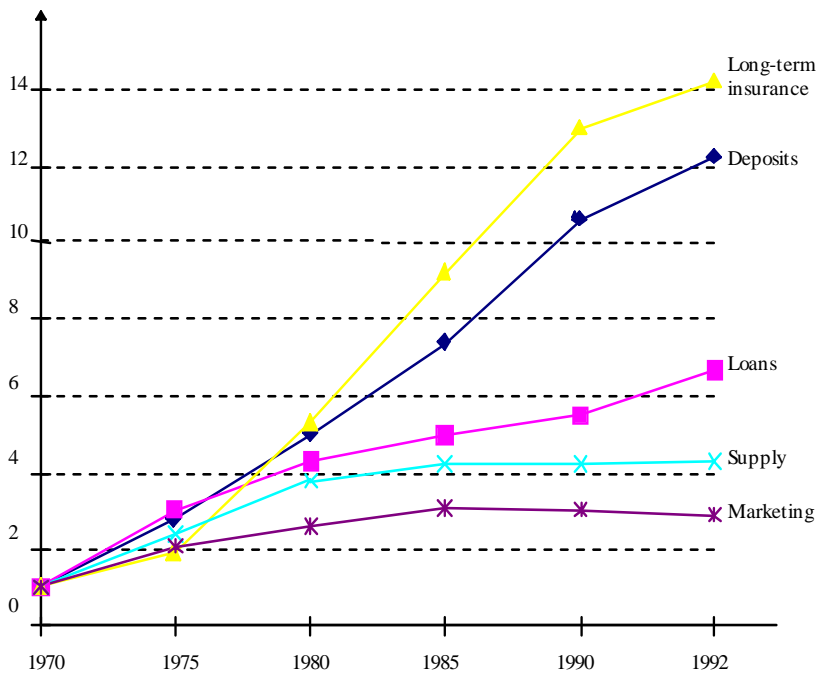


Table 3 Change in the Number of Employees by Business in Charge

	1964	1970	1975	1980	1985	1990	1992
Credit	43,109 (22.9)	58,796 (23.8)	68,184 (25.1)	75,515 (26.4)	78,169 (26.3)	77,187 (25.9)	76,715 (25.6)
Mutual insurance	7,235 (3.8)	11,589 (4.7)	14,741 (5.4)	17,327 (6.0)	19,904 (6.7)	22,866 (7.7)	24,287 (8.1)
Purchasing	47,649 (25.3)	71,522 (28.9)	85,185 (31.4)	91,419 (31.9)	98,319 (33.1)	98,836 (33.2)	100,199 (33.4)
Marketing	16,858 (8.9)	18,539 (7.5)	19,063 (7.0)	19,648 (6.8)	19,299 (6.5)	19,299 (6.5)	19,367 (6.5)
Guidance	14,086 (7.5)	17,490 (7.1)	18,318 (6.8)	20,955 (7.3)	22,719 (7.6)	22,603 (7.6)	21,286 (7.1)
Other business ¹	33,439 (17.8)	35,686 (14.0)	28,488 (10.5)	22,285 (7.8)	20,341 (6.8)	19,587 (6.6)	20,447 (6.8)
Other	26,078 (13.8)	34,514 (14.0)	37,220 (13.7)	39,228 (13.7)	38,344 (12.9)	37,081 (12.5)	37,861 (12.6)
Total surveyed	188,454 (100.0)	248,136 (100.0)	271,199 (100.0)	286,377 (100.0)	297,095 (100.0)	297,459 (100.0)	300,162 (100.0)

Source: 'Statistics on multi-purpose agricultural co-operatives', MAFF.

¹ Agricultural warehousing, transportation, processing and manufacturing, utilities, supplying home-lots and others, etc.

Decreasing the rate of rice in the marketing business of co-operatives is one reason for losing the balance from the 1970s. As we can see in Table 4, the rate of rice in marketing turnover has decreased from about 51% in 1970 to 32% in 1992, owing to a policy of reducing cultivated acreage for rice under overproduction. Until 1970, the rice had accounted for more than 50% of marketing turnover. The marketing of rice and a large sum of rice proceeds which was paid directly to co-operatives' savings account had brought a high profit. After the 1970s, instead of rice, livestock products, vegetables and fruits have been grown, but the growth stopped in the early 1990s. Under a background of urbanization in rural areas, as marketing business has not brought a profit compared with financial ones, co-operatives have been inclined to intensify financial business. As a result, they have gradually left members such as farmers behind.

Table 4 Marketing Turnover of Multi-Purpose Co-operative
(100 Million Yen)

Commodities	1955	1960	1970	1980	1990	1992
Rice	2,956 (66.9)	3,662 (61.0)	10,812 (51.3)	19,766 (35.9)	20,027 (31.2)	20,129 (32.4)
Wheat	414 (9.4)	479 (8.0)	311 (1.5)	1,277 (2.3)	1,611 (2.5)	1,306 (2.1)
Cereals and pulses	100 (2.3)	126 (2.1)	186 (0.9)	589 (1.1)	761 (1.2)	736 (1.2)
Potatoes	125 (2.8)	152 (2.5)	301 (1.4)	697 (1.3)	609 (0.9)	575 (0.9)
Silk cocoon	177 (4.0)	250 (4.2)	702 (3.3)	1,000 (1.8)	308 (0.5)	188 (0.3)
Vegetables	184.0 (4.2)	172 (2.9)	1,766 (8.4)	8,258 (15.0)	13,422 (20.9)	12,640 (20.3)
Fruits		291 (4.9)	1,989 (9.4)	5,659 (10.3)	7,804 (12.2)	7,760 (12.5)
Livestock products	105 (2.4)	485 (8.1)	3,998 (19.0)	13,805 (25.1)	14,295 (22.3)	13,108 (21.1)
Others ¹	357 (8.0)	382 (6.4)	1,023 (4.9)	3,956 (7.2)	5,274 (8.2)	5,681 (9.1)
Total	4,418 (100.0)	5,999 (100.0)	21,080 (100.0)	55,009 (100.0)	64,113 (100.0)	62,123 (100.0)

Source: 'Statistics on multi-purpose agricultural co-operatives', MAFF.

¹Flowers and ornamental plants, industrial crops, green tea and others.

Table 5 shows the membership of multi-purpose societies, and in particular indicates the increase of associate members without voting rights. Regular members are farmers, while associate members are non-farmer

inhabitants living in the locality where the co-operative society in question is situated. The proportion of associate members has increased from about 12% in 1960 to 38% in 1992, i.e. about two-fifths of multi-purpose co-operative members are non-farmers, mainly in financial business.

Table 5 Membership of Multi-Purpose Co-operative Societies (in 1000s)

	Regular members		Associate members B (1,000)	Total C = A+B	Rate of associate member B/C
	Total A (1,000)	Households (1,000)			
1960	5,780	5,072	756	6,536	11.6%
1965	5,837	5,266	953	6,790	14.0%
1970	5,889	5,304	1,387	7,276	19.1%
1975	5,773	5,253	1,899	7,672	24.8%
1980	5,641	5,088	2,244	7,885	28.5%
1985	5,542	4,968	2,526	8,068	31.3%
1990	5,544	4,859	3,065	8,609	35.6%
1991	5,533	4,837	3,203	8,736	36.7%
1992	5,514	4,806	3,329	8,844	37.6%

Source: 'Statistics on multi-purpose agricultural co-operatives', MAFF.

Structural Reorganization - a Case of Purchasing Business

Concurrently with merger development, the present three-tier system of agricultural co-operatives is reorganizing into a two-tier system. The present three-tier system is described below (see Figure 2).

Primary societies have corresponding federations at the prefectural level, organized by function. Federations are therefore classified into two categories:

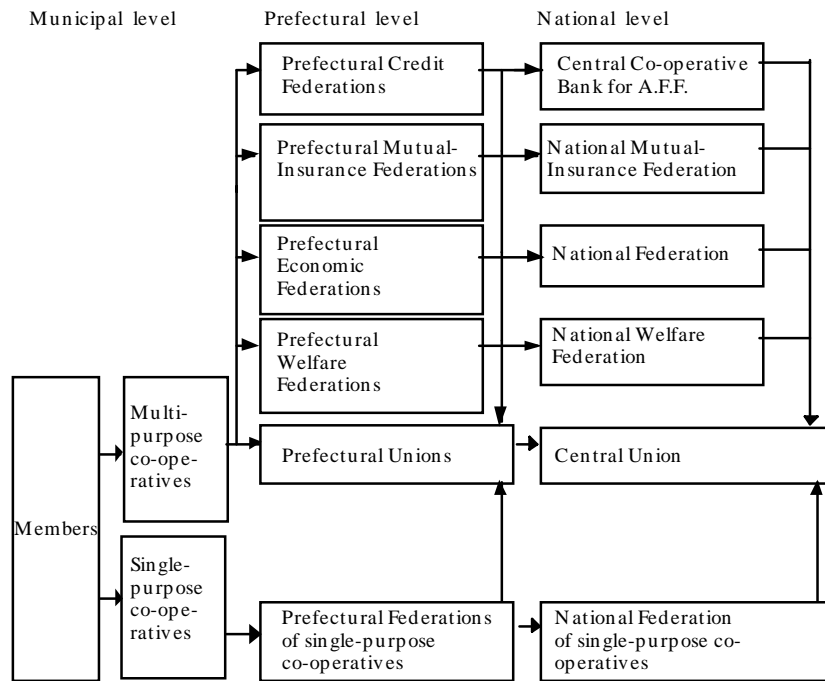
- Those mainly composed of multi-purpose agricultural co-operatives such as prefectural economic (marketing and supply), credit, and mutual insurance federations, and
- Single-purpose agricultural co-operatives such as dairy and horticultural co-operative federations, and so on.

Each of the 47 prefectures in Japan has a prefectural union whose members are primary societies and prefectural federations. Each prefectural federation has a national counterpart, such as the National Federation of Agricultural Co-operative Associations (ZENNO), etc. The Central Union of Agricultural Co-operatives (ZENCHU), whose membership is held basically by primary co-ops, prefectural unions and federations, and various national federations, is a nationwide organization.

In this three-tier system, the upper two tiers are organized separately by business; however, co-operative business has been carried out comprehensively in an integrated manner at the primary level. As the business scale became enlarged, each business became organized by a vertical system and, as a consequence, those business functions have been virtually carried out separately in the primary societies. In addition,

structural reorganization into two tiers is advancing separately by business. In many businesses, such as the supply of fertilizer, agricultural chemicals and livestock feed, the functions at the prefectural level will be dismantled into primary and national levels. But the purchasing business of consumer goods is an exception, in which the voluntary A-co-op chain stores of the primary societies is reorganizing into a regular chain store by prefectural economic federations.

Figure 2 Structural Organization of Agricultural Co-operatives



The A-co-op chain store was organized in 1973 in order to survive growing competition with other chain stores; however, member stores were owned and managed by their respective co-operatives and only A-co-op brand products were distributed. Member stores were bigger and more standardized than the other co-operative stores. Table 6 shows chronological changes of member co-ops and stores. In this table, there are number of notable points. Firstly, A-co-op chain stores have grown rapidly during the decade from 1973. Consequently, aggregate sales by member stores have had three-fourths of the total sales of agricultural co-operative stores, despite the number of member stores being only one fourth of the total of agricultural co-op stores. Secondly, after 1985, however, A-co-op chain stores have remained stagnant in the number of member stores and in the rate of sales (B/D). This is the background of the recent consolidation of A-co-op chain stores to the prefectural level.

Table 6 Change in the 'A-Co-op' Chain Store of Agricultural Co-ops

	1973	1975	1980	1985	1990	1991	1992	<u>80</u> 75	<u>85</u> 80	<u>90</u> 85
No. Affiliated co-ops	346	846	997	1202	1131	1080	1038	1.18	1.21	0.94
No. Member stores	A 714	1471	1812	2065	1813	1764	1668	1.23	1.14	0.88
Sales area/store (m ²)	214	254	308	330	388	396	412	1.21	1.07	1.18
Sales of A-co-op (100M¥) B	800	2743	5884	8602	9629	9972	9787	2.15	1.46	1.12
Agricultural co-op stores C	-	9936	8961	8394	7696	7382	7258	0.90	0.94	0.92
Sales of (100M¥) D	4397	6763	9025	10849	12687	13222	12884	1.33	1.20	1.17
A/C	-	14.8	20.2	24.6	23.6	23.9	23.0	--	--	--
B/D	18.2	40.6	65.2	79.3	75.9	75.4	76.0	--	--	--

Source: Data of National Federation of Agricultural Co-operative Associations and 'Statistics on multi-purpose agricultural co-operatives', MAFF.

Reorganization of A-co-op chain stores is now advancing in several prefectural federations. Instead of primary societies, those prefectural federations are beginning to administer member stores, though those owners are still primary societies. Moreover, as store employees of agricultural co-operatives, exclusively store clerks, also go on loan to the federations, head offices of A-co-op chain stores in the federations start to administer personnel affairs beyond the extent of primary societies. So far, in general, employees of primary societies, not only store clerks but also the persons in charge of marketing and guidance activities, etc., have been engaged in multifaceted businesses by turns every several years. Hence they have had many opportunities to make contact with member farmers. They may improve their expertise as store clerks by becoming A-co-op staff exclusively, but opportunities to make contact with members will thus unfailingly decrease. Moreover the authority of primary societies in store administration will be lost.

New A-co-op stores which come under member articles are more restricted to the larger scale stores, while the other smaller stores are consolidating and being abolished. Table 7 shows that small stores of less than 100 m² decreased drastically through the 1970s and 1980s, and the number of small stores in 1992 were reduced to less than half. In general, co-operative small stores are located in the old hamlets, and they function as a haunt for members. But those have been consolidated into bigger ones in suburban areas, and stores with upwards of 300 m² gradually have been increasing in number. This tendency is going to be strongly affected by the current structural reorganization. Structural reform of co-operative stores will be accelerated, and the functions of store administration will be carried out by federations which have no system of direct member participation. (Kawaguchi, 1993)

New Movements of Agricultural Co-operatives

The increasingly larger scale of co-op societies is, in itself, not problematic, because large-scale co-operatives do not always have weak member

involvement. For example, Japanese consumer co-operatives successfully combined the development of business operations and movement through member participation. But we could say the above-mentioned process of mergers and structural reorganization has left membership behind and resulted in the development of 'enterprises' separated from membership. (Craig 1986)

Table 7 Number of Agricultural Co-operative Stores by Sales Area

	1970	1975	1980	1985	1990	1991	1992
-100m ²	8021 (77.6)	6867 (69.1)	5564 (62.1)	4834 (57.6)	4173 (54.2)	3949 (52.7)	3748 (51.9)
100-300m ²	1815 (17.6)		2580 (28.8)	2640 (31.5)	2487 (32.3)	2490 (33.2)	2400 (33.2)
300-500m ²			522 (5.8)	611 (7.3)	740 (9.6)	746 (9.9)	739 (10.2)
500-1500m ²	500* (4.8)	3069** (30.9)	269 (3.0)	288 (3.4)	274 (3.6)	291 (3.9)	308 (4.3)
1500m ² -			26 (0.3)	21 (0.3)	22 (0.3)	22 (0.3)	26 (0.4)
Total (%)	10336 (100.0)	9936 (100.0)	8961 (100.0)	8394 (100.0)	7696 (100.0)	7498 (100.0)	7221 (100.0)

* Applies for sales area 300 m² and greater

** Applies for sales area 100 m² and greater

Source: 'Statistics on Multi-purpose Agricultural Co-operatives', MAFF.

When intensifying the pursuit of profit-making in the business of agricultural co-operatives, the so-called 'Suishin' activity (a quota system of sales that must be fulfilled by an employee in addition to his/her regular work) has been stressed. For example, each employee has to sell out his/her quota, such as a few suits, jewelry or long-term insurances, etc., within a given period of time. Many members used to keep away from employees during a 'Suishin' period, because of fear of getting into a fix of buying unnecessary things. Employees are also inclined to get into a fix of buying the remaining quotas out of their own pockets. We can find a reverse form of 'dialog' system in the 'Suishin' activity. (Böök, 1992; Tanaka, 1992)

Recently, there has appeared a movement based on a demand for work that is worth doing as a co-operative employee, i.e. useful work for member farmers, in the labor union movement of agricultural co-op workers. A strong demand by agricultural co-operative employees who want to do worthwhile work is changing the construction of co-operative businesses into those based on members' needs. Co-operative business organizations should contain the system of member participation, and co-operative employees are in a crucial position between business and members. Co-operative works worth doing are those based on members' needs, and farmer members hope to foster the local development of agriculture, not the pursuit of profit-making first. Accordingly, marketing business has come to play an important role among co-operative businesses in some societies, and in the societies in which farm guidance activities for raising local farm products and marketing efforts have been strengthened.

Besides this movement, a lot of direct transactions of agricultural co-operatives with consumer co-operatives have appeared and a new agricultural co-operative whose purpose is exclusively direct transactions has also come into being. Influenced by the background of a health-oriented diet in urban areas, direct transactions with consumer organizations have linked up with organic farming in many cases. It is another important point to combine marketing businesses of agricultural co-operatives with nearby consumer organizations and promote mutual reliance of co-operative members in order to vitalize the organization and survive the fierce competition.

Conclusion

Under the recent import-liberalized process for farm products, we have a new stage of agricultural co-operative mergers and structural reorganization in Japan. The model of mergers, which is presented now, is based on one as reasonable as a financial company's model. Marketing business of co-operatives have shown a tendency to be neglected, while financial businesses have grown vigorously. Multi-purpose co-operatives are advancing in a direction by which their multi-purpose characteristic in itself will be lost. This trend will furthermore expand the imbalance among the functions of businesses.

In addition, structural reorganization into two tiers is advancing separately in each business, and is being carried out by the vertical system of two tiers. Multi-purpose co-operatives in Japan are dissolving into each part of the business organizations by the structural reorganization.

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12 Diversification, Vertical Integration and Profitability in the Greek Food Manufacturing Industries*

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The present chapter assesses the importance of diversification and vertical integration strategies as determinants of performance in the Greek food manufacturing industries. The analysis is conducted using a panel of 540 firms observed annually over the period 1986 to 1992. The analysis of the results suggests that diversification is a source of competitive advantage in the local food industry. Although a diversification strategy is a distinct evidence of higher profitability in the full sample, diversification activity *per se* is not. Concentric diversification seems to be a profitable option for smaller food manufacturing companies that adopt such a strategy, but it is not a profitable option for larger food manufacturing companies that raise their profitability via the conglomerate diversification alternative. Expansion strategies in the form of vertical integration seem to be associated with negative pay-offs for firms involved. However, a combined strategy of vertical integration and conglomerate diversification for larger firms and a combined strategy of vertical integration and concentric diversification for smaller firms shows superior performance for the relevant companies.

Diversification and Performance

Although a *diversification strategy* is, in principle, the production of more than one product or service by a company, it is convenient to narrow the concept somewhat to the following definitions:

- In a concentric diversification strategy, the company adds a number of new related products or services.
- In a conglomerate diversification strategy a firm produces products or services which are seemingly unrelated in production or demand.

Vertical integration describes the overall degree to which different business activities in a value chain are brought under the management of a single company. There are two categories of vertical integration:

- Backward or upstream integration is the case where the company is seeking increased control or ownership of its suppliers. For the purpose of the present chapter, it refers to the extent to which a single business (product) company is moving into the raw materials and inputs market, either via vertical merger or by setting up new production facilities.

- Forward or downstream integration describes the situation where the company moves towards final production and distribution. In that kind of integration the company may also gain ownership or increased control over distributors or retailers, as it carries on successive stages in the processing and distribution of a product.

The motives behind company diversification can be classified into two broad categories: (a) the utilisation of specific physical and/or human assets, and (b) the reduction of financial risk. The first incentive is related to economies of scope or in general to the utilisation of an asset or assets that can produce a number of goods and services. The second motive is associated with pecuniary economies arising from large firm size *per se* and also in keeping a balanced portfolio of products or services in order to stabilise the company's profitability over time. The implications of the previous arguments are numerous. The diversified corporation should be able to allocate resources among divisions more efficiently than the external market, and the latter should be greatly enhanced by the existence of a vertical organisational structure. We can expect a diversified corporation to enjoy higher profitability than its non-diversified rivals over time. Secondly, since the main rationale for diversification is the reduction of a firm's unit costs by producing two or more goods or services jointly rather than separately (economies of scope in common inputs and the transfer of skills among divisions), related (concentric) diversification should be more profitable than unrelated (conglomerate) diversification.

There is an extensive literature on the diversification-profitability relationship following the seminal work of Rumelt (1974). The main interest and research in corporate strategy has focused on how different types of diversification strategies may impact upon company performance. In particular, a number of studies examined the influence of a company's strategy and organisational structure might have on performance. Rumelt (1974) found that while diversification *per se* was not a profitable activity, firms that pursued market related diversification were more profitable than companies that diversified into markets that were unrelated to their main activity. In addition, Rumelt (1974) pointed out that both conglomerates and vertically integrated companies were the least profitable among the 500 industrial companies examined between 1949 and 1969^{1,2}. A number of authors have subsequently confirmed the superiority of related over unrelated diversification, although industry specific factors seem to play an important role in raising the profitability in the case of related diversification³. Other studies have found unrelated diversification to be a more profitable strategy than related diversification (Michel and Shaked, 1984; Luffman and Reed, 1984; Dubofsky and Varadarajan, 1987). Belkaoui and Pavlik (1992) find a significant nonmonotonic relationship between performance and ownership structure and a positive direct relationship between performance and related and unrelated diversification. The findings of Grant et al's (1988)

for Britain showed that diversified companies were more profitable than specialised companies up to a point in their index of product diversity, after which further increases in diversification were associated with decreasing profitability⁴.

The main bulk of the vertical integration literature is rooted in the theory of industrial economics and is basically concerned with the 'gains and losses' or with the various 'incentives and disincentives' associated with such a strategy. There is a market failure-transaction costs literature, a technology/cost savings-economies of scale approach, and thirdly a structure-conduct-performance/five forces of competition/supplier-buyer 'strategy approach'⁵. Evidence for the profitability of vertically integrated corporations is rather scarce, and although information on horizontal mergers or integration is relatively easy to obtain, strategists tend to look at horizontal mergers or integration as a conglomerate diversification strategy. However, even if we ignore potentially beneficial cost savings associated with vertical integration, integration will eventually allow the integrated producer to capture – at least part of – the monopoly profits and perhaps to raise barriers to entry in one or more stages of production. Therefore, the long-run profitability of a vertically integrated producer should be above the average industry level.⁶

Following this discussion, a number of propositions are formulated as follows:

- *Proposition 1:* Diversified companies are more profitable than their non-diversified counterparts;
- *Proposition 2:* Related (concentric) diversification is more profitable than unrelated (conglomerate) diversification;
- *Proposition 3:* Vertically integrated companies are more profitable than their non-integrated rivals; and
- *Proposition 4:* A 'combined' strategy of diversification and vertical integration should greatly enhance profitability.

Modelling Firm Profitability

The data used in this study are food company account information taken from the ICAP Directory for Greek companies registered as Limited Liability (LTD) and Public Limited Companies (PLC). The data used constitute a panel of 540 food manufacturing companies that survived during the financial years 1986 to 1992 (ICAP Directory for Greek Companies, Issues 1988 to 1994). Companies in Greece are not required to publish a detailed breakdown of their sales by market and there is no publicly available information on the issue. Therefore, to estimate company diversification, I inspected company annual reports from the ICAP Directory for Greek Companies that contains information on every company's operation for all products and markets down to the 4-digit level of International Standard Industrial Classification (ISIC).

In order to investigate the empirical validity of Propositions 1, 2, 3 and 4 and the effect of a number of company related characteristics on

performance, the following ordinary least squares estimating (OLS) equation is specified:

$$(NI/TA)_{jt} = C_0 + C_1 \text{DIVERSIFICATION}_{1jt} + C_2 \text{VERTICAL INTEGRATION}_{2jt} + C_3 \text{SIZE}_{3jt} + C_4 \text{EXPORTER}_{4jt} + C_5 \text{DIVERSIFICATION AND VERTICAL INTEGRATION}_{5jt} + U_{jt}$$

where U_{jt} is an independently distributed error term with zero mean and constant variance [$E(U_{jt}) = 0$, $\text{VAR}(U_{jt}) = s^2$]. The subscript j stands for the 540 firms in our sample ($j = 1, \dots, 540$) and the subscript t indicates the financial years 1986 to 1992 ($t = 1986, 1987, 1988, 1989, 1990, 1991, 1992$).

The dependent variable $(NI/TA)_{jt}$ is measured as net income before tax deductions and net from any income brought forward from the previous year over the value of total assets. Total assets includes the fixed capital of the company, at inflation-adjusted acquisition price, plus the value of its circulating capital and reserves.

The set of regressors used to explain the company profitability includes the following variables:

DIVERSIFICATION. A dummy variable that takes on a value of unity if the company is engaged in diversification, zero otherwise. The **DIVERSIFICATION** variable incorporates the addition of new related products and services (concentric diversification) and the addition of new unrelated products and services (conglomerate diversification). A company was defined as being diversified if it was operating in two or more 4-digit food markets.

VERTICAL INTEGRATION. A dummy variable that takes on a value of unity if the company has a vertically integrated structure, zero otherwise. A company was defined as being vertically integrated if it was operating in two or more stages in the production of the final product. Companies were involved in forward integration (normally towards downstream retailers) and backward integration (normally towards an upstream supplier or input) in the production process.

SIZE. This is a measure of firm size and it is measured as the natural logarithm of the company's number of total assets (Grant and Jammie, 1988). If large company size gives rise to economies of scale, pecuniary economies and capital intensity related technical efficiencies, then a positive relationship is expected between size and performance (Hall and Weiss, 1967).

EXPORTER. A dummy variable that takes on a value of unity if the company is an exporter, zero otherwise. A positive association is expected between exporting activity and profitability if exporting is associated with economies of scale in production and/or the achievement of market power in the local market.

DIVERSIFICATION AND VERTICAL INTEGRATION. A dummy variable that measures the combined effect of diversification and vertical integration. The **DIVERSIFICATION AND VERTICAL INTEGRATION** variable takes on a value of unity if the firm is engaged in both vertical integration and diversification, zero otherwise.

CONCENTRIC DIVERSIFICATION. A dummy variable that takes on a value of unity if the company is engaged in concentric (related) diversification, zero otherwise.

CONGLOMERATE DIVERSIFICATION. A dummy variable that takes on a value of unity if the company is engaged in conglomerate (unrelated) diversification, zero otherwise.

Statistical Results

Combining the various years' data in a pooled cross-section regression presupposes that the relationship in all years is the same. In order to test the homogeneity of the relationship between profitability and diversification between 1986 and 1992, an analysis of covariance based on a technique described in Dhrymes (1971) is used. The assumption of homogeneity was confidently accepted in all regression estimations, hence all results reported below are pooled samples of the 540 companies over the 7 year period 1986 to 1992. The various sets of results are reported in Tables 1, 2 and 3, where the estimated regression equations are heteroscedasticity robust as suggested by White (1980).

Table 1 Regression Analysis of the Effect of Diversification on Profitability for the Years 1986–1992 in the Greek Food Industries

Variables	Regression equations			
	(1)	(2)	(3)	(4)
Intercept	0.2029 (2.659)***	0.1957 (2.564)**	0.1927 (2.519)**	0.1866 (2.379)**
Diversification	0.0451 (2.012)**			
Concentric diversification		0.0419 (1.928)*		
Conglomerate diversification			-0.0107 (-0.240)	
Vertical integration	-0.0409 (-1.773)*	-0.0364 (-1.692)*	-0.0224 (-1.681)*	
Size	-0.0122 (-1.958)*	-0.0117 (-1.869)*	-0.0114 (-1.823)*	-0.0129 (0.269)
Exporter	0.0029 (0.192)	0.0046 (0.308)	0.0052 (0.346)	0.0041 (0.269)
Diversification and vertical integration	0.1006	0.0987	0.0811	0.0299 (1.996)**
R ²	0.1006	0.0987	0.0811	0.0813
F-statistic	3.587**	3.221*	2.637*	2.844*
Mean of dependent variable	0.03465	0.03465	0.03465	0.03465
Number of firms	540	540	540	540

Heteroscedasticity robust (White, 1980) estimated t-statistics are shown in parentheses.

*, **, ***: indicates t-statistic significance at 10 per cent, 5 per cent and 1 per cent levels, respectively, on a two-tailed test.

+, **: indicates F-statistic statistically significant at the upper 5 per cent and 1 per cent points, respectively.

The first set of results is set out in Table 1 and the estimated equations are reported in columns (1) to (4) in Table 2. The mean rate of return on capital for the 540 food companies is 0.03465 (or 3.465 per cent). As Table 1 suggests the DIVERSIFICATION and CONCENTRIC DIVERSIFICATION dummy variables have a positive and statistically significant effect on profit rates in columns (1) and (2) respectively. Column (3) shows that a CONGLOMERATE DIVERSIFICATION strategy does not seem to be a profitable strategic option. In addition, a policy of VERTICAL INTEGRATION seems to lower the profitability of the companies involved, a finding that is in contrast with the *Proposition 3*. The negative sign of the VERTICAL INTEGRATION regressor is a bit puzzling, but it is consistent with other studies that observed a negative and significant relationship⁷. A plausible explanation can be that a number of companies may be (or have recently been) in a process of backward and/or forward integration that requires high capital expenditure, and that the potential benefits of integration are yet to be fully materialised. The SIZE variable is negative and statistically significant in the formulated equations in columns (1) to (4). Negative associations between size and profitability, as well as between market share and profitability, have been detected by the author in most sectors of the Greek manufacturing industries (see Bourlakis, 1992a and 1992b). Finally, Table 1 illustrates that exporting (EXPORTER) is not an important factor in raising profitability for the domestic food companies. In general, diversification seems to be an element of competitive advantage in the food industry. The strategy of related diversification is also superior to the strategy of unrelated diversification. The joint regressor DIVERSIFICATION AND VERTICAL INTEGRATION turns up with a positive and significant regression coefficient, suggesting that vertical integration can be a reasonably potent option if combined with diversification⁸.

In order to test for potential differences in diversification practices between smaller and larger food companies, the 540 food manufacturing firms are broken down into two groups. The first group consists of the larger food companies that operate above the average minimum efficient firm size in relation to the size of the market, and the second group consists of the smaller companies that work below the average minimum efficient size in relation to the size of the market. By classifying our sample into smaller and larger companies, I expect that the detection of potential differences in diversification strategies will be greatly enhanced. The estimation of the average 'minimum efficient scale of production' was made as follows:

*Average 'Minimum Efficient Scale of Production' = The average size of the largest companies accounting for 50 per cent of total assets in the food manufacturing industries as a percentage of total assets in the food manufacturing industries*⁹.

According to this definition, 39 food manufacturing companies were found to be above the average 'minimum efficient scale of production', and 501 food manufacturing companies were found to be below the aver-

age 'minimum efficient scale of production'. The second and third sets of results are reported in Tables 2 and 3 respectively.

Table 2 Regression Analysis of the Effect of Diversification on Profitability for the Years 1986–1992 for Companies Operating Above the Average 'Minimum Efficient Scale of Production'

Variables	Regression equations			
	(1)	(2)	(3)	(4)
Intercept	0.5928 (1.004)	0.5808 (0.994)	0.8421 (1.429)	0.8552 (1.447)
Diversification	-0.0029 (-0.732)			
Concentric diversification		0.0033 (0.759)		
Conglomerate diversification			0.2277 (5.984)***	
Vertical integration	-0.0079 (-0.175)	-0.0109 (-1.246)	-0.0113 (-0.280)	
Size	-0.0316 (-0.831)	-0.0308 (-0.818)	-0.4769 (-1.253)	-0.0490 (-1.289)
Exporter	-0.0649 (-2.314)**	-0.0646 (-2.366)**	-0.0699 (-2.623)**	-0.0716 (-2.840)***
Conglomerate diversification and vertical integration				0.2273 (5.972)***
R ²	0.0805	0.0806	0.1801	0.1788
F-statistic	2.458 ⁺	2.482 ⁺	4.819 ⁺⁺	4.012 ⁺⁺
Mean of dependent variable	0.03940	0.03940	0.03940	0.03940
Number of firms	39	39	39	39

Heteroscedasticity robust (White, 1980) estimated t-statistics are shown in parentheses.

** , ***: indicates t-statistic significance at 5 per cent and 1 per cent levels, respectively, on a two-tailed test.

+, ++: indicates F-statistic statistically significant at the upper 5 per cent and 1 per cent points, respectively.

Table 2 sets out the empirical findings for the 39 larger companies that were found to operate above the average 'minimum efficient scale of production' in the food manufacturing industries. The results in column (1) and column (2) indicate that there is no statistically significant impact of DIVERSIFICATION upon performance, as well as of CONCENTRIC DIVERSIFICATION upon profitability for the 39 larger companies in the sample. However, as can be seen in column (3) of Table 2, profitability is increased via a conglomerate diversification strategy. The CONGLOMERATE DIVERSIFICATION dummy variable indicates that the benefit associated with such a strategy is a substantial one. Holding the other variables constant in column (3) in Table 2, a 10 per cent increase in the CONGLOMERATE DIVERSIFICATION variable increases profitability by 2.277 percentage points.

Table 3 Regression Analysis of the Effect of Diversification on Profitability for the Years 1986–1992 for Companies Operating Below the Average ‘Minimum Efficient Scale of Production’

Variables	Regression equations			
	(1)	(2)	(3)	(4)
Intercept	0.2738 (2.658)***	0.2681 (2.608)***	0.2626 (2.549)**	0.2501 (2.392)**
Diversification	0.0486 (2.012)**			
Concentric diversification		0.0452 (1.988)**		
Conglomerate diversification			-0.0446 (-1.839)*	
Vertical integration	-0.0433 (-1.783)*	-0.0387 (-1.803)*	-0.0230 (-1.859)*	
Size	-0.0183 (-2.165)**	-0.0179 (-2.120)**	-0.0174 (-2.062)**	-0.0184 (-2.179)**
Exporter	0.0078 (0.499)	0.0100 (0.639)	0.0111 (0.709)	0.0107 (0.684)
Concentric diversification and vertical integration				0.0322 (2.128)**
R ²	0.0762	0.0742	0.0863	0.0675
F-statistic	4.407**	4.116**	2.485+	2.954+
Mean of dependent variable	0.03428	0.03428	0.03428	0.03428
Number of firms	501	501	501	501

Heteroscedasticity robust (White, 1980) estimated t-statistics are shown in parentheses.

*, **, ***: indicates t-statistic significance at 10 per cent, 5 per cent and 1 per cent levels, respectively, on a two-tailed test.

+, **: indicates F-statistic statistically significant at the upper 5 per cent and 1 per cent points, respectively.

Finally, although VERTICAL INTEGRATION and SIZE have no significant impact on profitability, a significant negative association between profitability and exporting (EXPORTER) is observed in Table 2.

In column (4) of Table 2, I add the joint CONGLOMERATE DIVERSIFICATION AND VERTICAL INTEGRATION term where: CONGLOMERATE DIVERSIFICATION AND VERTICAL INTEGRATION = A dummy variable that measures the combined effect of conglomerate diversification and vertical integration. The CONGLOMERATE DIVERSIFICATION AND VERTICAL INTEGRATION variable takes on a value of unity if the firm is engaged in both conglomerate diversification and vertical integration, and is zero otherwise; The combined effect of CONGLOMERATE DIVERSIFICATION AND VERTICAL INTEGRATION dummy variable turns up with a positive sign and very significant at the 1 per cent level in column (4)¹⁰. The joint term suggests that a combined strategy of vertical integration and conglomerate diversification is a successful strategic option for the 39 larger local food manufacturers.

Table 3 reports the estimated regression equations for the 501 smaller companies that operate below the average 'minimum efficient scale of production'. The added interactive term in Table 3 is defined as follows: CONCENTRIC DIVERSIFICATION AND VERTICAL INTEGRATION = A dummy variable that measures the combined effect of concentric diversification and vertical integration. The CONCENTRIC DIVERSIFICATION AND VERTICAL INTEGRATION variable takes on a value of unity if the firm is engaged in concentric diversification and vertical integration, and is zero otherwise.

Column (1) in Table 3 reveals that diversification in general matters in raising profitability for smaller companies, while column (2) shows that CONCENTRIC DIVERSIFICATION raises profitability and can be used as a competitive weapon by smaller firms. Column 3, on the other hand, suggests that VERTICAL INTEGRATION and CONGLOMERATE DIVERSIFICATION strategies have negative pay-offs for smaller competitors. The SIZE variable is also negative and significant, while the EXPORTER variable has no significant influence on profitability. As column (4) in Table 3 depicts, the joint regressor CONCENTRIC DIVERSIFICATION AND VERTICAL INTEGRATION is positive and statistically significant at the 5 per cent level¹¹. The computed average profitability for 120 smaller incumbent companies that were found to fall in the CONCENTRIC DIVERSIFICATION AND VERTICAL INTEGRATION category was 0.05701, a rate of return on capital higher than any other group of firms in the local food manufacturing industries.

Concluding Remarks

This chapter gives an analysis of the effects of diversification and vertical integration strategies on firm profitability in the Greek food manufacturing industries. The analysis was conducted using a panel of 540 firms observed annually over the period 1986–1992. The findings reveal that concentric and conglomerate diversification strategies are a potential source of competitive advantage in the local market, with the former favouring the smaller food manufacturers and the latter benefiting the larger food manufacturers. Vertical integration does not seem to be directly beneficial as it lowers the companies' profitability. However, firms that combine vertical integration and diversification manage to reverse such a trend. In particular, manufacturers of food in the local market that operate at a large scale of production seem to enjoy higher rates of return via conglomerate diversification strategies or a combined conglomerate diversification and vertical integration strategy. The latter means that larger food manufacturing firms in Greece not only have a stake in a number of unrelated markets outside their core (food) activity (conglomerate diversification), but they also exploit their upstream (backward) and downstream (forward) activities across marketing channels to their full advantage. Smaller food manufacturing companies raise their profitability via concentric diversification strategies. Concentric diversification strategy is highly beneficial for smaller food manufacturers

if used alongside a vertically integrated structure. The results suggest that neither vertical integration nor conglomerate diversification are necessarily losing propositions. On the other hand, concentric diversification can be a winning proposition among competitors with relatively low 'deep pocket' resources.

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Notes

- * I am grateful to Peter M. Jackson for valuable comments received.
- 1 See for example Berry, 1975; Christensen and Montgomery, 1981; Bettis, 1981; Rumelt, 1982; Varadarajan and Ramanujam, 1987; Itami *et al*, 1982; Lecraw, 1984; Singh and Montgomery, 1987; Amit and Livnat, 1988; Haverman, 1992; and Hamilton and Shergill, 1993, where the relative superiority of related diversification in terms of financial performance is confirmed.
 - 2 Simmonds' (1992) study on 73 Fortune 500 firms over a ten year period ranked diversification classifications according to their profitability from best to worst: (1) Internal Related, (2) External Related, (3) Internal Unrelated, and (4) External Unrelated.
 - 3 In particular the studies by Christensen and Montgomery (1981) and Bettis (1981) show that industry specific factors such as advertising, capital intensity and research and development were important factors in raising the profitability of companies arriving in those markets via a related diversification mode of entry. Interestingly enough, the study by Christensen and Montgomery (1981) shows that vertically integrated companies were the least profitable.
 - 4 According to Grant *et al*'s (1988) findings, a value of around four (4) in their index of product diversity was associated with the maximum return on net assets.
 - 5 For an extensive treatment on the vertical integration literature see Davies (1987).
 - 6 For example, Rumelt (1974) and Christensen and Montgomery (1981) point out that vertically integrated companies were the least profitable.
 - 7 Biggadike (1979) states that new business ventures take, on average, 7 years to restore profitability.
 - 8 The combined effect of concentric diversification and vertical integration was found to have a positive and significant impact on profitability, while at the same time the joint effect of conglomerate diversification and vertical integration on profitability was found to be statistically insignificant.
 - 9 Total assets is defined as the sum of fixed assets (the value of land, buildings, machinery and equipment), investment and long term receivables, and total current assets (inventories, receivables, securities bills, cash and cash equivalents).
 - 10 The combined effect of concentric diversification and vertical integration on profit rates was statistically insignificant in Table 2.
 - 11 The combined effect of conglomerate diversification and vertical integration on profit rates was negative and statistically significant in Table 3.

Part IV

Market Challenges

13 Intense Competition, Revised Strategies and Financial Performance in the U.K. Food Retailing Sector

Ken Bates and Mark Whittington

By the 1990's, the European food industry had undergone a number of important structural changes. Merger and acquisition activity had sharply increased market concentration causing the smaller, under-resourced, operators to become increasingly vulnerable, not least because of the trend towards expensive branding activities.

The balance of power between the food manufacturers and retailers has been shifting. In most European countries there has been a rising trend in the sale of retailers' own brand products, for example in Germany, retailer-controlled brands climbed from 5% of food sales in 1980 to approximately 15% in 1990. In the U.K., however, own brands already accounted for 17% in 1980 and this had risen to 35% by 1990 (Corstjens and Corstjens, 1995). In many situations, the degree of market concentration is such that further expansion by acquisition would probably fall foul of either domestic or E.U. competition regulations. Therefore grocery retailers have turned to alliances, forming international buying groups, in order to achieve greater dominance over suppliers.

Turning to the U.K., it is only in recent years that the domestic food retailers have started to feel the pressure from outside competitors. The largest food retailers in the U.K. are J. Sainsbury, Tesco, Argyll, Asda, Somerfield and Kwik Save. Sainsbury, Tesco and Argyll are quality supermarkets, Kwik Save is a food discounter; Asda and Somerfield lie in between the two categories. Discount operators have proved that selling large volumes of goods at permanently discounted prices is a profitable strategy, if costs are kept at a minimum by the use of cheap sites, minimum staff and low investment in shop fittings. The quality supermarkets have invested heavily in sites, buildings, fittings and people as they have pursued high margins through a strategy that emphasises service and enhances the quality of the shopping experience. The arrival in the U.K. of more aggressive discounters from continental Europe and the U.S., into a market that is getting close to saturation point, has severely tested customer loyalty and the quality supermarkets have responded to this competitive threat by introducing a range of low priced own brands, for example Tesco's 'Value Lines'. In the twelve months to July 1994 food prices in the U.K. fell for the first time in twenty years. However, the quality supermarkets are still in a strong position with high market shares, Sainsbury and Tesco both over 12% whilst Kwik Save, the major UK

discounter has under 4%¹; own brand sales for Sainsbury were 65.8% of turnover, Tesco 56.1% and Kwik Save only 13.4%.

Although these quality supermarkets have clearly been able to preserve their superiority, it has not been easy. The quality image is no longer enough to guarantee customer loyalty and in the past few years there have been quite dramatic changes in the competitive environment which have resulted in revised strategies.

Planning restrictions have halted the move from town centre sites to out of town retail parks, so the quality multiples have turned to new shopping formats and non-food superstores, for example the petrol station with attached convenience store and do-it-yourself stores. The reduced opportunities for expansion in the U.K. have encouraged the acquisition of food retailers overseas. As a counter to the threat from discounters some of the quality supermarkets have introduced shopper loyalty cards and used them in the related development of customer intelligence databases. The legalisation of Sunday trading in the U.K. has been a mixed blessing, Tesco, Asda and Argyll have benefited, but Sainsbury loses market share on Sunday and the volume of trade is still well below that of the worst weekday.

To assess the impact of this rapidly changing environment, this paper compares the performance of the two leading U.K. food retailers, Sainsbury and Tesco, and explores the links between strategy revision and financial performance. The key financial performance indicator, return on equity, is decomposed to show how a discounter, Kwik Save, has achieved comparable returns from pursuing an entirely different strategy.

A Framework for Analysis

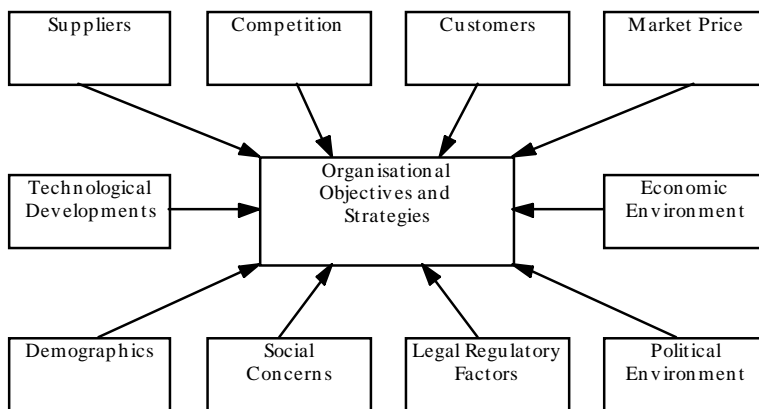
The continued success of today's major companies depends on their ability to gain and maintain at least one source of competitive advantage over their actual and potential rivals (Porter 1980). More recent advice to managers responsible for strategic decisions is to return to basics and focus on the search for sustainable competitive advantage (Day and Wensley, 1988; and Cravens, 1988). In today's intensively competitive markets a successful company must constantly reassess its sources of competitive advantage, ensure that the company's key success factors are regularly reviewed, effectively communicated throughout the organisation and reinforced and monitored through the performance measurement system. Moreover, to preserve their competitive position in the face of increased intensity of global competition, companies need to constantly monitor the market place and consequently managers should be increasingly interested in information about the present performance and future strategy of not only those already operating in the same market but also those with the potential to enter any of the company's markets.

The supply of such relevant information remains problematic, but some management accountants are beginning to shake off their preoccupation

with inward looking systems and are developing systems that focus much more on the external environment of the company, its current and planned markets and present and potential competitors. Such approaches have been described in the U.K. literature under the title of Strategic Management Accounting, defined by Bromwich (1990) as: *"The provision and analysis of financial information on the firm's product markets and competitors' costs and cost structures and the monitoring of the enterprise's strategies and those of its competitors in these markets over a number of periods."*

The Strategic Management Accounting (SMA) focus on external environmental factors (Figure 1, taken from Ward, 1992) points to a daunting need for competitor 'intelligence' and hence the literature has concentrated on information that is difficult and costly to collect. Simmonds (1981) suggests that a *"new camera could be of more value than another office calculator"*, but perhaps this 'industrial espionage' image is dissuading accountants from adopting the SMA approach. Bromwich and Bhimani (1994) suggest that SMA has generated limited excitement because the revisions required to current management accounting systems are much more radical than those needed to implement other recent innovations, such as Activity Based Costing.

Figure 1 External Environmental Factors



Moon and Bates (1993) would suggest, however, that the sourcing and cost of information need not always be considered such a major obstacle, as for an SMA analysis essential information includes *"a quantitative assessment of sales, costs and profits for close competitors"* and such an assessment can be made by utilising the annual accounts of competitor companies. They consider that the published annual report is *"an excellent source document from which to estimate and extrapolate such data whilst avoiding prohibitively high collection costs."* They claim, however, that what has been missing is a comprehensive framework for the interpretation of financial statements that focuses directly on key sources of competitive advantage. They introduce such a framework, the CORE framework for

appraisal, and provide a comprehensive example of how it could be utilised by Sainsbury to appraise the strategic performance of Tesco, its nearest rival in the UK food retailing sector.

In this paper we further consider the potential utility of both the financial and non-financial information provided in annual reports in appraising the strategic performance of competitors and we highlight the need for greater guidance on the choice and interpretation of ratios than is presently provided in accounting texts. We briefly review the CORE framework and its advantages as a strategic appraisal tool, show how the financial implications of chosen strategies can be identified by using the framework and demonstrate particular techniques that can be used in an analysis of key players in the U.K. food retailing sector.

We argue that such an approach provides the basis for a comprehensive analysis of the effects that the intensified competitive pressures in the U.K. food retail sector have had on strategies of leading companies and on their recently reported and future financial performance.

Use of Annual Report and Accounts

There is a large amount of information in U.K. annual reports (Both Tesco's and Sainsbury's 'Annual Report and Accounts 1994' run to 58 pages whilst Kwik Save's is discounted to 40 pages) and the information is not restricted to financial data, as along with the audited financial statements is an analysis of the year's trading and future prospects in the Chairman's statement, and in addition there is likely to be a statement of corporate objectives and a review of the activities of each of the business divisions. This may be 'of interest' to shareholders or potential investors, the primary recipients of a U.K. company's annual report, but is the information disclosed in a competitor's annual report likely to be of any real value to management?

The non-financial 'additional' information included in the annual report and accounts is un-audited, it may also be selective and will inevitably be somewhat biased with an emphasis on marketing the company to investors. Despite this, it does give a detailed and valuable insight into the company's current and proposed activities and a fairly clear vision of the company's strategy. Whilst the broad context of a company's competitive environment can be gleaned from economic forecasts and national statistics and trends (as detailed in Ellis and Williams, 1993) the company's chosen strategy for dealing with competitive pressures can only be gleaned from company specific information and here the annual report and accounts is a most valuable source. The true value of both financial and non-financial data relies on the ability of the user to accurately interpret the financial results in the light of the company's strategy and so produce a meaningful evaluation of the company's performance as a competitor and hence an estimate of the extent of the 'threat' posed.

Meaningful interpretation begins with the application of a “comprehensive framework for the interpretation of financial statements that focuses directly on key sources of competitive advantage.” Moon and Bates claim that the CORE framework of analysis fills a gap left by the accounting texts where “the coverage is a rather ad hoc listing of a series of ratios, without much emphasis on their relative importance, interrelationship and interpretation.” Stead (1995) sets out a framework for analysis of companies through their Annual Report that is designed to be used by investors and considers “strategy to be fundamental to any analysis”. However, he then states that “the analysis should be completed by a summary review which addresses the question of the company's apparent strategy and the developments that are likely to take place in the next one of two years, as viewed after the appraisal” (p.15, our added emphasis). Whilst we applaud the inclusion of strategy identification as a fundamental part of making a forward projection we question the exclusion of a more detailed analysis of strategy as a *first step* in the whole appraisal process. This analysis of strategy is key to the CORE framework which we briefly outline below.

The CORE Framework for Strategic Performance Appraisal

The title CORE is derived from the four stages of analysis: context, overview, ratios and evaluation. The *context* stage has two aspects as it involves gaining a thorough understanding of both the *external* profile of the company and its related business environment and also the company's *internal* profile. A detailed knowledge of the external environment enables the analyst to assess the likely impact of imposed market conditions on the organisation's achievements. The internal profile relates to the organisation's own strategic positioning within its sector and the critical success factors that underlie its performance. The *overview* stage focuses on the financial statements themselves and involves the identification of trends in the key financial figures (e.g. sales, profits, major assets and liabilities). No formal calculations are required at this stage as it is concerned with highlighting the factors that may have a significant impact on the presentation and content of financial statements. These include one-off events (e.g. acquisitions) and accounting policy choice, as comparison between companies will only be valid if consistent accounting policies are used or, if not, the figures have been adjusted accordingly.

The *ratios* stage involves skill and judgement in choosing only those ratios that help to evaluate the achievement of the company's strategic objectives as identified in the first stage of the analysis. The analyst should resist the temptation to calculate all known ratios, or even a set list of preferred ratios, but instead should concentrate on those ratios that may prove revealing in the particular case, often the most unconventional ratios can prove to be the most enlightening. The final stage is the *evaluation*, which involves the interpretation of the carefully selected ratios to disclose how the company has performed in the key areas of strategic importance identified. This stage should involve a complete reiteration

through the three previous stages to ensure that all questions raised have been answered and the analysis has remained firmly focused on the effectiveness of strategy.

In the remainder of this paper we develop the CORE framework further by introducing additional techniques that can be utilised in the ratios and evaluation stage of the appraisal process. A key measure of shareholder value is the primary ratio Return on Equity (ROE), but this ratio only shows the overall result of the previous period's trading, and thus indicates what has happened but gives no clue as to *why* it has happened. We will demonstrate how disaggregation of ROE can be used to determine how the application of the company's strategy has influenced its ROE performance and how the precise way ROE is broken down should depend on the particular element of strategy that requires investigation.

We will initially utilise the example of Sainsbury appraising its nearest rival Tesco but to reflect the intensifying competitive climate and the added competitive threat now posed by the discounters we will also consider Kwik Save, as an example of a competitor with a somewhat different strategy. Our example is by no means a complete one as other competitors would need to be included and in particular the potential threat from the foreign discounters would have to be comprehensively analysed. What we hope to demonstrate is the framework and type of techniques that can be utilised in the necessary full analysis and to highlight the dynamic nature of the CORE framework of analysis by showing how it gives the analyst the freedom to react to the sort of developing and changing competitive situation that is clearly so characteristic of the U.K. food retail sector.

The key issue we wish to develop is the need for 'comparison'. Sections on interpretation of ratios in many texts point to 'ideals' which we feel are of extremely limited value as they totally ignore the context within which the company is operating. Many texts concentrate on the interpretation of a single company in isolation and hence compare only to the previous year, this 'inward focus' has little application in the real world where success depends on the ability of a company to beat its competitors' performance not just improve on its own previous performance. The texts that advocate comparison with industry averages are at least recognising the presence of competition, but only a below average company will gain from comparison with the industry average, whilst all companies would benefit considerably from direct comparison with close rivals. This type of 'strategic perspective' is advocated by Wilson et al (1994) who stresses the need to 'view' an enterprise's position relative to competitors' positions. The most useful approach will be to compare the various different aspects of the company's performance to several different competitors with the ultimate aim of matching (or beating) the best performance in each area.

With the importance of comparison in mind we describe a useful technique for the comparison between competitors of any set of key ratios, we call the technique 'Polygon Analysis' after the diagrams that are utilised for comparison. A regular polygon highlights that two companies are producing similar ratios from similar strategies whilst the more irregular the polygon the greater the contrast in strategies and consequently in ratios although the overall resulting return on equity may be similar.

We now develop the above approach by examining the specific case of the food retail sector.

Context: External Profile

A detailed report on retailing, *The Economist* March 4th 1995, claims that "economies of scale and information technology have given the top retailers awesome power". The report highlights how retailing has undergone a many-sided revolution over the past 15 years and how retailing firms have been transformed from parochial businesses requiring little management skill, to leaders in business innovation and the management of complexity, wielding enormous power over manufacturers and consumers, and over urban, suburban and rural environments the world over. The two main reasons for the retail revolution are the rise in disposable incomes and more recently the shift in control of the distribution chain from manufacturers and wholesalers to the retailers themselves. The retailer's main competitive advantages used to lie in skill at merchandising and closeness to the customer, for it was manufacturers who decided what goods were available, and in most countries even the price. Not so today after a string of innovations have each provided the customer with more choice, or greater convenience, or better quality, or lower prices, or a combination of any or all of these things.

The impact of advances in information technology must not be underplayed, the *Economist* survey makes the following point: "Computers have also allowed retail managers to exercise closer control over much more extended store chains and ... with the lowering of trade barriers around the world, ... European supermarkets [are poised] to start transforming themselves into global businesses."

It is clear that competition between rivals in the food retail market place is intensifying and this is influencing each company's strategy. Further evidence of this is provided by comments in the Chairman's statement of Sainsbury's annual report for 1994: "The UK food retailing environment has become increasingly competitive in the past year due to the repositioning of major competitors and the continuing expansion of discount formats."

The Chairman of Tesco, in his statement for the same period, goes into more detail as follows: "The past year has seen significant changes in the food retail market in the UK. There has been fierce competition between the superstore majors as consumers have become more demanding than ever about value for money. Price has become increasingly important as a competitive tactic as

superstore operators have also sought to reduce or eliminate the price differential established by the discounters on a limited range of basic groceries."

Kwik Save chairman notes that "competitive pricing activity reached an all-time high during the year, with all of our competitors making long-term price reductions in one form or another", and goes on to say that "our challenge is to maintain the 'real' difference between ourselves and our competitors, so that we can protect and grow our customer base." This 'real' difference is Kwik Save's competitive advantage which we need to probe in our analysis.

Context: Internal Profile

Again, the annual report and accounts can provide insight to the response and strategy of each of the companies. There is no secret about Sainsbury's strategy for dealing with the increased competition as the chairman states: "*.....we have reinforced our leadership in quality and innovation, strengthened our price competitiveness and taken action to enhance customer service and reduce costs.*"

It is also clear that there are limits to growth within the UK food retail market which have forced both Sainsbury and Tesco to turn to more risky expansion strategies. Shareholders in both Sainsbury and Tesco have come to expect rising profits and dividends. The scope for future rises in either of these from the U.K. food retailing market appears limited due to their already considerable market share, the entry of foreign based retailers and increasing difficulty in obtaining planning consent for out of town locations, see for example Murphy (1994) and Buckley and Tailor (1994). The two companies have made differing responses to this challenge. The introduction of the Tesco Clubcard, offering discounts for regular shopping whilst providing the company with detailed information concerning purchasing habits, shows that there is still a need for new ideas in the traditional UK food market if only to maintain market share in the face of greater threats from traditional rivals and new entrants to the UK market from overseas.

Both Tesco and Sainsbury have launched town centre formats called Metro and Central respectively and Tesco has also moved into stand alone petrol stations with convenience stores attached (Tesco Express). Sainsbury have increased their investment in the U.K. home improvement sector with the purchase of Texas adding to their Homebase chain. In addition to these moves in the U.K., both companies have also looked overseas. Sainsbury have made two substantial investments in food retailing in the U.S. and have also entered into a partnership with three other European food retailers to increase purchasing power. Tesco have invested in food retailing in France and Hungary.

With reduced opportunity for new store development, large players in the U.K. food retailing market should be able to generate considerable surplus cashflows to undertake new ventures either in the U.K. or over-

seas. This scenario is dependent on their ability to retain both margin and market share in the face of increasing competition. The recent purchase by Sainsbury of Nurdin and Peacock's Cargo Club food warehouse chain, in order to close it down, highlights the difficulties of entering the market and Sainsbury and Tesco's capacity to respond to the threat of foreign competitors by erecting barriers to entry.

Overview

This stage of the analysis focuses on the financial statements themselves, with the aim of forming an overview of performance. The degree of understanding can be adversely affected by companies changing accounting policies or the advent of one-off events, for example take-overs, or write-offs. The initial ratio analysis below focuses on the financial years ending in 1993 for Sainsbury, Tesco and Kwik Save due to changes in accounting policies and property write-downs in 1994, a topic returned to at the end of the paper.

A glance at the 1993, and previous, accounts reveal high levels of capital expenditure by both Sainsbury and Tesco over many years, as both increased the quantity of floor space and the average store size. This high level of reinvestment appears to have reaped the reward of increasing sales and profit. From the relative sizes of the financial figures, it would seem that it is normal practise for Sainsbury and Tesco to own their sites rather than lease them. Leasing is however a normal activity at Kwik Save; in 1994, for example, the annual report states that only 40% of new stores were freehold, that is purchased outright.

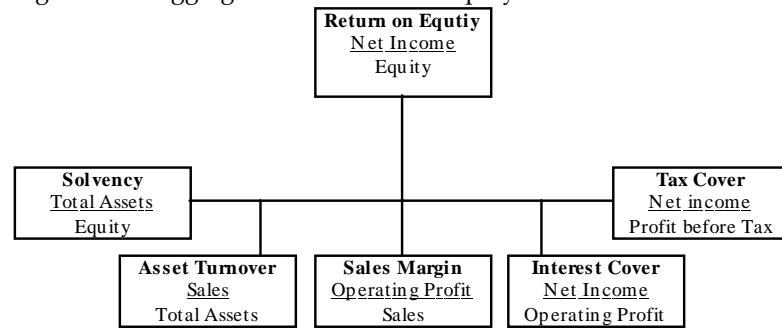
Ratio Analysis

Moon and Bates (1993) studied a broad range of ratios for a complete analysis; here we investigate one particular ratio and examine how it can be broken down to enhance understanding in a particular industry.

Disaggregation of Return on Equity

A key measure of performance for any quoted company is that of return on equity. This compares the profit available for shareholders, either to retain in their company or to be paid out as dividends to themselves, with the level of investment by the equity holders in the company. Whilst this may be taken to give an indication of the success or failure of a company over the previous period, it does not reveal the reasons, or causes, behind the performance achieved. To improve understanding of the underlying factors behind a return on equity ratio, the figure needs to be broken down into component parts. One possible disaggregation of the ratio (see, for example, White et al, 1994) is shown in Figure 2.

Figure 2 Disaggregation of Return on Equity



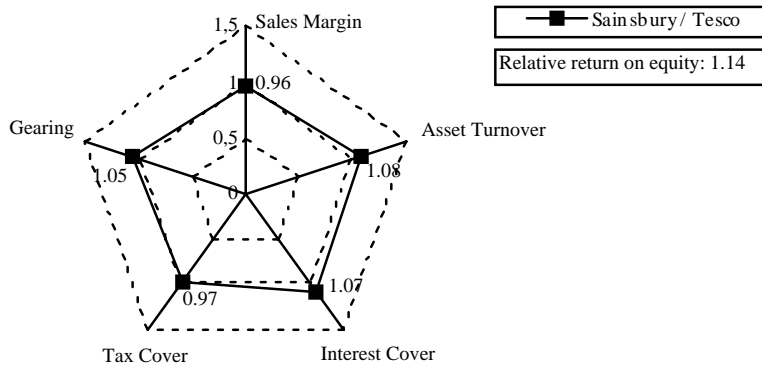
The ratios resulting from the breakdown of return on equity for Kwik Save, Sainsbury' and Tesco, for their accounting years ending in 1993, are shown in Table 1. For companies in a similar line of business, with similar strategies and reasonably comparable accounting policies, one might expect a set of ratios that show a high degree of similarity, which does seem to be the case for Sainsbury and Tesco, whereas Kwik Save shows a significantly different result. It is difficult to make a meaningful comparison from the figures alone and hence we present a polygon diagram as a useful technique to help in such a comparative analysis. The polygon diagram, Diagram 1, shows the comparative ratio performance of Sainsbury and Tesco, taking the Sainsbury ratio and dividing by the Tesco figure; hence where Sainsbury out-perform Tesco, the comparator is greater than one. The chart shows a near pentagon with all comparator values around one, so showing visually a high degree of comparability between Tesco and Sainsbury's performance. The polygon diagram is an adaptation of an idea presented in Steele (1993).

Table 1 Return on Equity Disaggregation, 1993

	Sainsbury	Kwik Save	Tesco
Return on Equity equals	17%	25%	15%
Sales Margin times	8%	5%	8%
Asset Turnover times	184%	397%	170%
Interest Cover times	97%	100%	91%
Tax Cover times	69%	68%	71%
Gearing	174%	181%	192%

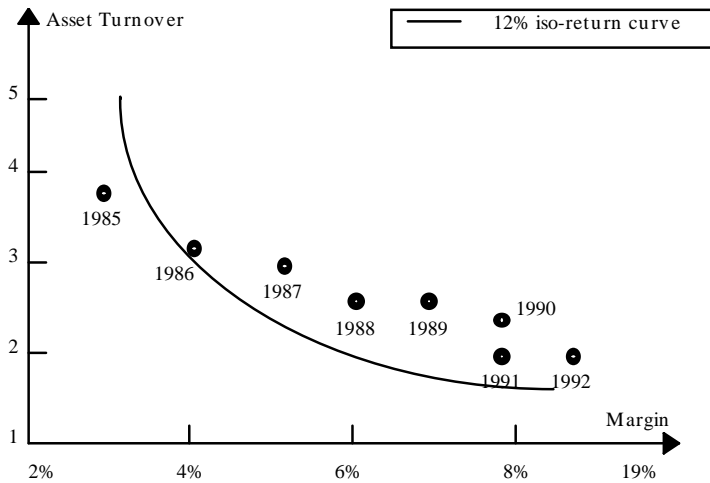
Sainsbury's higher return on equity can be seen to be due to achieving more sales relative to balance sheet asset values, a higher interest cover and a higher financial gearing effect. These factors are partially offset by Tesco's slight advantage on sales margin and tax cover.

Diagram 1 Sainsbury and Tesco Comparison, 1993



Both Tesco and Sainsbury have invested heavily in more expensive floor space, hence reducing asset turnover, as a route to improving their sales margin; this trade-off is demonstrated in an X-Y chart, Diagram 2, plotting Tesco's asset turnover against its sales margin. The iso-return (in this case return on assets) curve of 12% shows how the trade off has not been completely self-cancelling but has been beneficial in improving returns over the period.

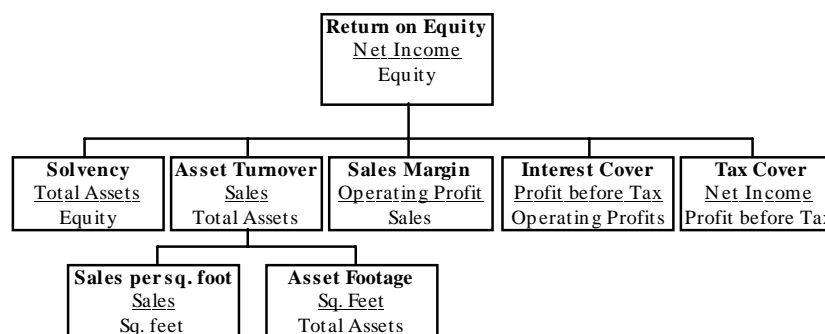
Diagram 2 Tesco; Margin against Asset Turnover



Adapting the Analysis

Whilst it can be argued that analysis and disaggregation of the return on equity ratio is relevant for any company with commercially orientated shareholders, there is still much to be gained by adapting the ratio structure to include industry relevant performance measures. Two key statistics, quoted by each of the leading players in the UK food retailing industry, are that of sales floor space and sales per square foot. The second of these can be integrated into the analysis by further disaggregation of ROE. Asset Turnover is broken down into two component ratios, firstly the familiar sales per square foot and secondly 'Asset Footage', which is the proportion of a square foot that is supported by £1 of total assets, including both fixed and current assets. The second ratio is the inverse of the effective investment in assets per square foot of sales space. This revised disaggregation framework is shown in Figure 3.

Figure 3 Disaggregation of Return on Equity (2)



Using this enhanced framework, the polygon diagram comparing Sainsbury and Tesco can now be redrawn, Diagram 3. This shows that Sainsbury's advantage on asset turnover was not caused by higher sales per square foot, but by providing its sales area at lower cost in terms of asset investment. We would clearly need to investigate how this has been achieved, one useful step in analysing this ratio further would be to split it into two parts, investigating the fixed asset and current asset investment relative to square footage.

The usefulness of the introduction of floor area into the analysis is further highlighted if we compare Sainsbury with Kwik Save, the U.K.'s leading food discounter, rather than Tesco. Kwik Save's ROE is 25% compared to 17% for Sainsbury - why is this so when Sainsbury has higher sales margin and sales per square foot? The key reason for Kwik Save's higher return on equity is the asset footage ratio, where each square foot in Kwik Save requires one third of the investment of that in Sainsbury. Indeed, in Kwik Save's 1994 annual report, the managing director and chief executive states "We will continue to apply strict cost control over our investment per square foot." Diagram 4 clearly shows Kwik Save's emphasis on investment control.

Diagram 3 Sainsbury and Tesco Comparison, 1993

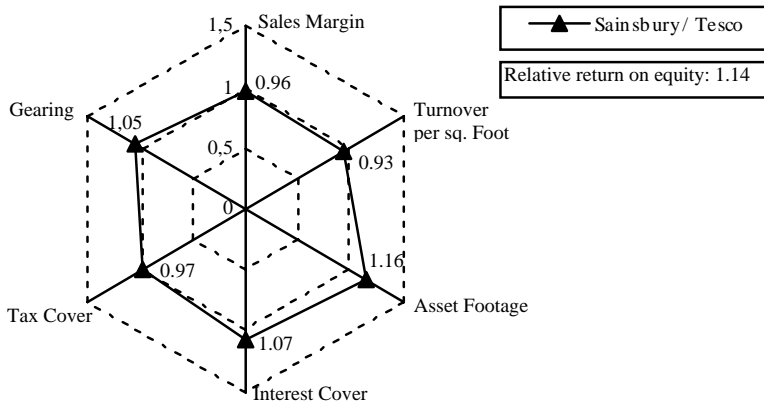
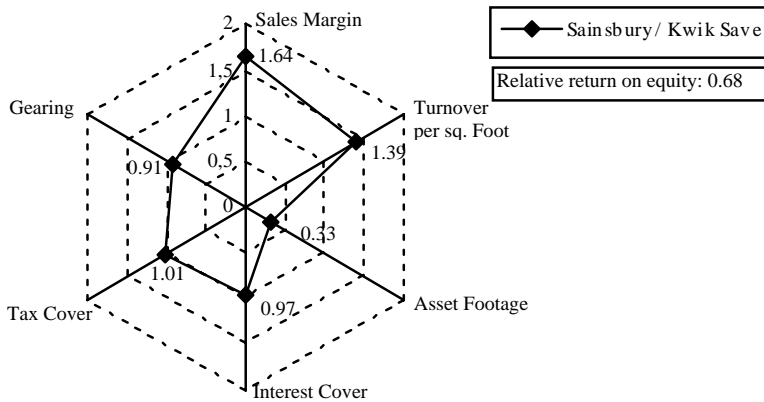
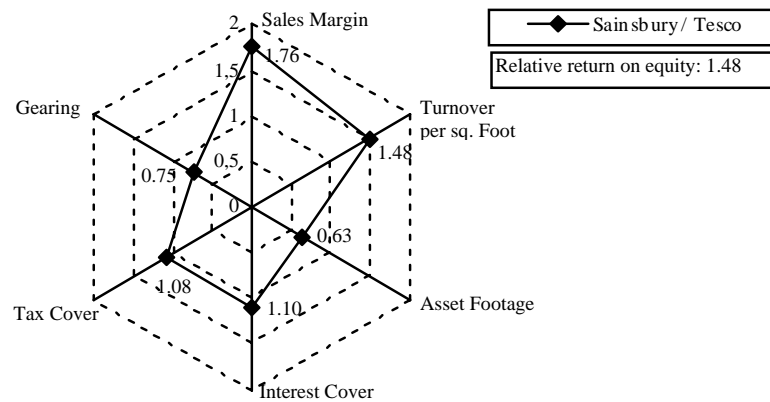


Diagram 4 Sainsbury and Kwik Save Comparison, 1993



If we now go back 10 years and examine the relative ratio decomposition for Sainsbury and Tesco in 1984, we find that there is a similarity between Tesco's position at this time and Kwik Save's in 1993. Sainsbury had a considerable margin advantage over Tesco at this time and higher turnover per square foot, but Tesco had a substantial advantage in the relative asset footage ratio (Diagram 5). Tesco's strategic shift away from the discount end of food retailing is supported by the reporting of the sale of the Victor Value discount store chain in their 1986 report and accounts.

Diagram 5 Sainsbury and Tesco in Comparison, 1984



Evaluation

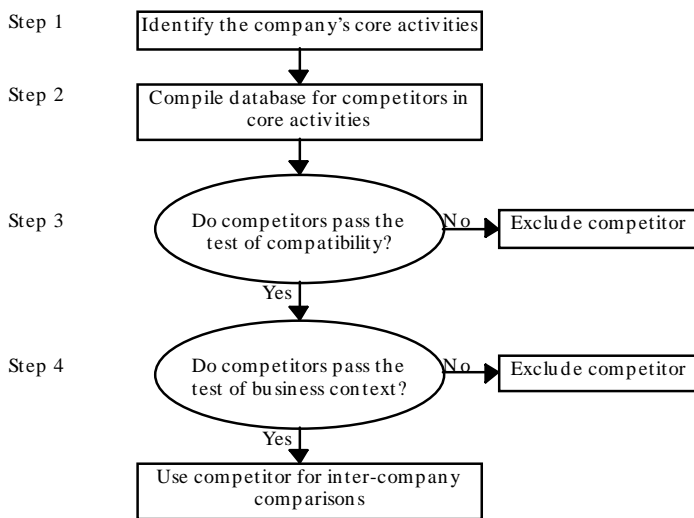
The evidence from the financial statements points to a shift in Tesco's strategic position in order for it to become more closely aligned with Sainsbury. Assuming this to have been Tesco's strategic objective, then it would appear to have been largely achieved by 1992. Sainsbury remains more profitable, that is delivering a higher return on equity to shareholders, although having only a small advantage in market share. Sainsbury's slight advantage seems to be due to a lower level of investment per square foot.

The comparison with Kwik Save highlights that there are still alternative routes to retailing success in the U.K. and that a well-managed discounter can achieve excellent returns. The question raised here is where do Sainsbury and Tesco go next, with perhaps little opportunity for market share or market size growth and the increasing difficulty of obtaining planning permission for new sites. If their sales margin figures remain at these internationally high levels, then there are conclusions to draw. Firstly, that if the companies do not wish to, or are unable to, reinvest capital in U.K. food retailing at the rate they have in the past, then they will have considerable cash flows available for expansion elsewhere. Secondly, comparable returns made by overseas food retailers (see for example Corstjens and Corstjens, 1995) will not, at first sight, seem attractive to either the management or shareholders of the two companies. Whilst there may be specific opportunities, global retailing is generally a less profitable business. The alternative reinvestment path is to move into fields where key business strengths can be employed to good effect; Sainsbury's involvement in home improvement retailing could be viewed in this category. The final possible use for the cash flow would be to increase dividend payments substantially and leave the question of investment strategy with the shareholder.

International Issues

The above highlights the increasing internationalisation of the food retailing market, like many others. This must bring us to question the often recommended approach to inter-company analysis as shown in Figure 4, taken from Ellis and Williams (1993). The four steps suggested in this approach start with the need to identify the core activity of the company being examined. The second step requires the assembling of a database of competitors in this activity. The following step requires the analyst to reject all competitors from the database that do not have broadly similar accounting policies to the company being examined. If the accounting data is not comparable then the results of comparative analysis will be invalid and potentially misleading. The final step asks whether the competitors operate mainly in the same product markets.

Figure 4 Choosing Companies for the Purpose of Intercompany Comparisons (Source: Ellis and Williams, 1993)



With the internationalisation of markets, it can be argued that it is no longer adequate to reject all competitors for analysis who do not meet data comparability criteria. All present competitors and identified future competitors must be included in the analysis and the problems over 'comparability' of information must be tackled and overcome. Accounting policies should be scrutinised and the figures adjusted appropriately, so that essential comparisons can be made, albeit with due care. Exclusion of a competitor or a potential competitor on the grounds of incompatibility of data is not a practical option.

Despite European accounting directives and wide adoption of international accounting standards, there is still considerable difference in the

calculation of reported accounting figures. The requirement for those non-U.S. domiciled companies with stock exchange quotes in the U.S. to prepare accounts under U.S. accounting principles offers a route to comparison for a limited number of generally large companies. However, the E.U. may attempt to find a further answer; Mogg, director general of DG XV has been quoted as follows. *"It would not be acceptable for Europe to delegate the setting of accounting standards to the U.S."* (Kelly, 1995)

Hence, at present, the comparison of retailers from different European countries is difficult, but is becoming increasingly important as the degree of internationalisation of the industry increases. The fact that the companies that are to be compared are of the same nationality does not make their comparability a foregone conclusion. The accounting policies of Kwik Save, Tesco and Sainsbury are broadly equivalent, but have altered over time, particularly between 1993 and 1994.

Caution in Interpreting Inter-Company Comparisons

The analysis above has been based on the 1993 results of the three companies examined. Attempting to analyse the 1994 figures serves as a reminder for the need to be cautious in interpretation and to be clear in determining what is to be measured.

Both Sainsbury and Tesco reduced the value of some of their land assets due to changes in the commercial environment from the 1993 results to the 1994 ones and introduced depreciation for buildings. Sainsbury took the whole write down as a deduction in their 1994 result, Tesco assessing the need for a smaller overall reduction spread it between 1993 and 1994, by restating their 1993 accounts in their 1994 reports. The analysis above has been based on the originally published Tesco figures. The result of these adjustments and of the different methods of implementation causes a major shift in the relative ratios calculated. The polygon diagram (Diagram 6) shows the unadjusted comparison of Sainsbury and Tesco for 1994 and suggests, on superficial examination, that Tesco significantly outperformed Sainsbury in providing a return to equity holders and that this was caused by a higher sales margin and a better, lower, effective tax rate. The latter signals that there may be something unusual with the figures as one would expect, a priori, that two comparable companies governed by the same tax regime would have similar tax burdens. Sainsbury's profit is being reduced by a large deduction for land value write-downs which is not allowable against tax by the UK authorities.

If we remove the asset value adjustments from the results for both Sainsbury and Tesco for 1994, a more familiar polygon diagram emerges (Diagram 7). It could be argued that this diagram gives a more meaningful picture of the underlying retail performance for 1994 rather than reflecting the changes in net wealth of the shareholders compared to the previously reported figures and hence may be significantly more reliable as a basis for predicting future performance.

Diagram 6 Sainsbury and Tesco in Comparison, 1993 and 1994

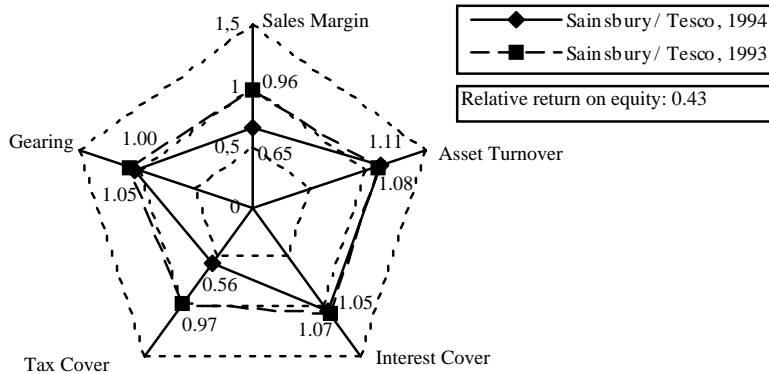
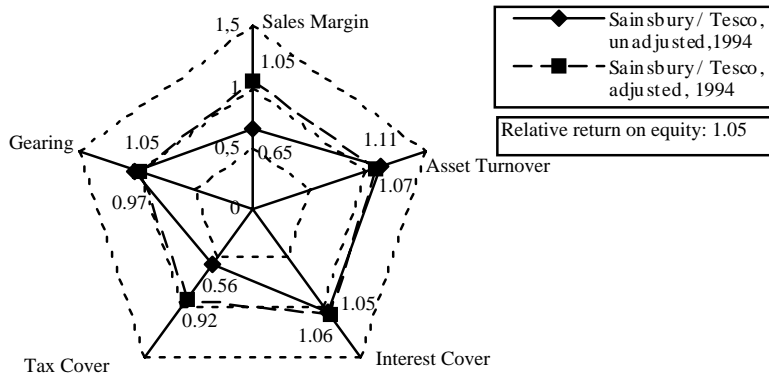


Diagram 7 Sainsbury and Tesco in Comparison, 1994, adjusted



Conclusion

The central theme behind CORE analysis is that the reason and background for an investigation needs to be determined and researched before attempting a meaningful ratio analysis. Here we have demonstrated this by concentrating on the identification and comparison of strategies and suggesting techniques useful in the evaluation of their effectiveness.

On many occasions the analysis is being undertaken with the aim of inter company comparison or for a meaningful assessment of one company, which we argue can only be achieved by comparison with its peers. Tools such as the polygram diagrams assist by presenting a comparison visually, and hence in making numbers that are difficult to

interpret readily understandable by those performing the analysis and by those to whom they report.

The integrity of the analysis depends on the comparability of the financial figures being examined. This problem is not just one caused by differences in international accounting frameworks and practices, but also of individual company accounting policy choice and of changing circumstances for the companies involved.

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Note

- 1 Source: Key Note report 'Supermarkets and Superstores', 1995

14 Internal and External Coordination and Organizational Structures: The Case of a Leading European Company in the Canned and Frozen Vegetable Market

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The performance of the vegetable processing industry is directly dependent on the efficiency of the supplying farmers. The productivity of the industrial processes depends largely on the suitability of the vegetables for processing and the homogeneity of batches. In addition, a regular and smooth supply of raw materials is required for the optimal functioning of the processing site. The factors determining the quality of processed vegetables are closely linked to those of the raw vegetable. The appearance of the final product (form, color, marks) and the organoleptic and hygienic qualities (presence of residues) correlate closely with the characteristics and age of the raw material.

The dependency of the processor and the specificity of the product are moral hazards for the industrialist who does not know the competence of his supplier, the quality of his work or the effort he puts in. The risk of opportunism caused by this asymmetry of information is reinforced by the minority position of vegetable production in farming (never more than 15%), its speculative nature and the low specific investments it requires. This gives the farmer a wide scope to maneuver in his strategic choices. This is not in the best interests of the processing industry which requires consistent collaboration.

Technological dependence, the specificity of transactions and moral hazards are all obstacles to price being the sole mechanism regulating supply and demand. An agreement more complex than a simple commercial buying/selling contract is required to eliminate the uncertainty associated with the transaction. The preparation, negotiation, execution and monitoring of such agreements raise the problems of transaction costs and organizational structures appropriate to minimize such costs (Williamson, 1985).

This is not a new issue (Larousse, 1991), but as in many sectors of the economy (Cohendet and Llerena, 1990), this problem has presented new facets since the 1980s. In the current competitive climate, there are new demands on organizational structure. For example, it has to be able to respond cheaply to widely diverse consumer requirements and quality objectives that vary with time and between geographic regions. The organization has to be flexible to control production and the supply of the raw material, while making best use of, rather than eliminating, the variability of supply.

These new, or renewed, problems (Ponsard and Tanguy, 1989; Thévenot, 1993) raise questions about forms of industrial organization, management strategies for supply and interaction with suppliers, methods of strategic management and the tools used for management. In this article, we examine these issues through research in collaboration with a leading European company in the canned and frozen vegetable market (excluding tomatoes and mushrooms). We will call this company 'V'. For some years, V has been involved in a major process of learning with respect to organization, in order to establish new forms of internal coordination and to develop new forms of coordination with vegetable suppliers (external coordination).

The role of research is to help this learning process. It is principally the directors of the company that are involved, but other levels of the company are also implicated (factory heads, the people responsible for supply). All these individuals attend meetings with the research team to discuss progress and results.

We first examine the types of internal organization and external coordination used by the company while the market was growing, and how they have become inappropriate in the current highly competitive environment. We then analyze the issues surrounding the design and putting in place of new forms of internal and external coordination: these measures are still underway.

Centralized Coordination and Business Strategy

The processed vegetables sector in France developed an original solution in the 1960s to stabilize transactions between the processing industry and farmers (Valceschini, 1991). The 'économie contractuelle interprofessionnelle' (interprofessional contractual economy) as laid down by the government combined cooperative and hierarchical organization. In the 1980s, this approach was completely dismantled.

Cooperation and Hierarchy in a Growing Market

The Interprofession commission was a cooperative organization. It was made up of national representatives of agricultural producers and the processing industry. In collaboration and by negotiation, they laid down the rules for transactions. They established yearly or longer agreements which set:

- Specifications for raw materials suitable for processing, and the quality grades;
- Prices of raw vegetables as a function of their quality;
- National minimum prices paid to farmers;
- Methods for determining indemnities for unharvested vegetables;

- Production quotas allocated to each business during periods of surplus;
- Conditions for monitoring fulfillment of contracts.

The Interprofession commission acted as a central agency imposing a hierarchical organization on farmers and the processing industry. The interprofessional agreements were then accredited by government and all vegetable producers and processors were obliged to respect them. They took the form of a standard contract, identical for everyone, signed by local representatives of the farmers and factories for every supply network. These local representatives formed a 'commission mixte' (bilateral commission) which represented the Interprofession commission locally.

In the strategic issues of the market and production, the central authority made decisions aimed at restricting competition. By setting national prices based on the prices for alternative crops, and designed to distribute added-value competition was avoided between farmers and between factories for access to vegetables. The collective definition of standards of quality and the quota system considerably reduced downstream competition. Thus the choice of organizational structure was not determined solely by cost reduction, but also by increasing income through a better control of the market.

Operationally, the production units planned supply and controlled productivity and quality. The companies' 'agronomic services' are departments responsible for supply, management of the farming network and technical advice to farmers. Together with the 'commission mixte', but hierarchically with respect to individual farmers, these departments fixed dates for planting and harvesting, and chose the varieties grown, technical monitoring and the characteristics of fields suitable for growing a particular crop.

The interprofessional contractual economy brought stability to transactions. However, stability also depends on four factors which to a large part cannot be controlled:

- The stability of the outlets for the processing industry: growth in demand and the creation of a national market.
- Inter-annual stock, used during periods of inflation to balance relatively predictable demand with highly variable agricultural production volumes (Albert et al., 1987).
- Changes in the industrial sector: the companies most favorably placed agriculturally, and those which are most innovative can acquire others, which is the same as buying market share.
- European agricultural policy (CAP): The contractual economy was legislatively independent, but the Interprofession commission implicitly referred to the CAP when setting the price of vegetables (by reference to alternative crops, such as cereals).

The combination of cooperative and hierarchical organization greatly restricts the autonomy of individual agents, whether growers or industrialists. It also determines to a large part the rules for strategic and operational action. However, this does not mean that the competition between companies was eliminated. Indeed, it was intense, but limited to one domain: industrial production costs. The decisive competitive battles were thus over improved productivity through economies of scale, plant performance, know-how, and technical expertise of the suppliers (technological quality of the raw material and agricultural yields).

In this environment where competition was based on production, company V emerged in the 1980s as a leader in the sector. It was initially a regional company, and the capital belonged to one family. It gained a competitive edge through its agro-industrial performance. From the 1960s, it increased volumes through a strategy of growth based on:

- Establishing production sites in regions with the highest agricultural productivity (Northern France).
- Investing in large-scale industrial production capacity thereby reducing unit costs by economies of scale and technological expertise.
- Rapid external growth, by buying competitors. This also increased market share and diversified supply zones.

To pursue this strategy, V centralized and organized according to function (production and supply). V also used the margins for maneuver left by the Interprofession commission to reinforce its competitive advantage in three ways, by:

- Production and promotion of brand-name products;
- Exporting to rapidly growing and profitable markets; and
- Diversification into the new market for frozen foods.

Restructuring of the Market and Destabilization of Types of Organization

Developments in the structure of the market and the economic environment posed problems to the forms of organization in the sector from the beginning of the 1980s. The new elements characterizing the market were:

- Concentration: currently three companies are responsible for 85% of the production in France.
- Saturation of global demand, product diversification, multinationalism and fragmentation of markets.
- The progress of supermarkets with own-brands and who now hold more than half the market.

Retailers are now in a strong position in relationships with the processing industry to which they subcontract the production of their products (Alcouffe and Poncet, 1991). The competition in the processing industry is no longer confined to industrial costs, and now includes commercial considerations. Competition has become hotter and differentiation strategies

have become pronounced. Thus farmers and industrialists no longer control the sector. There are two major effects resulting from this:

- The distribution of added-value has changed. This brings into question the method of setting prices.
- The retailers are in a position to make demands in terms of standards of quality, and this is not consistent with the Interprofession commission defining the standards.

In addition to these changes within the sector, there have been profound alterations in the economic and institutional environment.

First, the construction of the single European market and the suppression of barriers to intra European competition (Valceschini, 1993) is completely irreconcilable with a national minimum price determined by the 'Interprofession'. Indeed, the practice was judged anti-competitive and prohibited in 1990; the government lifted the obligation to conform with the Interprofessional agreements (Lorvellec, 1991). Each company has since been free to negotiate vegetable prices.

Second, the reform of the CAP is a major destabilizing factor. The fall in cereal prices, the changes in relative prices of different crops and now land set aside and direct grants to support farmers' incomes mean that cereal prices are no longer an appropriate reference for vegetable prices.

In these areas, buying the raw materials and selling the finished product, competition has been reintroduced into the market. The system of combining cooperative and hierarchical organization within the sector has been destabilized. It is now not possible to control the uncertainty about the economic behavior of the various players by coordination to eliminate competition. Similarly, it is out of the question to remove uncertainty about the performance of agricultural suppliers or the quality of the raw materials by a strictly hierarchical organization of production (Valceschini and Papy, 1991).

Strategies of Differentiation and Multi-Division Structure

Company V has played an active role in restructuring the sector. Both in agricultural prices and in adaptation of quality to market requirements, the company has continually tried to increase its autonomy of decision: it has vigorously contested the authority of the Interprofession commission. The company pushes for decreased agricultural prices, and buys in more and more diverse areas. The company questions the Interprofession commission's rules more or less openly. This arouses the suspicion of the farmers, who in consequence continually ask for the strengthening of the contractual agreements, in particular those concerning monitoring. This illustrates the development of approaches based only on self-interest, or opportunism. V has benefited from the move towards concentration. The company has grown substantially by acquisition. It is now an industrial group including 15 processing plants in the North and South-West of

France, Belgium, Spain, Portugal and more recently in Central Europe. Diversification into different European regions allowed breaking into new markets, and reducing costs for agricultural products by setting up in the most productive areas, and playing the interregional competition.

This external growth has mainly been by acquisition of other businesses. However, towards the end of the 1980s, the company also entered into alliances with two large cooperatives in the South-West of France. These joint ventures were to expand into a new producing region while limiting the costs associated with finding suppliers, and minimizing investments. It also allowed the diversification of the product range, one of the main strategies to counter the stagnation in the market.

This strategy for growth encountered three difficulties in the 1980s:

- The strategy of growth was dictated primarily by agro-industrial production logic, which is unsuitable for large multinational, varied clients with demands that change and grow in specificity.
- A presence in many different agro-industrial sites makes centralized functional organization obsolete; this system is not likely to optimize coherence between local initiatives and the overall strategy of the group.
- The dismantling of the Interprofession contractual economy gives the processing plants growing autonomy of decision in negotiations with farmers. This has led to an uncontrolled increase in the number of individual contractual transactions.

Starting in the mid 1980s, company V reorganized itself with the aim of creating a multi-divisional structure (Chandler, 1977). The first move in this direction was to form separate canning and freezing divisions, each responsible for its own technology and products. This approach was quickly abandoned, as it did not correspond to a true strategic structure: production remained dominant while the particularities of the clients in different countries were not addressed. Following an analysis by Porter (1985), the group adopted new tactics:

- The market was given priority over upstream considerations, by taking the particularities of clients into account.
- Differentiating the company, by changing the product range: launching new products, promotion of brand names.
- A European strategy, addressing the particularities of each national market.
- Vigorous price competition, aimed particularly at increasing market share within the brand-name market.

The resulting divisional structure was thus based on profit centers. Each profit center (or division) corresponds to a region and contains all the factories in that region (Northern France or South-Western France for example). The factories may nevertheless produce for different markets (such as frozen food for retail sale, own brands, or restaurants and institutions).

This organization also proved to be unsuitable for various reasons. First, it did not allow expertise in the dynamics of each market. Second, problems in one market for a given profit center could be obscured by its performance in another market. Third, each division made parallel investments in industrial equipment, and thus the allocation of resources across the group was not optimal. Fourth, the different centers of profit became competitors on some markets.

In 1992, the company started to organize according to 'activity'. The aim was to disassociate commercial from productive structures, so as to assure the downstream stages controlled production. The geographical organization was abandoned and divisions created according to strategic market/product segments.

Company V is thus restructuring both internal and external relationships. The role of research is to supply analysis methods and management tools which can ensure the coherence of the system as a whole. The aim is to design a structure in which decentralization of decision making and the centralization of information can be reconciled (Aoki, 1990).

Planning and New Methods of Coordination

The structure of the company into divisions based on product/market pairs aims to give a better view of the markets and improve sales forecasts (Anastassopoulos and Ramanantsoa, 1988). What is the best way to define the workings of the organization and the management tools appropriate to the market dynamics as perceived through this structure?

Two concepts were used to establish a working plan with the company:

- The search for rational procedures, that is a satisfactory way of making the organization work (Simon, 1969). This requires addressing the issue of strategic management of the company (Tanguy, 1989), and analyzing interactions between: commercial planning, agro-industrial planning, the appearance of new constraints on markets or production, and modified commercial planning or agro-industrial organization.
- Strategic management supposes coherent control of the coordination between the various players within the firm, and relationships with external agents, particularly the growers.

The Key Position of Planning Problems

Competition imposes the need for rapid responses to developments and changes in demand. However, it is not straightforward to translate a change in demand into changes in production and the supply of raw materials. There are two reasons for this difficulty:

1) Production of vegetables is a slow process (up to one year between buying seed and harvest), as compared to variations in the commercial situation. Thus, as commercial agreements are planned 12 to 16 months in

advance to allow rational seed-buying by the farmer, the forecasts are of necessity approximate at this early stage, and subject to subsequent modification. This is difficult as production of the raw material is underway and costly or impossible to reverse.

2) Industrial forecasting is never perfect. It has improved over the last ten years, due to the increased reliability of plants, flexibility in production systems and developments in agricultural techniques and varieties giving more predictable yields. Despite these improvements, the predicted quality and quantity may not be achieved. This can cause difficulties, particularly if no buffer stocks are held. The organization of the company into product/market divisions aims to improve commercial forecasts.

What is the best way to find and exploit methods of 'regulation', to allow management in uncertainty both upstream and downstream? What types of hazard can be dealt with by the methods available? Which hazards require changes of plan, reconsideration of contracts or changes to the agro-industrial structure? The validity of strategic planning is dependent on its ability to reply to these issues. To do so, or at least to ensure that the company is ready to do so, the planning methods must be analyzed in detail.

Thus, strategic management of the firm is heavily dependent on the production planning process. Planning aims to minimize the gap between demand for the products and supply of raw materials. The product/market pairing strategy structures the company for this process. However, the company can also adjust its strategy according to its control of the planning process and the way in which the agro-industrial system responds to commercial requirements (the response could be to modify the system for example by relocating production).

Various players are involved in this planning process. Coordination is required at two different levels. First, internal coordination, that is coordination between the heads of divisions who define demand, the factory directors who plan production and the agronomists who plan supply. Second, external coordination between factory agronomic units and the farmers.

New Forms of Internal Coordination

Coordination and more generally the functioning of the organization have three groups of objectives:

- Price: minimize costs, in particular the price of raw materials, the cost of transport from the field to the factory and delivery of the products.
- Conformity: minimize the gap between plans and the actual performance both in terms of quality and quantity.
- Flexibility: absorb any modifications of programs required by unforeseen commercial needs.

For a given product, for example, there could be two different markets each requiring a different batch. The corresponding divisions will each communicate their needs expressed as specifications for, for example, size and color, amount, retail price and delivery dates. The production facility must then optimize its production schedule to fulfill these two different demands. This immediately raises two problems: 1) Should factories specialize in a product/market pair? 2) Are intermediary levels of planning desirable?

Should Factories Specialize in a Product/Market Pair?

Factories, and their supply network, can either specialize in a production process (specialization) or aim to supply a particular market (non-specialization). Both these approaches have advantages and disadvantages.

Specialization in a process gives a minimization of costs, quicker reaction to unforeseen events due to shorter lines of communication, and simpler and more efficient translation of product specifications into raw material specifications. This type of organization is inflexible from two points of view. First, specialization of a factory in one process or a single brand means that it is only able to use a part of the raw materials available as the characteristics of agricultural products are variable. The result is, that unharvested crops and vegetables of unsuitable quality are rejected at the factory. This requires indemnities to be paid to the farmers. This system cannot use the rejected raw materials for other products. Second, organization according to process implies a particular positioning of markets relative to each other, in terms of price and quality required. Each factory's plant and supply network becomes dedicated to a particular process. Obviously, changes in the market change the demand for the process and where the system is highly specialized, the required modifications can be extremely expensive (closure and reconstruction of factories and raw material supply networks, etc.).

Non-specialized factories in part avoid these two problems. Raw materials of diverse quality can be used by different processes within a single site. Changes in agricultural supply logistics can be balanced by temporary or permanent changes to factory activities or supply networks.

However, the increased number of different specifications for a given factory makes production and supply planning difficult. It is also more difficult to assess the performance of each process within the overall activity.

Are Intermediary Levels of Planning Desirable?

The specialization of factories in a single process implies the disappearance of intermediary levels of planning. The commercial programs are directly translated into agro-industrial plans for the factory, and this requires only very short lines of communication.

A hierarchy, with intermediary levels to balance overall demand and allocate factory activity, reduces the reactivity of the system due to the

long decision-making circuits. A solution to this problem is a matrix organization, allowing the company to react rapidly to commercial dynamics while maintaining or developing cooperation between sites. In this type of structure, factories specialize in a process but there is interaction between factories to respond to commercial pressures and thereby maintain overall coherence.

Strategic management in a matrix organization poses the problem of constructing appropriate management tools (Soler, 1993). What are the management rules for ensuring both efficacy (price/conformity) with regards to commercial demands and agro-industrial opportunities, and also flexibility to adapt to unforeseen developments in the market and the agro-industrial environments of production sites? What tools are suitable for constructing and updating the appropriate rules? These questions open a large field of research.

New Forms of External Coordination

External coordination (with growers) aims to guarantee quality and quantity of supply, while remaining within costs appropriate for the product (or the market for particular processes). There are two questions to answer:

- Now that the Interprofessional commission does not run this activity nationally, what are the systems to put in place? That is, how does one determine, for each supply network, price and the division of jobs and responsibilities between the farmer and factory?
- Should technological and organizational functions be contracted to outside agents to minimize costs and if so, which functions? The need for flexibility to respond to market changes, and the maintenance of the relationship between the farmer and factory have to be taken into account.

The answers to these questions involve a contractual supply policy. We have identified the elements that constitute this type of policy. First, we will analyze the functions governing the supply of a processing unit (Valceschini, 1991; Caneill, 1993). We will then describe the types of coordination currently used at different production sites in company V.

Factory Supply: The Main Functions

Factory supply functions fall into two categories:

1) *Operational and organizational functions*. These aim to control activity in light of provisional planning. They include:

- Sowing plans to adjust production in the supply network in terms of quantity and for each quality class to fit with the provisional plans made by the processing unit. The vegetables and their varieties to be grown and the fields and methods to be used are defined in these plans.

- Sowing and monitoring consistent with assuring that the best techniques are used, and conformity with the specifications.
- Several functions associated with harvest. The harvest date has a direct effect on the quality of the vegetable, the flow of supply to the factory and the level of payment to the farmer. Who pays the costs has to be determined. The choice of who does the harvesting is important, as the performance (waste harvested, percentage of crop not harvested, proportion of the harvest damaged) can vary significantly according to the machines used, and their operation.
- Transport of harvested crops. Loading costs are generally paid by the grower, and transport by the processor. The processor is thus largely responsible for transport, which is essential to the smooth working of the factory.
- Measuring the quantity and quality of the vegetables arriving at the factory. This requires sampling, and instruments for measuring and testing. It is often at this stage that fluctuations in supply are ironed out.

Each of these functions is important in terms of cost or risk. The technical and economic efficiency of the factory, and the farmer's income are at stake. There is obviously scope for conflict between the farmer and the factory, and for opportunism or sharp practice. Compromise is necessary both in terms of operational and organizational authority, and in interpreting assessment and measurement rules.

2) *Strategic functions.* These are medium-term functions associated with making the best use of technical developments, choosing production structures for the supply network and determining the prices of raw materials. They include:

- Choosing suppliers. For example, using local climatic variations to stagger harvests. The most productive and most reliable farmers have to be chosen. This process is also used as a barrier to entry into the sector ('production rights' are granted to farmers).
- Making best use of technical innovation. This mainly involves testing for the species and varieties most suitable for the commercial aims, for chemical crop treatments and the conditions for their application, for the best harvesting equipment, and to develop methods for predicting the yield and quality of products.
- Determining the price paid to farmers. This is not a mechanism for adjusting supply and demand (and is thus not a true free market system). Rather, it has several roles: remuneration for the farmer's work, encouraging production efficiency, payment for farming risks and possibly distribution of added value.

These functions are strategic for both the farmer and the factory. They cannot be assumed by the processing industry alone: negotiation and contracts are required. Crops have to be planned, as does farm organization. These transactions thus have two dimensions: they are bilateral com-

promises between individual farmers and the factory. However, there is also agreement between farmers collectively and the factory. Thus, the form of the collaboration between farmers affects the transactions.

Variety and Developments in External Coordination

The expansion policy of company V has consequences for the geography of its overall supply. The processing sites and their supply networks have become more varied in terms of vegetable production capacity and plants, and also in terms of types of coordination with farmers. The dismantling of the Interprofession commission in France has contributed to the differences between sites. The diversity is currently very large, and more the result of expediency than strategic choice. Coordination between factories within company V and their suppliers can be classed into six types:

- The processor has complete operational authority. In these cases, the farmer makes land available for use. The agronomic service of the factory chooses field, crop and harvest specifications. The farmer is paid a fixed sum, or the yield (quantity and quality) may be taken into account. In this system, the farmer's freedom of action is small. The agronomic service of the factory has total control of the supply, and assumes a large part of the risks.
- Individual contracts between factory and associations of farmers. Supply is governed at two levels: first, the choice of farmer, and second, contracts with individual farmers to ensure supply and remuneration.
- Alliance between the processing site and a farming cooperative. The cooperative owns half the factory and finances half the supply. For logistical reasons, the cooperative is located on the factory site. It chooses the farmers, and the contracts are negotiated by the two parties. Thus, like the previous case, there are two levels of agreements: one with the farmers as a group and the other with the farmers individually. This system involves the farmers in commercial and industrial constraints. Its characteristic feature is that the farmers have to invest in the factory. This investment is a sort of membership fee, giving the farmer stability of outlet for his product.
- Agreement with a cooperative of specialized vegetable producers. The supplier is a group of farmers who contract to supply according to a predefined program of quantities and qualities either at the factory or in the field. Thus, transactions are solely between the factory and farmers collectively.
- One-off agreements with particular farmers. The contracts are annual, and specify the area to sow, the technical specifications and the calculation of payments (generally according to simplified rules). This system is rare and mainly used for particular vegetables required in small volumes, or as a method of applying pressure.
- Buying from middlemen who in turn buy either from the market or direct from farmers. The relationship is strictly commercial, and allows flexibility and the fine-tuning of supply.

Each of these systems corresponds to a particular type of management, and spreading farming risks between the farmer and processing industry.

They are not mutually exclusive, and can be used to complement each other, although one is always dominant in any one site. The disappearance of the Interprofessional contractual economy, and the expansion of company V to new sites has considerably increased the complexity of possible combinations, both within each site, and between different sites.

There appears nevertheless to be a general tendency along three lines:

- Place and aims of negotiation. Negotiation is becoming decentralized, and takes place within factory/supply network units. Operational, organizational and strategic considerations are all addressed. Part of the agronomic activity of the factories is being contracted outside the company, and authority is given to farmers' organizations.
- Players in negotiations. The relationships between factory and farmers are moving from individual collaborations to collaboration between factories and groups of farmers. Supply cooperatives or associations of producers are now in control. They manage the land, choose the suppliers and develop new techniques. This is a radically new situation.
- Nature of agreements. Essentially tactical contracts (specifying what to produce, at what price, on which date etc.) are being replaced by more strategic contracts. The new contracts define conditions for the continuation of the collaboration between farmer and factory, based on the type of effort put in by the farmers and the factory to remain competitive, rather than simply on results.

As we have observed, the current evolution changes the nature of the relationships between the company and the farmers. For some products, the need to master technical learning processes permanently, the need to obtain a certain level of flexibility of agricultural practices, lead to new forms of contracts between factories and farmers. These 'alliances' not be set up neither at the national level, nor at the individual farmer level.

Concluding Remarks

The new constraints faced by the farmers and the food industries today may lead to an adaptation of both 'internal' and 'external' coordination arrangements. The way of posing these two problems are not so different. In both cases, coordination arrangements must be designed according to ...

- the balance between a 'market logic' (competition between plants inside the company; opposite interests of farmers and firms) and an 'organizational logic' (common rules inside the company, and common rules between farmers and firms); and
- the balance between autonomy (of plants and farmers) and control (of plants and farmers).

Taking into account Williamson's hypotheses, it appears that the problem is to adapt consistently to internal and external coordination. The

efficiency and the flexibility of the firm depends on this consistency. For management researchers, this means to propose tools, evaluation criteria and analysis frameworks to help the firms in implementing this consistency in concrete terms.

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15 Strategic Behavior and Interrelationships in the Food Chain: The Case of the Finnish Market

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The membership in the European Union and the internationalization of the food business mean a great change for the Finnish food system. The new competitive environment affects all stages of the food chain. Agriculture has been a regulated and subsidized sector. About 60% of the food processing industry has belonged to the closed, protected sector of the economy with hardly any export competition. The firms have formulated their strategies under the assumption of market stability. During the past years, the food processing industry has been strongly rationalized, resulting in the concentration of market structure. The concentration ratio, however, varies greatly among subindustries. The bakery and meat processing industries, for example, are fragmented, whereas the sugar and dairy industries are characterized by, respectively, monopolistic and oligopolistic competition. Farmer-owned cooperatives have the market shares of about 90% in dairy and 70% in meat processing.

On the one hand, lack of foreign competition may allow monopoly profits for leading food manufacturing firms. On the other hand, it may lead to overcapitalization, lower operating efficiency due to organizational bureaucracy, and a reduced ability to generate product and/or process innovations (Russo, 1992). To a large extent, the ability of firms to increase their international competitiveness is affected by 'good domestic competitors' (Porter, 1980). An industry therefore requires a rich variety of firms, which constantly seek innovations, in order to maintain its long-term health (Nelson and Winter, 1982). Food processors can no longer launch a broadside of standardized products on a mass market and be assured of marketing success. Due to the changing lifestyles and consumption patterns of consumers, there is a growing need for finding market niches (Drabenstott, 1994). The fragmentation of consumer segments also changes structures and strategies in food retailing. In the Finnish food chain, the retailing sector is highly concentrated. The two co-ops and the two quasi-integrated chains account for 95% of all food sales. Theory suggests that buyer concentration, *inter alia*, restricts alternatives open to sellers, and weakens the dynamics of competition throughout the whole food chain (Tirole, 1988).

The changing consumption patterns, stronger processors and concentrating retailing sector are bringing changes to agriculture. First, to satisfy consumer demand, processors want more specific farm products. There is a need for a closer relationship between the farmers and

processors (Shaw, 1994). A great part of the agricultural production nowadays takes place through production contracts between farmers and industry. Second, from the farmers' point of view, an increasing concentration in processing and retailing means monopsony or oligopsony on the buyer side. Theory suggests that monopsony/oligopsony may produce large farm-retail price spreads (Rogers and Sexton, 1994).

Theoretical Background

Porter's Diamond as a Determinant of Industry Competitiveness

Traditionally, the concept of competitiveness has been seen as price or cost competitiveness. As product differentiation has become common, the importance of technology and a firm's ability to innovate rapidly has become an important element in competitiveness. Porter (1980, 1990) sees industry as the appropriate unit when analyzing competitiveness. Seeking to explain competitiveness only at the national level or at the firm level is too narrow a viewpoint. Porter explains the dynamics of competitiveness using the concept of the value chain, the five forces of competition (the nature of competition) and the diamond model.

The diamond model tries to give a holistic framework to the analysis of the determinants of the competitive advantage in the context of national settings. Porter's approach emphasizes the meso-level analysis. It also stresses the interrelationships between the industry, input sectors such as agriculture, and services.

The diamond is Porter's answer to the question of what the attributes are that shape the environment influencing a company's ability to create and sustain competitive advantage. The diamond is made up of four determinants, i.e., factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry. There are also two 'outside' forces: government and chance. At their best, these elements of the diamond form a mutually reinforcing system. The interlinkages and the interaction between the determinants promote industrial clustering, i.e., the formation of several competitive industries which are related and mutually supporting. In an industrial cluster there are several firms that are linked via commercial networks. Porter's (1990) cluster chart is a good tool to describe the interlinkages of the industry.

According to Porter (1980, 1990) the nature of competition is embodied in five forces, 1) the threat of new entrants, 2) the threat of substitute products, 3) the bargaining power of suppliers, 4) the bargaining power of customers, and 5) the rivalry among the existing competitors. The firms influence and respond to the industry structure. They also have to choose their position within the industry. At the heart of positioning is competitive advantage.

Competitive Advantage

Much of competitive strategy research draws on Porter's (1980) generic strategy typology, examining under what conditions cost leadership, differentiation and a focused strategy generate positional advantages. Competitive advantage is ascribed to industry structural characteristics and competitive forces rather than to internal firm-specific resources (Caswell, 1992; Conner, 1991). In an examination of strategies and performance at the level of the firm, the generic strategy typology may lose its explanatory power (see e.g. Dess and Davies, 1984; Hill, 1988). By integrating concepts from economic theory and organizational behavior, the resource-based view on competitive advantage looks inside the firm and its resources in exploiting market opportunities (Barney, 1991; Conner, 1991; Penrose, 1959; Snow and Hrebiniak, 1980; Wernerfelt, 1984). Wernerfelt (1984, p.172) broadly defines a resource as "*anything which could be thought of as strength or weakness of a given firm*". By nature, these internal strengths can be managerial skills, competencies as well as tangible and intangible resources (Day and Wensley, 1988). These terms have often been used interchangeably. Resources refer more to 'having' while skills and competencies characterize more 'doing' (Barney, 1991). For the purposes of this study, tangible and intangible resources as the fundamental sources of competitive advantage are more relevant.

Transforming inputs into outputs requires the deployment of tangible resources such as working capital, highly automated production equipment, advertising and product development expenditures, and a broad distribution coverage. For example, technological superiority and marketing resources provide a firm with the capability to generate new processes/products faster than competitors. On the other hand, intangible resources can be illustrated by a variety of characteristics such as reputation, brand images, the relationships to suppliers and buyers, and a good knowledge of customer needs (Yao, 1988). These intangible resources can accumulate over time (provided that the environment remains relatively stable), which can then make the current rate of spending more effective (Porter, 1991). In many industries, successful differentiation is therefore based on intangible 'hidden' resources. It should be noted that competitive advantage does not arise from better resources per se, but from a firm's ability to reconfigure different resources in specific ways (Penrose, 1959). Valuable, rare, non-imitable, and non-substitutable resources are strategically the most important (Barney, 1991). In the study, competitive advantage is described in terms of resource-based activities aimed to create customer value, and that the firm performs particularly well or differently relative to rival firms within a similar product-market domain.

Bargaining Power

Two important forces that affect competitive advantage are the bargaining power of suppliers and buyers (Porter, 1980). In the distribution channels context, the conventional analysis of bargaining power is based on power-dependence theories (Gaski, 1984). In both views, an important origin of power may stem from increased dependency due to the concentration of purchases/sales on one or a few trading partners. The importance of a business partner and the associated switching costs, the degree of product substitutability, and the threat of vertical integration may also be the origins of bargaining power. For example, an important supplier can exert power over its buyer(s) by threatening to raise prices or reduce the quality of raw materials. If the output market of a firm is dominated by a small number of distributors, flexibility to choose alternative trading partners decreases. In the vertical chain, powerful firms can squeeze the profitability of downstream or upstream firms (Tirole, 1988). Bargaining power refers here to the perceived ability of a firm or a group of firms to influence other firms' decisions and actions in the vertical chain concerning what is traded, where, in what quantities, at what prices, and on what terms.

Organizational Performance

Performance is a multidimensional concept and may be characterized in a number of ways, including profitability, efficiency and effectiveness. Most prior studies on strategy have described performance in terms of profitability, either alone or together with other performance indicators (Venkatraman and Ramanujam, 1986). However, the empirical verification of financial measures (that are influenced by actions taken in many previous time frames) shows that these may not be adequate to predict 'excellence' (Chakravarty, 1986), and may actually undermine current and future strategic advantages (Bhargava et al, 1994; Day and Wensley, 1988). Access to accounting data on privately-held firms can also be severely restricted. Thus, performance measurement in strategy research is a very thorny issue. In this study, organizational performance is described in terms of subjective and self-reported objective measures that reflect profitability, efficiency, and effectiveness criteria (Dess and Robinson, 1984). Efficiency indicates input-output ratios internal to the firm while effectiveness reflects 'how well an organization relates to its environment', for instance by successfully expanding its product-market scope.

Cluster Structure, Strategic Behavior and Interrelationships in the Finnish Food Chain

Research Methods

Porter's (1990) approach uses, as a primary tool, a cluster chart. In his study, industries appearing in the chart were chosen according to their success in exports. Industries are grouped into primary goods, machinery used in making them, and specialized inputs that are associated with the goods and their production. Successful industries are grouped into sub-categories most closely related by end-use in order to expose the nature of clustering.

Porter's model can, in spite of its wide usage, be criticized especially when it is applied to regulated industries. The framework was chosen as a starting point, but the method has been adjusted for our purposes. Porter's original method to select competitive industries is based on export shares. This has been criticized by many authors (see Bellak and Weiss, 1993; Rugman and D'Cruz, 1993; Cartwright, 1993). In our study Porter's method to select internationally competitive industries has modified in several respects.

Porter's method focuses on the industry level and lacks quantitative measures. It can also be criticized because it attempts to generalize from a few particular cases (see Yetton et al., 1992; Bellak and Weiss, 1993). Because of the lack of quantitative measures, the method is in many respects subjective and descriptive. We try to increase the accuracy of the description of interrelationships by the aid of input-output calculations. When studying the competitive advantage and bargaining power, a resource-based view is used.

The Structure of the Food Cluster

In order to describe the food system as a whole, we first formed a cluster chart involving a broad category of products. The share of exports of total production is only 9 per cent and many of the export products are subsidized commodities. Therefore, Porter's principle to choose only internationally competitive primary products was abandoned and all food products were considered as primary goods. The products were classified into established, potential and latent according to their success in export (Figure 1). The share of unregulated products of total foreign trade has been about one third until the last years. Due to the rapidly increased exports to Russia, the share of unregulated products of total exports was in 1994 42 per cent. Therefore, subjective evaluation has been used when classifying products into the potential export products and domestic products.

Some case studies have been made concerning every group. Established export goods are products where exports are greater than imports. Potential products are such that their imports are greater than exports but the

exports have increased considerably during the last years. Latent goods are exported only in small quantities.

Due to the regulation of foreign trade, there are only few industries which have been successful in export markets. Sugar confectionery and chocolate, crispbread, vodka, baby food and sucrochemical products are examples of successful product groups. Due to the free trade agreements between Finland and the EFTA and EC areas, exports of these goods have increased considerably. However, imports have also increased. Exports of basic commodities like meat and dairy products have been regulated. Only a few dairy products (ice cream, flavored yogurts) have been on the list of free trade products.

When defining specialty inputs, machinery or services, Porter's original method relies on export shares. We have first tried to find the functional links and then examine whether there is export success. Supporting industries are not very strong and there are only a few export products.

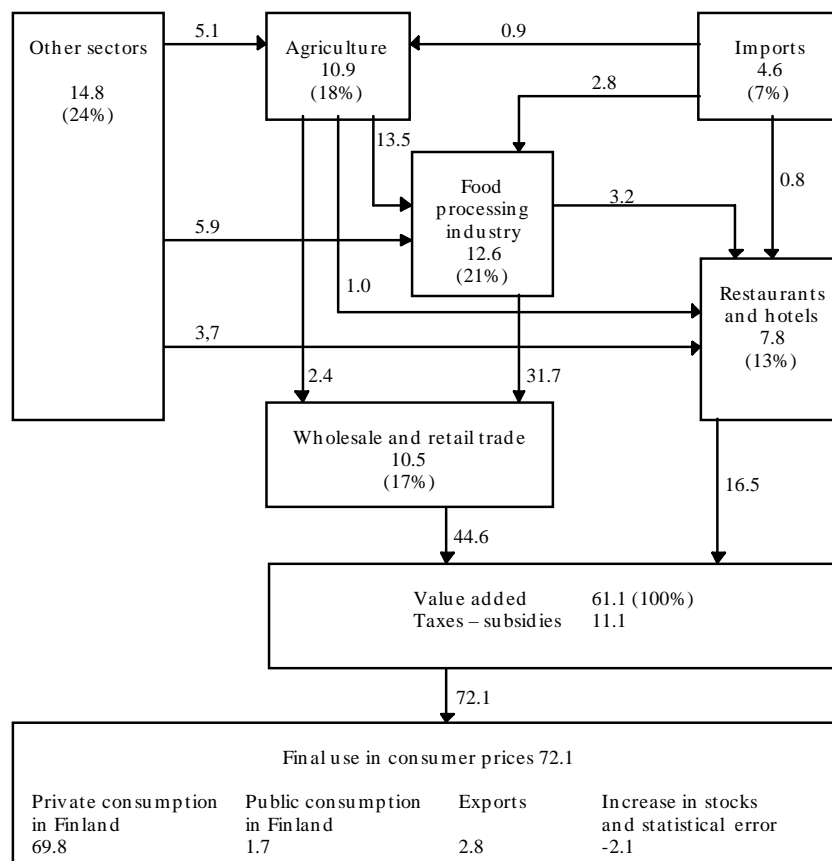
Figure 1 The Food Cluster

SPECIALTY GOODS	PRIMARY GOODS	BUYERS
Agricultural inputs Enzymes, ingredients Packages	<i>Established export products</i> -chocolate, -sugar confectionery	<i>Domestic wholesalers and retailers</i>
MACHINERY	-crispbread and biscuits -baby food -vodka -sucrochemical products	<i>Domestic industry for intermediate usage</i>
Equipment for low temperature transport Blenders Cooking machinery Conveyers equipment Industrial washing equipment etc. Packaging machinery	<i>Potential export products:</i> -liqueurs -beer -ice-cream -cheese -malt -juices -berry products	<i>OECD-countries</i> <i>Russia and Baltic Countries</i>
BY-PRODUCTION		RELATED SERVICES
-pet food industry -paper industry (starch) -chemicals (sizing) -pharmaceutical industry -fodder industry	<i>Latent export products:</i> -fish products -bread, cakes -pasta -soft drinks <i>Products for domestic sale</i> -butter and milk -vegetables -sugar -meat -egg products -ready-made meals	Storage and low-temperature transport Consulting Process automation Academic research Biotechnological R&D Catering, restaurants

Interrelationships Within the Cluster

The links within the cluster are measured with the help of value added in different parts of the cluster (Figure 2, Figure 3) and with input flows in the cluster. The advantage of using calculations based on input-output studies is that they eliminate double counting and provide data within a consistent accounting framework.

Figure 2 Value Added Within the Food Cluster, Billions FIM¹
(Source: Input-output tables 1992 and National Accounts)

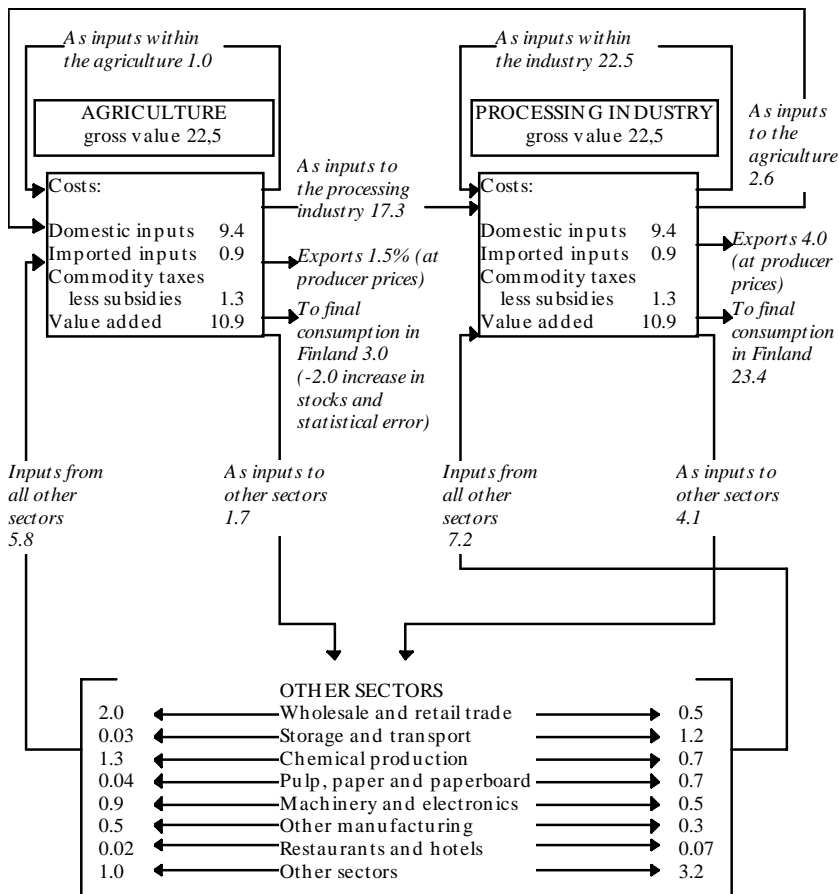


A considerable part, 42 per cent, of the value added is created in the agricultural and other input sectors (Figure 2). The share of agriculture is steadily diminishing. In 1985 23 per cent of the value added in the whole food system was created in agriculture and in 1992 18 per cent. The share of food processing, restaurant and other input sectors has increased respectively. The share of whole sale and retail trade has been constant, about 17 per cent. The increasing share of input sectors can be explained by specialization. Food processing companies buy services like transpor-

tation or cleaning from other companies instead of doing it within the company.

Input flows do not go only from input sectors to agriculture and from agriculture to the processing industry, but also from input sectors direct to the processing industry and restaurants. The strongest links are, however, between agriculture and the processing industry.

Figure 3 Input and Output Flows Within the Food Cluster 1992, in Billion Finnish Markka (Source: Input-output tables 1992)



Because of the regulation, the dependence on domestic inputs is great. About 93 per cent of inputs used by the processing industry are domestic (see Figure 3). The share of imported inputs is small also in other parts of the cluster. Due to the tax system, subsidies obtained by the industry are considerable.

The relationships between farming and the other input supplying sectors are of special importance. The fertilizer industry and some agricultural machinery industries are suppliers of the agriculture. Thus,

agriculture has close connections to the chemical industry. The food processing industry also utilizes different related services i.e. there are links to the storage and the transport and to the paper industry through packaging (Figure 3). The output of the food system is used mainly for domestic consumption. Only a small part is exported.

Input-output calculations give an impression of the monetary flows between the different parts of the food sector. They do not, however, tell much about the nature of the relationships behind these flows. In order to understand the nature of competition we should understand the key driving forces of the environment. On the other hand, to understand how individual firms do develop competitive advantage, we have made a field study.

Field Study and Measures

In this part, the strategic behavior of Finnish food manufacturing firms is analyzed. For the empirical study, firms operating in the meat processing, soft drink, and milk processing industries were selected as the most appropriate data sources. The total value-added contributed by these three subindustries is about 45 per cent, suggesting that they are relevant sectors in our food industry. In total, 88 operating firms were identified, and all of them were selected for empirical exploration. This setting permits the examination of relevant questions applicable to diverse firms while controlling for circumstances that might otherwise vary greatly across industries. There are firms of differing sizes that operate in different market segments. This should ensure enough variability to study strategic behavior.

A semistructured questionnaire was mailed either to the chief executive officer, chief marketing executive, or to the owner of the company.² 58 firms represented the meat-processing industry, four firms operated in the soft drink industry, and three firms represented the ice cream industry. The firms averaged 204 employees and 32 years in operation. Small firms employing less than 10 persons accounted for one third of the sample. A total of eight firms had operated less than four years.

To provide a general profile of *competitive advantages*, production, purchasing, marketing, distribution, and finance variables are all represented in the strategy scale that consists of 19 items (see Table 1). Respondents were asked to indicate the degree to which their firm emphasized each of the listed 'success' factors or methods of competing. Seven point scales with values ranging from one (not at all important) to seven (extremely important) were used. The instructions to the respondents also stressed that they should use their major competitors as a frame of reference, and that they should selectively emphasize particular competitive methods.

Three measures were developed for *bargaining power*. The manufacturer's power in input markets (i.e., the primary and secondary suppliers

of raw materials) was measured with two items. The response scale ranged from one (extremely low) to seven (extremely high). Because Cronbach's alpha coefficient, which reflects the unidimensionality or internal consistency of a scale (Nunnally, 1978), did not meet the critical value of 0.70 for a narrow construct, the item measuring power relative to the secondary suppliers was deleted. Hence, the final scale consists of one item. Using an identical seven-point scale, the manufacturing firm's power relative to its distributors was measured with seven items altogether, reflecting different channel types. One five item scale showed the manufacturer's bargaining power relative to the four leading wholesalers and the customer retailers. Cronbach's alpha for the scale was 0.79, showing adequate internal consistency. The five items were then combined into a summated scale. Another two item scale measured the manufacturing firm's power in relation to its industrial and catering customers. Coefficient alpha for the scale was 0.71. As earlier, a summated scale was formed.

Organizational performance consists of three indicators that reflect profitability, effectiveness, and efficiency. Following the recommendations of Dess and Robinson (1984), a self-reported scale on profitability was developed in the following way. Each manager indicated to what extent their firm had realized its performance objectives concerning the following five criteria: sales growth rate, gross margin, operating margin, net profits from operations, and return on shareholder equity. The response options for the scale ranged from one (highly dissatisfied) to seven (highly satisfied with the realized result). The scale had a high internal consistency (alpha = 0.87). For the analyses which follow, the five items were combined into a summed scale measuring overall financial performance. The sales growth rate over the last five years measures effectiveness. Efficiency was defined as sales turnover/the number of employees working in food processing.

The study also includes some variables indicating marketing-related resources as well as two contextual variables (size and age of the firm).

Identification of Competitive Advantages

Evaluation of Industry Effects

Prior to aggregating the firms independent of their industry classification, a comparison was made of the competence and performance variables among the firms grouped by the three industries. ANOVA results indicated that there were significant differences in only two of the 19 competence variables. To identify the industry category sources for this variation, the Scheffe multiple comparison test was performed. It revealed no paired comparisons significant at the 0.05 level. No significant differences were found among performance variables by industry, either. Thus we may conclude that the industry effects are minimal in this study, and therefore it was appropriate to aggregate the responses.

How do the food manufacturing firms compete?

The strategy variables were refined through factor analysis in order to identify the most important dimensions of competitive advantages. An orthogonal rotation (VARIMAX) of the initial principal components factor matrix yielded five factors. A combination of minimum eigenvalue criterion and scree test were used to determine the number of factors.³ The results of the factor analysis are shown in Table 1.

Marketing differentiators (factor I) compete with a broad product range typically involving specialty products and with a strong emphasis on product development and new technology. Direct advertising, brand marketing and a skilled sales force are also important dimensions of marketing differentiation. Distributor orientation (factor II) suggests an especially strong commitment to 'push marketing' and a large marketing and sales organization necessary for its implementation. These firms emphasize serving specific market segments; e.g., they manufacture distributor brands for the integrated retail chains. Image and product development (factor III) shows high loadings on good corporate image, tight quality and cost control, and product development and innovation. This combination suggests a strategy based on efficiently producing a narrow line of niche products. Production and supplier orientation (factor IV) is characterized primarily by cost advantages based on economies of scale. This focus on large-scale manufacturing is combined with a strong emphasis on the quality and availability of raw materials, the control of distributors, and operating efficiency including new technology. Factor V called 'low-priced products with no brand identity' was of minor importance in the factor structure. These firms do not manufacture well-known brands (negative loading); their strength is in price competition.

Competitive Advantages, Bargaining Power and Organizational Performance

The data showed that the number of primary suppliers of raw material ranged from 1 to 10. Sample median was four suppliers, and 17.5% of food manufacturers purchased over 50% of their raw materials directly from farmers. As to buyers, two thirds of the total food sales is channeled through retailers and wholesalers, and the rest through industrial and catering channels (Hyvönen, 1993). The correlations between the five strategy patterns and the food manufacturer's bargaining power in input and output markets are presented in Table 2.

In terms of organizational performance, Table 2 indicates that the production- and supplier-oriented strategy is positively related to overall financial performance as well as to efficiency. The strategy emphasizing low-priced, nonbranded products is also positively correlated with overall financial performance. Marketing differentiation, distributor orientation, and image and product development are not significantly related to performance measures. While the correlations showed a negative direction, we complemented the analysis by correlating these three strategy patterns with the self-reported profitability measure: net profits

from operations. The results (not reported here) showed that the marketing differentiation-based advantage, distributor-based advantage as well as the strategy focusing on image and product development, were all negatively related to net profits from operation.

Table 1 Factor Structure of Competitive Advantages (Values \geq [.42])

	Factor loadings					H ²
	I Marketing differen- tiation	II Distributor orien- tation	III Image and product develop- ment	IV Produc- tion and supplier orien- tation	V Low- priced products with no brand identity	
Emphasis on production processes and new technology	.46			.51		.71
Strong marketing and sales organization	.46	.72				.79
Continuing product development and innovation	.54		.48			.75
Focus on specific market segments		.80				.71
Broad range of products	.87					.80
Capability to manufacture specialty food products	.55					.52
Depth of product range, large number of items	.79					.76
Advertising expenditures above the industry average	.67					.69
Manufacturing of distributor brands	.47	.45				.55
Good corporate image			.81			.69
Product quality control			.70			.64
Continuing concern for lowest cost per unit			.56			.65
Competitive pricing					.85	.77
Economies of scale based on mass production				.42	.43	.74
Building brand identification					-.53	.69
Finance and operating efficiency				.68		.74
Major effort to ensure the availability of raw materials				.87		.84
Emphasis on trade marketing		.70				.68
Control of distribution channels				.42		.64
Eigenvalue	7.01	2.10	1.76	1.40	1.07	
Percentage of cumulative						

	variance accounted for	36.9	48.0	57.3	64.7	70.3
Table 2 Relationships Between Food Manufacturer's Competitive Advantages, Bargaining Power and Organizational Performance						
Type of advantage	Manufacturer's power relative to wholesalers and retailers	Manufacturer's power relative to industrial and catering customers	Manufacturer's power relative to primary suppliers of raw materials	Overall financial performance	Efficiency	Effectiveness
Marketing differentiation	.27*	-.04	.19	-.11	-.05	.05
Distributor orientation	.09	.05	-.21*	-.05	.17	-.14
Image/product development	-.08	-.23*	.15	-.09	.08	-.02
Production/supplier orientation	.05	.16	.24*	.34***	.26*	-.13
Low-priced products with no brand identity	.05	.29**	.03	.23*	.10	.10

*** p < .001; ** p < .01; * p < .05;

Largest pairwise N = 65

Smallest pairwise N = 58

Only the strategy focusing on marketing differentiation is positively related to the bargaining power in relation to wholesalers and retailers. On the other hand, a low-price strategy with no brand identity is positively related to the bargaining power in relation to industrial and catering customers, while the strategy based on image and product development shows a negative correlation with power in these non-traditional channels of distribution. There is a positive relationship between the production and supplier-oriented strategy and the manufacturer's power vis-à-vis the primary suppliers of raw materials, while the correlation between distributor-oriented strategy and the manufacturer's power in the input market is negative.

A Taxonomy of Strategies in the Food Industry

To identify possible differences in the strategic profiles of competitive groups, the factor scores obtained from the above analysis (Table I) were utilized as the input variables to classify the firms. A six cluster⁴ solution was found to maximize the distances between cluster means across the five factor patterns. The pattern of mean scores that emerged from the cluster analysis shows relatively high and positive scores on several alternative strategy types. This may indicate the possibility of emphasis on more than one strategy within the groups of firms.

Next, differences between clusters on strategic variables not utilized on bases of classification are described. In particular, marketing-related

resources and organizational characteristics were examined using ANOVA. Duncan's multiple range test was used in order to determine which group means were different from each other. Table 3 shows the strategic profiles of the six groups of firms along with F-statistics and Duncan's tests.

Cluster 1: Distributor-oriented, low-price strategists are larger food manufacturing firms that operate on a regional and national scale. These firms had launched an average of 11 new products during the previous two years. A relatively high proportion of lower-priced campaign products (an average of 49% of product range) is an indication of a strong distributor orientation. The marketing organization averages 17 staff members. Cluster 1 accounted for 16 percent of the sample.

Table 3 A Taxonomy of Competitive Advantages in the Finnish Food Industry

Cluster	1	2	3	4	5	6	F-stat
	Distributor-oriented, low-price strategist	Utilizers of differentiation and cost-based advantages	Marketing differentiators lacking cost-based advantages	Innovation differentiators lacking cost-based advantages	Production and cost-oriented strategists lacking marketing competence	Distributor-oriented image product developers	
Number of new products launched	10.7	13.2	50.0	14.9	11.7	24.4	2.400*
Proportion of low-priced campaign products	48.6	12.4	65.0	40.0	10.3	56.7	4.417***
Advertising expenditures (%) of sales turnover	1.7	0.7	2.6	0.8	0.9	2.0	4.173***
Trade marketing support (%) of sales turnover	1.4	0.5	4.3	1.4	1.2	6.1	2.143^
Size of marketing and sales organization	17.5	7.9	53.6	17.6	1.2	44.7	3.708**
Years of operation	26.6	29.0	46.4	22.8	48.5	52.6	2.176^
Sales turnover, mill. FIM	236.2	58.0	291.3	161.1	32.6	397.1	1.970^
Overall financial performance	3.8	4.1	3.8	4.3	4.8	3.4	n.s.
% of sample	16%	22%	14%	24%	8%	16%	

*** p < .001; ** p < .01; * p < .05; ^ p < .10

Duncan's comparison (p < .05):

Number of new products CL3 > CL1, CL5, CL2, CL4;

Proportion of campaign products CL3, CL6, CL1, CL4 > CL5, CL2;

Advertising expenditures CL3 > CL2, CL4;

Trade marketing support CL6 > CL2, CL5, CL1, CL4;

Size of marketing organization CL3, CL6 > CL5, CL2, CL1, CL4;

Years of operation CL6 > CL4;

Sales turnover $CL6 > CL5, CL2$;

Cluster 2: Utilizers of differentiation- and cost-based advantages are smaller and medium-sized firms which have no clear strategic orientation. During a two year period, new product introductions numbered 13 but a low-price strategy is not widely adopted in this group of firms. This cluster has the lowest advertising and trade marketing expenditures. The marketing organization consists on an average of eight staff members. The 'stuck in the middle' group captured 22% of the sample.

Cluster 3: Marketing differentiators lacking cost-based advantages are large firms. The firms compete with a broad product range, having launched on an average 50 new products over the past two years. The proportion of campaign products is large, averaging 65% of product range. Consequently, a low-price strategy is commonly adopted by the firms. Cluster 3 contributes heavily to trade marketing. Advertising expenditures are the highest, and the marketing organization the largest, averaging 54 employees. The cluster accounted for 14% of the sample.

Cluster 4: Innovating differentiators lacking cost-based advantages are medium-sized and smaller firms. The group had launched an average of 15 product innovations during the previous two years. While the proportion of lower-priced campaign products accounts for an average of 40% of the product range, to some extent the group emphasizes a low-price strategy. Advertising and trade marketing expenditures are relatively low. The marketing organization is, however, relatively large, averaging 18 staff members. Cluster 4 accounted for 24% of the sample.

Cluster 5: Production- and cost-oriented strategists lacking marketing competence are small firms that have a very small marketing organization, averaging only 1.2 persons. The group had introduced an average of 12 new products during the previous two years. A low-price strategy is not common in this group. The cluster captured 8% of the sample.

Cluster 6: Distributor-oriented image and product developers are very large firms that have operated long in the business; firm age averages 53 years. The group most strongly emphasizes a push strategy oriented to their distributors, which can be seen from the high proportion of trade marketing expenditures. A relatively high proportion of lower-priced campaign products demonstrates a focus on competing with price in the channels of distribution. In the group, the size of the marketing organization is the second largest, averaging 45 staff members. Cluster 6 accounted for 16% of the sample.

With regard to overall financial performance, the analyses of the data showed that clusters 3, 1 and 6 fell below the sample average. Cluster 2 appeared to have a performance level roughly equivalent to the sample average while clusters 4 and 5 are 'high performers'. The data revealed that some firms in clusters 3, 4, and 6 manufactured distributor brands (the results are not reported here). This explains, in part, their focus on distributor orientation. Differences in marketing variables by cluster provide some confirmation of the validity of the cluster solutions. As Table 3 shows, ANOVA reveals significant group differences on four

marketing variables, and three of them were marginally significant ($p < 0.10$).

Conclusions and Implications

Increasing Rivalry and Competitive Strategies in the Food Industry

The Finnish food sector has been dominated by the targets of domestic agricultural policy, i.e. self sufficiency and income parity between farmers and workers. The sheltered and protected environment has shaped the nature of competition at the industry level. Domestic inputs have mainly been used. Exports are small. It appears that the food processing industry has not been able to build many supporting industries around the processing. Related goods and services are oriented to the domestic market. Machinery is in many cases imported. Producer-oriented government policy and the lack of keen foreign competition characterize the competition environment.

The strategies in the Finnish food industry are largely home market-oriented, to which, *inter alia*, a distant location and trade barriers have contributed. Now, membership in the EU introduces new adjustment requirements into the food chain; the period of stability is history. Data from the food manufacturing firms in three subindustries show that the largest firms tend to follow either a differentiation strategy in mass markets competing with a broad product range, or a distributor-oriented strategy with an emphasis on price competitiveness and trade support. We find a group of medium-sized innovative firms that emphasize a differentiated strategy in regional market segments. There are also a group of smaller firms that have no clear strategic orientation, and a group of very small local firms that are purely production-oriented.

Although the leading national firms now have bargaining power in the food chain as well as considerable economies of scale, the importance of cost-cutting will increase in a deregulated market situation. It is generally thought that (gradually) opening markets may give new export opportunities especially for large-scale standard food producers, and for the manufacturers having strong brands. This surely is true, but the segmentation process of consumer markets and new requirements for product development increasingly tend to favor differentiation. We can see that consumer segments are becoming more and more heterogeneous and smaller. In larger firms, differentiation based on fewer but stronger brands to focused segments would be more profitable than widening the product range. Price always remains important to consumers, but quality, safety and ethics of production will become increasingly important. There is a growing consumer segment that is health and environment conscious and not so price conscious. These trends favor small-scale specialty producers in domestic as well as in foreign markets.

In the light of the structure of the European food industry in general, it is unlikely that small-scale and medium-sized food companies will be outcompeted by market leaders (Dijk and Mackel, 1990). While most smaller firms may remain domestic, their success may then be largely dependent on the bargaining power of integrated wholesalers and retail-

ers. Market entry, however, may be difficult because of the requirements of large-scale production and 'megabrands' of integrated retail chains. The share of retail brands is also on the increase, tightening competition. Our findings show that only marketing differentiation may increase a food manufacturer's bargaining power vis-à-vis retail chains. This kind of competence is primarily based on a broad product range, strong brands, and heavy advertising. At the firm level, brand marketing creates a power advantage in terms of a consumer pull, while the manufacturers of less clearly identified products generally suffer considerable erosion in bargaining power (Watkins, 1986). Because brand strategy is expensive, alternative strategies for smaller and medium-sized food manufacturers would be the development of collaboration with local retailers and direct distribution through own outlets.

However, a tradeoff remains. The study implies that the firms emphasizing marketing differentiation or distributor orientation are 'low performers,' while the firms following a low-price strategy with no brand identity or a production- and supplier-oriented strategy are 'high performers' relative to competitors. In fact, there are pressures to lower marketing and distribution costs in the Finnish food industry (Hyvönen, 1993), which are found to be somewhat higher than in some European countries. Our findings also reveal that the production-oriented firms have bargaining power in relation to the primary suppliers of raw materials. It is common, for example, that these manufacturers secure a direct and regular supply of raw materials through contracting with farmers.

Our study demonstrates that production-oriented firms may outperform market-oriented and distributor-oriented firms. The strategies that are differentiated are usually assumed to be the key to a firm's chances to earn above-normal profits (Rumelt, 1987). However, there is some evidence to indicate that, *if* the market is protected from active competition (such as our setting), production orientation with its overall lack of marketing skills and resources can then be superior (Snow and Hrebiniak, 1980).

In a mature industry such as food, a sustainable competitive position is not only a function of a firm's absolute size. As consumer needs and preferences are changing, it is the relative size of the firm in a specific market segment, associated with unique competencies, that become important. From a consumer's point of view, structural concentration can have negative impacts on the long-term functioning of the whole food chain. As Nelson and Winter (1982) maintain, to gain positional advantages, survive and grow, firms within an industry need competitors that constantly seek innovations.

In order to satisfy the demanding consumer, firms should be able to deliver customized products at separate market niches. This brings new challenges to the relationships between farmers and industry. There is a shift to production contracts. For example, all the Finnish poultry production is already based on contracts. Farmers prefer production contracts because they ensure the marketing of their products. In addition, farmers

appreciate the advisory services concerning for example breeding and medication of the animals offered by the industry. 74 per cent of farmers believe that production contracts help to improve the quality of farm products.

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Notes

- 1 The figures in the boxes describe the value-added created in the respective sector and the figures between the boxes the net input flows between the sectors. There are minor differences between Figure 2 and Figure 3, because in Figure 2 all taxes and subsidies are collected together so that the figures between the boxes are net figures without taxes and subsidies.
- 2 The two mailings and personal contacts resulted in a sample of 65 usable questionnaires, a response rate of 73.4% (65/88). A comparison of early responding firms and late responding firms showed that these groups do not differ in terms of years of business, number of employees, or firm performance. The questionnaire was developed according to the general approach recommended by Nunnally (1978). Several iterations of the research instrument were made prior to an actual field test. The relevance of the items was ascertained through the use of extensive interviews in 12 firms, which led to several improvements in both the wording and the composition of lists of variables.
- 3 Because of the potential instability of factor scores with 65 firms and 19 strategy variables, the factor analysis was performed five times to (n-1) cases in order to test whether a changing of sample composition would alter the factor loadings (Kim and Mueller, 1978). The analysis results were the same or similar in all runs.
- 4 In the following, the word 'cluster' is used in the statistical sense. Ward's hierarchical centroid method based on squared Euclidean distances was used to form clusters. This method is considered to be one of the most accurate hierarchical cluster methods (Everitt, 1980). Ward's method produces a grouping of relatively homogeneous groups of firms which have maximum between-group variance and minimum within-group variance (Punj and Stewart, 1983).

16 Quality Certification as a Key Success Factor in International Marketing of Food Products¹

Niels Jørgensen

The consumption of animal foods has been declining in the Western World for a long time and this fundamental change in demand has increased competition. This change in the pattern of consumer spending is among other things caused by increased attention on quality and the nutritional content of products. Consequently, the consumption of meat products has not only been declining in general, there has also been a change in consumption in the direction of white and comparatively healthier meat such as poultry. As the Danish food industry primarily sells their production in western markets, the Danish meat processing companies became aware of an increased competition. As a means to obtain a higher quality and thereby a competitive edge, the ISO 9000 certification of the company's quality control system has often been mentioned and introduced.

Therefore the question is as follows: *Will an ISO 9000 certification, in itself, be important for marketing and thereby affect customer preferences?*

If the ISO 9000 affects customer preferences, the certified suppliers of processed meat products will be able to achieve an advantage at the expense of suppliers with no ISO 9000 certification. If, on the contrary, one or more of the customer groups do not attach essential importance to an ISO certification, the supplier has to compete on other and more value-adding criteria in the choice of suppliers.

If we are to estimate whether a factor is a competitive advantage or not, it is important to analyse whether or not this factor is considered by various customers when choosing/rejecting suppliers. We must also analyse the importance of this factor in the decision-making process. Moreover, we have to consider if more weight will be attached to this factor - will it become more important in the years to come and will it possibly become a necessary condition for being considered a supplier at all.

Consequently, in this presentation we are going to analyse how different groups of customers in different countries purchase - choose/cultivate their suppliers of meat and processed meat and determine the position of an ISO 9000 certificate. It may be so that demands on hygiene and quality control exceed what a certification will guarantee, so that such a certificate would in fact be of no value at all to the supplier as it is of no importance for the customers' choice.

A logical start will be to examine the ISO 9000 quality certification and set up some hypotheses on the supposed value of a certificate for the

company's customers. These hypotheses will then form the basis of an empirical investigation, in which various groups of customers in different geographical markets are interviewed about their criteria and processes for choosing a supplier, and their opinion of the present and future importance of ISO 9000 certificates. Subsequently, the results of this investigation can be analysed and these analyses can then form the basis of guidelines for Danish producers of meat and processed meat on how to behave towards their various groups of customers.

For producers of meat and processed meat products, customers can be divided into three main types:

- retail chains,
- catering firms, and
- meat processing industries (selling their products to the first two groups).

The three main groups of customers mentioned could again be divided by nationality, size, profile, degree of centralisation, degree of internationalisation, etc. In this presentation, we will look primarily at the large units in the three most important Western European markets for the Danish food industry, namely the UK, Germany and Sweden. Our interest is concentrated on these large units because of the concentration process and the structure-rationalisation process the three main groups of customers have been and still are experiencing. A large supplier of meat or processed meat has to sell a substantial part of his production to these units and their share and importance are very likely to grow considerably in the years to come.

ISO 9000 Quality Certification²

The Arrival and Prevalence of the ISO Series

The ISO 9000 system itself is a comparatively new phenomenon. The ISO 9000 series was published in March 1987 by 'The International Standards Organisation' ISO. Afterwards, the series has been accepted by a large number of countries (45), of which 16 have entered into bilateral agreements with each other as a token of mutual acceptance of each other's interpretations of the standards. In Europe CEN, The European Standards Organisation, has approved the ISO 9000 series as an ES-standard, i.e. as a European standard. This approval includes the CEN-countries' approval of the ISO 9000 series as national standards without any deviations or reservations at all. In the European Union, the series has been named EN 29000 and in Denmark the series is called DS/ISO 9000 in which DS refers to the national standardisation authority 'Danish Standard'. The 'Danish Standard' published the ISO 9000 standards as national standards at the beginning of 1988.

With the publication of the ISO 9000 series, a common systems language regarding quality understanding and quality control has been introduced, a political act which is intended to ease the international trade in goods of a certain minimum quality.

The ISO 9000 Standards

The ISO 9000 series consists of five standards and a vocabulary. The ISO standard contains general guidelines for the choice and usage of different standards for documented quality control. Documented quality control means that the company sets up a number of definite quality measures in order to make continuous corrections, if necessary, for the continuous securing of a homogeneous quality level. Consequently, the standard considers which of the three different certification models the company can choose.

The ISO 9001, ISO 9002 and ISO 9003 are three distinct system standards for documented quality control by which the company can be certified. These three standards are called the requirement models as they are in principle designed for actual contracts between buyer and seller.

The difference between the three models is their respective areas of validity. In this way one standard is no better or more distinguished than the other. The choice of standard will depend on the needs of the company and its expectations of future demands from customers.

The ISO 9001 is the most comprehensive requirement model and contains demands for the functions of construction and development, production, installation and service. Above all, this standard addresses companies which have their own functions of product and process development or any other kind of construction. The ISO 9002 consists of demands for production and installation whereas the ISO 9003 only consists of demands for final inspection and testing.

The ISO 9004 can best be characterised as a catalogue of ideas on how each company, whether or not it has a certification in sight, can introduce documented quality control in its organisation.

At last, it can be mentioned that the ISO 8402 is the vocabulary for the ISO 9000 standards. The vocabulary covers the most common quality concepts and their exact meaning in relation to the other standards.

The Company Keeps its Promises

The introduction of quality control by the ISO 9000 standards is an individual arrangement where in principle special consideration is given to conditions of specific importance to the companies. A certification by the ISO 9000 standards does not necessarily mean that the quality of the delivered product is outstanding just because the company has an ISO 9000 certification. As 'Danish Standard' states in one of its many information brochures about the series, it is important to keep in mind that

quality is not to be understood as a measure of quality of the final product, but rather as a guarantee that the customers' expectations are fulfilled. By this fulfilment of the customer's expectations we mean the situation in which the company delivers the order specification agreed on by buyer and seller. Danish Standard puts it like this: An ISO 9000 approval means that 'the company keeps its promises'.

The customer does not necessarily have to be satisfied in order for a company to become and remain ISO 9000 certified. The company is evaluated on its ability to follow its own rules for quality control, partly in connection with the issue of the certificate itself and partly during the subsequent audits. If it does so, the company can become and remain ISO 9000 certified. Quality is a relative concept. How quality is defined and experienced depends on each individual company and its relations to current and potential customers and/or suppliers. What is, for example, experienced as a satisfying quality in one situation can be found unacceptable in another; what is regarded as a good quality by one customer can be turned down as inferior by another. The ISO 9000 standards allow both situations.

ISO 9000: An Advantage for the Customer and the Supplier

An ISO 9000 certification will *in principle* include the following advantages for the customer:

- A guarantee that the supplier delivers a product or a service that fulfils the customer's needs and wishes.
- A guarantee that the supplier delivers according to the specifications agreed on in the contract situation.
- Establishment of a closer supplier-customer relationship to mutual advantage, for example in connection with product and process development.
- Improved opportunities of introducing the JIT-principle in purchasing, production and sales, e.g. with the purpose of reducing storage, production, transport, and installation costs.
- Improved opportunities of reducing one's own quality costs; for example, less comprehensive control on incoming purchased goods, reduction of supplier audits, reduction in resources used on complaints, correction of faults, etc.
- A simplification of the procedure for approval of a supplier including continuous control. If the customer is ISO 9000 certified, an ISO 9000 approval of the supplier will at the same time fulfil the customer's formal obligation to the supplier regarding the quality control of the supplier.
- A potential marketing effect towards the customer's own customers as he will be able to maintain that the incoming raw materials, components (perhaps from the main suppliers) are subordinated to certified quality control and thereby checked for faults, etc.

For the *supplier*, the marketing effect of an ISO 9000 certification, caused by these advantages for customers, could for example be:

- The supplier is chosen by customers who directly require an ISO 9000 certification, or in any other way have preference for those who have, at the expense of those who do not have an ISO certificate. An important supplier criterion is fulfilled.
- The supplier obtains status as main supplier with one or more present customers, for example as a sole supplier. That is, he obtains an improved status as a supplier.
- It becomes easier for the supplier to be approved as a potential supplier by future customers.
- The supplier keeps his present customer base but has at the same time improved his opportunities of extending it. This can lead to an increased market share.
- The supplier's need to compete on price is reduced in favour of the competition parameters 'supplier safety' and 'supplier quality', in broad terms.
- The supplier improves his export opportunities.
- The supplier reduces the customer's need for supplier audits which can lead to a reduction of costs for both customer and supplier.
- The supplier achieves a closer and more balanced relationship to the customer. This results in improved trade relations as well as in the equalisation of an uneven division of power between the parties.
- A general improvement of image.

An ISO 9000 approval does not guarantee that the supplier's product or service is of a high quality or is able to fulfil the customers' needs in spite of the fact that the standards are developed with this in mind. The reason can be found in the demand models for certified quality control. An approval of these models does not contain demands on quality and fulfilment of needs but only on the prevention of deviation from the specification.

The ISO 9000 certification does not refer to the supplier's products and services directly but to the quality control system that produces them. First of all, an ISO 9000 certification shows that the supplier through his quality control system documentedly endeavours to deliver the specifications agreed on in the contract. Therefore, in principle, the purpose of an ISO 9000 certification is to increase the confidence in the supplier regarding the homogeneity of the goods delivered.

An Empirical Investigation of the Marketing Effect of the Suppliers' ISO 9000 Certification³

In the previous section we gave an explicit formulation of the advantages of trade with ISO 9000 certified suppliers and of how the customer's

experience can be a marketing effect for the ISO 9000-approved supplier. Therefore, we assume that companies that get an ISO 9000 certification will have reason to believe that they will be able to observe a marketing effect after having received this certificate.

However, the question is now whether the assumed advantages of an ISO 9000 certification in the supply link will in fact produce a marketing effect and whether ISO 9000 certified companies in general will be preferred as suppliers because of their system approval?

We will now conduct empirical investigations on this matter by finding concrete answers through an investigation of the importance given to an ISO 9000 approval by retailers, catering firms and producers of foods in Britain, Germany and Sweden, in connection with their choices of suppliers of (processed) meat products. The data has been collected by means of a number of interviews with decision-makers who have filled in questionnaires during the interviews.

The questionnaire, and the agenda for the interviews, dealt with three main points:

- General background information about the particular company and the respondent.
- General criteria for the evaluation of present and potential suppliers of meat.
- Specific questions about the ISO 9000.

The questions assume possible effects of an ISO 9000 certification, which are stated above.

As the retail trade and the manufacturing and meat processing sector differ from each other – the former buys processed meat products whereas the latter merely buys raw materials – it was necessary to modify the wording of some of the questions to take this into account.

Table 1 shows that 26 interviews were completed (25 personal and one by telephone) in addition to 8 interviews in connection with another project in this research programme, in which selected questions about ISO were included.

Interviews with the processing companies on the British Isles were completed without questionnaires, but as a discussion of their approach to quality control as producers. Furthermore, one of the German catering firms refrained from answering the questions about general purchasing criteria. In some cases the companies were requested to forward presentation brochures and/or annual reports in advance and in other cases we inquired about these things at the end of the interview.

Table 1 Number of Completed Interviews

	Retailing	Catering	Processing	Total
Britain	6	2	3	11
Germany	5	5	3	13
Sweden	5	0	5	10

Total	16	7	11	34
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A decision was made to conduct the first interview with the person responsible for the purchasing of processed meat. If it turned out to be impossible to get an interview because he was busy or if the purchasing manager refused to talk about quality control, we tried to arrange an interview with the technical quality control function.

Altogether two-thirds of the respondents had mainly a commercial post and one-third a technical one. In Sweden all respondents were 'commercial', and this was also the case in Germany with one exception. In the following section we will present and analyse the results of our investigation sector by sector.

Results of the Investigation

Retailing – UK

The most important criterion for the British chains in connection, with their evaluation of present and potential suppliers of processed meat, is delivery of stable quality, at a specified level. This is interesting in connection with the ISO 9000 as the very purpose of the ISO is to guarantee the production of a stable quality on a specified level. Delivery service (the ability always to deliver on time) is the second most important criterion. That is, they want the agreed quality at the agreed time. A high quality has the third highest priority but it is more important to get the quality desired than the absolute best quality.

Flexibility, a well-known brand, and the fact that the supplier offers a modern product mix are given high priority as well. A well-known brand is particularly important when we talk about the brand of the producer. All chains, however, have their own brands as well, of which they demand a stable and high quality. Some chains find it important to have a local supplier whereas others do not attach any particular importance to nationality. EDI-capability is merely of medium importance to the interviewed chains as they are not very far in this area.

Not much importance is attached to the ISO 9000. Oddly enough, high capacity does not have a high priority in spite of the remarkable size of the chains and thereby of the purchasing volume, but perhaps the respondents have considered the fact that there are chains which are larger than themselves. Low price has a low priority as well, but this is partly due to the fact that most of the respondents of the British chains have a technical rather than a commercial background and position.

The British food chains clearly attach more importance to the HACCP than to the ISO 9000/BS5750. The HACCP is a preventive quality control and in relation to this, we can add that a new EU-directive on food product hygiene demands that producers of food in the EU work out a HACCP-plan no later than 1 January 1996 (cf. article 3 subsection 2 in the directive).

All British chains have worked out a detailed 'Code of Practice', which suppliers are recommended to follow. The HACCP is typically incorporated into these manuals whereas BS5750 and ISO 9000 only are mentioned as an exception and used as framework for the preparation of the manual. All chains implement audits in order to investigate whether their 'code of practice' is followed.

None of the British chains demand a certification of their suppliers of processed meat by BS5750 or ISO 9000, none of them contemplate demanding this within the next years although one chain had some doubts. This same respondent thought that BS/ISO will become a common demand from the British chains in the next three years. Five out of six consider it as an advantage if a supplier is in the process of becoming certified. Only two out of six ...

- prefer, all things being equal, certified suppliers,
- would give certified suppliers status as sole suppliers, and
- think that it is easier for certified suppliers to become listed.

All of them are prepared to co-operate with suppliers about their Q-systems but none of them are willing to pay more for products of certified suppliers. None of them have cut out suppliers who were not prepared to become certified.

Retailing - Germany

The trade of foods in Germany amounted to approximately DM 214 billion in 1992, of which the first six groupings had a turnover of ca. 61%.

Of the five chains interviewed, one found it of special importance that products create good sales and that suppliers are able to deliver in sufficient quantities. Therefore, suppliers must be of a certain size and be flexible in order for them to deliver at short notice. Quality control as well as certification are considered very important. Even though each individual supplier has quality control, the chain itself makes controls with the supplier as well. In addition to this, a spot test is made of every consignment. Lack of quality immediately results in the removal of the products from the range.

Another chain stresses that assortment should not be widened (rather the other way round) as the number of products influence the financial position greatly. Usually a product is only introduced when another is removed from the assortment. Also in this case the products are above all selected according to their saleability. Hence it follows that the quantity is important. It is necessary to be able to deliver a minimum quantity if you want to be listed. But it is still more important that there is no shortage in delivery when you have been chosen as a supplier, i.e. that you are able to deliver the requested quantity in time. Much effort is made to control and improve this type of quality. As for the quality of the products, much importance is attached to the hygienic standard. It is essential that

suppliers have a high degree of hygiene and are able to guarantee this. Therefore, great importance is attached to ISO 9000 certification. However, it is no condition that suppliers are ISO-certified, but a certification simplifies the quality control of the chain.

Also the third chain found it important that the products are fast-selling and that the supplier has the necessary capacity and is able to deliver at short notice. It is stressed that suppliers deliver the required quality and a quality certification is found important. A certification is considered a quality stamp which is desirable in order for the chain to profile itself to the consumers. But also hygienic conditions and a guarantee of security in connection with foods are considered very important. They think that ISO-certification will be of still greater importance in the years to come and that it will become a crucial criterion when purchasing goods.

For chain No. 4, it is also crucial that the product has the right physical characteristics in order for them to sustain a good assortment image. The product is tested in their own laboratory.

They consider quality control to be of an increasing importance but do not rely on the supplier's quality control although they find it an advantage if he has one. Above all, they rely on their own laboratory tests regarding the ascertainment of faults. No importance is attached to ISO-certification when deciding whether to approve of a supplier or not. However, it is considered to be a small advantage even though the quality control still takes place in the laboratories of the chain. They will go so far as to say that an ISO-certification is superfluous.

The fifth chain has worked out its own guidelines which underlie the fixing of minimum demands on the purchase of meat and meat products. They visit the supplier's production facilities and test the quality in their own laboratories. Documentation and specification about the production process is demanded and will become indispensable demands in the future.

The Swedish Grocery Trade

The trade of groceries in Sweden is influenced to a great extent by the three large actors (blocks) on the market - ICA, the consumer co-operative sector and Axel Johnson (often called the third block). Together they have approximately 76% of the retail trade of groceries.

The highest ranking criteria for the first block with the purchase of meat products are 'Always delivery on time' and 'No variation in quality'. It is also stressed that the suppliers are Swedish and that they have the necessary productive capacity. It is emphasised that the import regulations and the demands on the Swedish farmers have worked as a quality assurance. On the other hand they want to be less dependent on Swedish farming. It is taken for granted that salmonella (and other bacteria) must not be found in products and the laboratories perform different types of bacteriological tests. On the whole, they rank the quality

of the products abreast of safety of supply and ability to supply. Not much importance is attached to an ISO-certification. 'The importance of an ISO 9000 certification should not be overestimated – and it must not become a pretext for doing nothing.'

One result of the minor importance attached to the ISO 9000 certification is that they neither demand an ISO 9000 certification from suppliers of processed meat nor want to make such a certification a general demand within the next 3 years. Another result shows that they are not willing to pay a higher price for products from an ISO 9000 certified supplier. Not one has been removed from the list of approved suppliers when not being willing or able to become certified. However, it is their opinion that it will be an advantage in the evaluation of the supplier if he is in the process of becoming certified just as it will be easier for a potential supplier to become 'listed' if he is certified.

The purchasing criterion which block 2 estimates to be of the highest value are delivery on time and no variation in quality. This does not mean that the quality level is not important. They find it very important that the supplier has a quality which is higher than or corresponds to the market leader. Next, the bacteriological quality must be in order, and without Salmonella. There is continuous control of the products delivered. The supplier must have good know-how in production and a sufficient production capacity. If the supplier does not observe quality, he is rejected.

The block does not demand that a supplier of processed meat is quality-certified and they are not going to make it a general demand within the next three years. Consequently, they will not give ISO-certified suppliers status as sole suppliers and they have not crossed any suppliers off the list of approved suppliers due to unwillingness to become certified. Neither are they willing to pay a higher price for a product from an ISO-certified supplier. However, a certification does have positive features. It is regarded an advantage when evaluating a present or a potential supplier if he is in the process of becoming ISO-certified. Other things being equal, a certified company will be chosen as supplier. It will also be easier for a potential supplier to become 'listed' if he is ISO-certified.

Block 3 gives its highest priority to delivery on time and no variation in quality. But also a large production capacity, flexibility as a supplier, and a modern product mix are considered as important criteria. Furthermore, it is stressed that the supplier is Swedish. An ISO 9000 certification is also considered important. The block controls everything from the supply of goods through the laboratory to the dispatch and follows a specific programme in this connection. However, they do not consider themselves to be as demanding as the British retail chains. The block does not demand that their suppliers of processed meat are ISO 9000 certified but they intend to make it a general demand within the next 3 years. Moreover, it is their opinion that it will become a common demand from the Swedish suppliers.

No suppliers have been crossed off the list of approved suppliers because of their unwillingness or inability to become ISO 9000 certified, and an ISO-certified supplier will not be given status as sole supplier of certain subsections of processed meat. It is, however, easier for a potential supplier to become 'listed' if he is certified by the ISO 9000. They are also prepared to pay a higher price for a product from an ISO-certified company (but in the future they will only use ISO-certified companies as suppliers). Thus block 3 prefers ISO 9000 certified suppliers to non-certified because they consider a certification as a sign of quality. Nevertheless they will still control the suppliers' quality control systems in spite of the fact that they are ISO 9000 certified.

Catering - UK

The British catering market has been increasing significantly as the share of the consumers' household expenses spent on eating outside the home went up from 17.8% in 1985 to 20.5% in 1992.

The two large British catering firms interviewed attached most importance to high quality, followed by stable quality, delivery service and flexibility. EDI-capability has a relatively high priority as well. The following priorities were a modern product mix, a British supplier, ISO 9000, and a low price. The suppliers' brand being well-known is of very little importance for one catering firm and totally irrelevant for the other.

As for certification the catering firms agree on the following: ISO is not demanded at the moment but will be demanded within the next years and will probably become a common demand in catering. It is an advantage if a supplier is in the process of becoming certified although a certified supplier will not be given status as sole supplier. The catering firms are prepared to co-operate with the suppliers about their Q-systems but are not prepared to pay a higher price for a product from a certified supplier. Certified suppliers advertise certification and explain the contents but firms have not been invited to participate in suppliers' certification process and a certification is not considered as a sign of quality. The catering firms will check the suppliers' Q-system in spite of the fact that they are certified and a certification is only considered as a small extra plus.

They only disagreed on two things, namely whether it is easier for certified suppliers to become listed or not, and whether ISO eases communication.

Catering - Germany

The five interviewed German catering firms have an average of 7500 employees and more than 200 restaurants each.

Delivery service has the highest possible priority. Flexibility has almost the same priority. Next comes a modern product mix and *stable* quality

which is therefore given a higher priority than *high* quality, and high capacity. The ISO 9000 has high priority as well.

A low price is of medium importance. The possibility of EDI, a well-known brand, and the supplier being local are given low priority. Local suppliers only rank a little higher than Danish and Dutch suppliers who are given the lowest priority.

All five respondents think that it is easier for certified suppliers to become listed, that certified suppliers advertise their certification and that ISO is a sign of quality. Four or five think that ISO will become a common demand in German catering within the next three years. Four will make ISO a demand within the next three years and consider it an advantage if a supplier is in the process of becoming certified. They prefer, other things being equal, certified suppliers and are prepared to co-operate with the suppliers about their Q-systems and check the certified suppliers' systems too.

At present *nobody* demands that the supplier is certified and nobody has struck any suppliers off their list because of their unwillingness or inability to become certified.

Processing – Germany

The criteria for evaluation of suppliers, given highest priority among the 3 interviewed German meat processing companies, are stable quality, followed by delivery service and flexibility. ISO 9000 and high quality are also given high priority. Large capacity and low price are of medium importance.

The German meat processing companies *agree* that ISO 9000 will become a general demand within the next three years, that it is a plus if a supplier is in the process of becoming certified, that, other things being equal, certified suppliers are preferred, that it is easier for certified suppliers to become listed, that suppliers boost their certification, that it is also necessary to check the certified suppliers' Q-systems, that ISO eases communication and that ISO 9000 is a great advantage in their evaluation of the suppliers of processed meat.

Two German meat processing companies will demand that their suppliers of processed meat are certified within the next three years. Only one would give certified suppliers status as sole supplier of certain categories of processed meat and only one would pay more for products of certified suppliers.

None of the German processing companies demand ISO at present, nobody has cut out non-certified suppliers and nobody has been asked to participate in their suppliers' certification process.

Processing – Sweden

Delivery service is given highest priority by the interviewed Swedish processing companies and stable quality has almost the same importance. A low price is given third highest priority. Next follows a group of three criteria which are of a bit more than medium importance, namely high(-est) quality and if the supplier is Swedish or Danish.

The Swedish processing companies *agree* that it is an advantage for the supplier to become certified, that they want to co-operate with suppliers about their Q-systems and that certified suppliers' Q-systems also should be checked. But at present *none* of them demand that their suppliers must be ISO 9000 certified, nobody wants to pay a higher price for goods of a certified supplier, and nobody has been asked to participate in the suppliers' certification process.

Three prefer, other things being equal, certified suppliers and think that ISO eases communication. Two find it is easier for certified suppliers to become listed, two consider an ISO-certification a sign of quality, and two regard a certification as a plus in their evaluation of suppliers of meat. Only one will demand that its suppliers of meat are certified within the next three years and expect that ISO will become a common demand within the same period. Only one would give a certified supplier status as sole supplier.

General Conclusions

We can now look at the general results of the research and see whether there are any differences between the three countries which have been examined. In general the two most important criteria for choice of supplier in the three countries are delivery service and stable quality. The high priority of stable quality is interesting in connection with ISO 9000, as a certification should contribute to a stable quality. Customers do not necessarily want the best possible quality but, on the contrary, the specified and requested quality. Therefore, high quality is less important than stable quality but high quality is still as important as, for example, flexibility and a modern product mix. The suppliers having a large productive capacity, a low price, ISO 9000 and a well-known brand have more than medium importance.

In Germany, ISO 9000 is considered as somewhat more important than in Sweden and the UK. In the UK, HACCP is considered far more important than ISO 9000/BS 5750.

Quality Certification and the Establishment of Relations

In the previous section the results of the research interviews were presented. The interesting question is now how these results can be utilised more generally by Danish producers of foods in their marketing, in order to compete successfully with foreign suppliers for the same impor-

tant groups of customers. This will be dealt with in the following sections. Special weight will be attached to marketing to retail chains whose structural development and purchasing behaviour has been analysed in greatest detail in the investigation.

On the basis of the analysis of the structural development process in the retailing links in groceries, a more general model for purchasing behaviour in the Western European retail chains can be drawn up regarding processed meat. This model can be used for a discussion of whether it is possible to build up more permanent relations with the individual chains and the conditions of this. The role of quality certification in these relations can be determined.

The Structural Development of Grocery Retailing

The Western European retailing in groceries has been and is undergoing a considerable structural rationalisation and concentration process. This appears, for example, from the analyses made by the retail trade in groceries in France, Germany and Sweden in connection with another project in this research programme, 'The Role of the Distribution System in Product Innovation' and from the reports of GIRAG S.A. This process is partly a result of the very sharp competition which has been reflected in new establishments, cut-rate marketing, buy-out of chains and campaigns of mass communication. Furthermore, the process has been intensified by consumer influence owing to their changed situation and by the development of new types of shops.

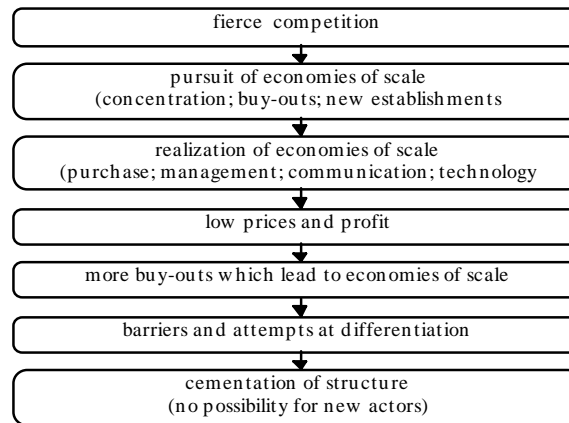
The fierce competition has implied that various actors on the markets have started pursuing economies of scale, e.g. regarding purchasing, shop fittings, staff training, mass communication and technology. In this way they have gone into a self-increasing process regarding structural development. In order to keep one's position in competition, it has been necessary to pursue and implement economies of scale, and the implementation of economies of scale has again made additional buy-outs of other chains possible which have increased the economies of scale even more.

For the suppliers this process has led to a number of demands from the chains for product development, low prices, listing fees, quality control, trademarks, packaging, JIT delivery, etc. The chains have tried to limit their costs at the same time as they have sought to differentiate themselves to the consumers through chain profiles. The described self-increasing structural development process is shown in Figure 1.

The result of the process of structural change has been a heavy decline in the traditional types of shops i.e. grocer's shops and specialist shops whereas supermarkets, hypermarkets and discount shops have been increasing considerably. At the same time, the number of actors have declined and each of them has developed a number of chain concepts which they try to profile and streamline and spread to a larger geographical area. Furthermore, retailing in groceries has been interna-

tionalised to some extent. Some of the actors have crossed the national borders through the buy-out of chains in other countries and through the establishment of shops with the same chain concept as in the native country. Another aspect of the internationalisation has been an extension of the international purchasing co-operation with a view to realise even more economies of scale. Because of a certain homogeneity in shop fittings, assortment and other marketing efforts, most attempts to profile the individual chains have been made by attaching more weight to chain brands and to fresh meat products. Finally the process of structural change has led to an increased use of information technology partly for stock management and partly for space management.

Figure 1 Self-Increasing Structural Development in Grocery Retailing



Presumably, the described structural development creates barriers for new actors who may wish to enter the market. It will be impossible to start from the bottom. The only possibility of entering the market will be to buy up existing chains and this will become more and more difficult as the remaining chains grow in size. Consequently, it can be expected that in the long run a cementation of a structure of a few large, international-oriented groups of retail chains will take place.

Purchasing Behaviour of the Retail Chains

For suppliers of processed meat products, the above-mentioned structural development means that knowledge about the large retail chains' purchasing behaviour, and decision criteria regarding the choice of supplier, will become fundamental for marketing planning. Without such knowledge, a well-founded marketing strategy cannot be developed (Grunert et al., 1996). Therefore, in this section – on the basis of the interviews made with decision-makers/purchasing managers in large

retail chains – a more general description of purchasing behaviour with these chains will be made.

The interviews made it possible to identify differences in purchasing behaviour dependent on nationality, size of the chain, its degree of centralisation and the image it wants to create.

The national differences appear from the general conclusions above. If you take a look at the way the purchasing organisation of the chains is built up, it is characteristic that decisions are becoming increasingly centralised. Central listing and negotiation are common, yet there are a number of deviations, especially depending on whether the chains are voluntary or centrally owned. Within more decentralised chains more weight is attached to local suppliers just as the size of the supplier (the delivered quantity) is not so crucial. The same considerations apply to the size of the chains. Large chains attach more importance to the size of the suppliers, quality control systems and delivery service than small chains. The image wanted by the chain can for example influence the desired absolute quality and the homogeneity of the quality.

Figure 2 shows a model for the purchasing behaviour of chains. At the top are the four factors which are presumed to have crucial influence on which criteria for supplier choice the chain finds most important.

Figure 2 Purchasing Behaviour of Retail Chains

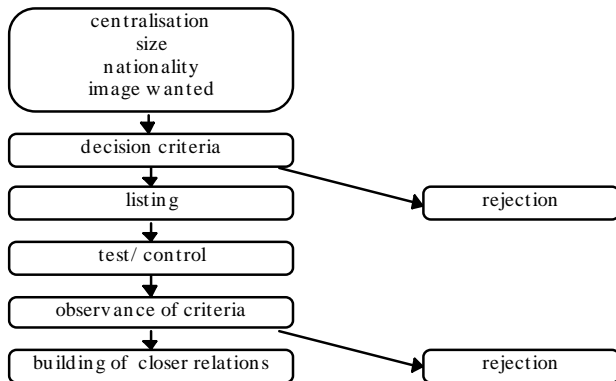


Figure 3 presents an attempt to generalise the prioritisation. The crucial condition for a product to become listed by a chain are the characteristics of the product, whether the purchasing organisation considers the product saleable, and that it fits into the assortment of the chain.

Several chains stressed that they were not willing to widen their assortment due to the costs involved and this means that other products must be removed from the assortment if new ones are to become listed. Consequently new products must be estimated to create better sales than the existing substitutes. In connection with the decision to list a given product, the chain usually goes through some careful procedures of approval which involve controls of the suppliers' facilities, hygiene and

quality control system. If the suggested products fulfil the chain's criteria for choice of supplier, they will be listed and sold, otherwise they are rejected.

When one has become approved as a supplier, it is vital in order to remain a supplier that ...

- the delivered products sell well,
- there is no variation in quality, and
- delivery is punctual and in the right quantity.

The common marketing effort belongs under the first point, quality control (including the ISO 9000 certification) belongs under the second point, and logistics belong under the last point.

Figure 3 Criteria for Choice of Supplier Within Retail Chains
(in Order of Priority)

1. CHARACTERISTICS OF THE PRODUCT
2. STABLE QUALITY AT THE REQUESTED LEVEL
3. DELIVERY SERVICE - ALWAYS DELIVERY IN TIME
4. HIGH QUALITY
OTHERS:
BRAND IS WELL-KNOWN
LOCAL SUPPLIER
NATIONALITY
EDI - CAPABILITY
ISO - CERTIFICATION
LOW PRICE

The individual suppliers is controlled continually, including quality tests, and if a supplier does not keep his promises he is deleted. This can happen after one or more warnings, depending on the policy of the chain. If, on the contrary, the supplier keeps his promises, the deliveries will be effected continuously, and as time goes by it will be possible to build up closer relations between the supplier and the chain.

Building Closer Relations

As it appears from Figure 2, it will be an objective for suppliers of food products, who supply still fewer but very large chains, to build close relationships with these chains. In doing so a substantial market share will become more secure because it will be more difficult and more expensive for the chains to find new suppliers. The switching costs will increase (Porter, 1980). For a discussion of building relations in a network, see Håkansson and Snehota (1995). The question is if whether it is possible to determine that an ISO 9000 certification system is a good means to build up closer relationships on the basis of these empirical results.

From the investigation and from Figure 3, it appears that important decision criteria for the major customers are stable quality and delivery on

time. These two criteria are closely connected with a quality management system. However, it is also very clear that an ISO 9000 certification does not guarantee that these criteria are met by the certified supplier. Only the promised quality is guaranteed. In quite a number of cases ISO 9000 certification will be able to ease communication, which also appeared from the investigation.

As mentioned above, the suppliers of food products will be interested in building up closer relationships with important customers, but it goes without saying that this does not need to be the case the other way around. It is true that major buyers of food products will be interested in close relationships with important suppliers but at the same time they will not be interested in relationships which are so close that it will become too expensive and too difficult to change supplier. It appears that, from the investigation, if quality in particular fails to come up to expectations time after time, one would want to find a new supplier.

In such cases where there is a change of suppliers, it will be an advantage seen from the customers' point of view that other suppliers have a quality certification. This will ease the changing process. It can therefore be concluded that an ISO 9000 certification would prevent close relationships rather than the opposite. Once the supplier has become accepted – and here a certificate can be of some help – the certifications of the rival companies will be a threat.

A more efficient way of establishing a relationship between a major supplier of food products and important customers would be to use other means than a certification, which would be a condition for entering the market at all. Such means could be the continuous agreement for quality improvements and it could be a closer co-operation on logistics.

Conclusions

In the introduction of the paper, the following question was formulated: *Will an ISO 9000 certification, in itself, be important for marketing and thereby affect customer preferences?*

This question has been analysed above by means of an empirical investigation made in selected countries. In this investigation, important groups of purchasers of processed meat were interviewed about their criteria for their choice of supplier and their opinion of the significance of the ISO 9000 certificates in this connection.

As mentioned above, there are differences between the countries investigated, for instance Germans attached far more importance to quality certification than the British and the Swedes. There are also differences between the customer groups and within the various customer groups.

However, a clear picture emerges of the importance large purchasers attach to the suppliers' quality certification. Quality control is of crucial importance and control is checked closely. Inferior quality in one or more dimensions will make the customer change supplier. This could be with

regards to hygiene, variations in quality, delivery service or ability to supply. In this connection, a certification can be a means of securing the desired quality level.

Through the investigation it has also become obvious that – to various extents – there is a positive attitude towards quality certificates. The great importance attached to a certificate by some of the respondents, the expected increased importance to some of the respondents, as well as the fact that some of the respondents are going to make certification a future demand, will make it absolutely necessary for the large suppliers of processed meat to become certified.

The growing concentration on the purchasing side will make every large customer vital and therefore a certification will become necessary even though only some customers in some markets find it significant. Another aspect is that all important suppliers will choose to become certified for this very reason. In this fashion, a certification will become a condition for being on the market.

An interesting aspect – seen from the suppliers' side – is whether they will be able to start a co-operation with selected chains and other important customers about the contents of the quality and the construction of the control system in order for both sides to save costs.

The concentration on the customer side and also a probable adjustment of the structure on the supplier side will make the establishment of closer relations to the individual large customers vital for keeping a stable market share. A co-operation about the construction of the quality control system could be a way of strengthening relations. An important theoretical task is to construct models for how to establish and maintain such a structure of relations with large retail chains in the course of time.

So, the answer to the main question must be that for marketing reasons, international suppliers of processed meat will be compelled to get certification as soon as possible if they are not to lose market shares.

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Notes

- 1 This paper is the result of the MAPP research project No 3: 'Quality Certification as a Key Factor to Success in International Marketing of Food Products'. The project is a co-operation between Tulip International A/S, Southern Denmark Business School (HHS) and the Business School in Aarhus (MAPP). The leaders of the project are Professor Niels

Jørgensen, HHS and a managing group whose members besides Niels Jørgensen are Jacob Ærenlund, Tulip International A/S and Professor Klaus G. Grunert, MAPP. Ph.D.-student Erik Lund and Carl Henrik Marcussen, research lecturers, both from HHS, have been assisting the project.

- 2 This section is based on Lund (1994).
- 3 The empirical basis of the work is interviews with purchasing managers/decision-makers from retail chains, catering firms and food manufacturers in three countries. These interviews took place in November and December 1994, and in January 1995. However, interviews with representatives from the retail chains in Sweden and Germany took place in the spring of 1994. The trade association 'Danske Slagterier' has placed a number of reports at our disposal, which have formed the basis for our selection of the persons and organisations interviewed.