

**THE CHANGING NATURE OF SUPPLY CHAIN MANAGEMENT IN THE
EUROPEAN GROCERY RETAIL SECTOR**

A thesis submitted by

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of the University of Abertay Dundee for the award of**

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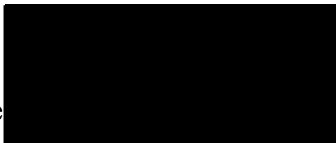
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DECLARATION

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ABSTRACT

Research in the field of distribution and logistics has been an area largely neglected by retail academics. While a considerable body of theoretical research has been undertaken on marketing channels, few researchers have investigated physical channels of distribution. This is surprising in view of the changing relationships within marketing channels and the impact of such changes on the physical distribution function. The current research investigation addresses this issue in a European context, albeit from a largely British viewpoint, by assessing the impact of changing supply chain relations on the physical distribution strategies of retailers and their suppliers in the European grocery market.

The background to this research is derived from an exploratory piece of research conducted by Fernie (1992) on retailers' distribution strategies in Europe. This research concluded that the greater the retail concentration in countries, the higher the level of retail branding and quality of distribution service support to stores. This results in a greater likelihood that retailers will control the supply chain.

The claims which were made in this exploratory research are tested in the first stage of the research investigation which involves the collection of data for 18 variables relevant to understanding the impact changing relations between retailers and their suppliers have had on supply chain management techniques across 10 countries of the EU and their analysis by applying a range of multivariate statistical techniques to identify homogeneous groups of countries. From this analysis, a definite north/south divide emerges between grocery retail markets on the continent of Europe.

Thus, the second stage of the research investigation involves undertaking primary research with the main supply chain participants in order to establish further how logistical support varies in time and space throughout Europe by drawing on results generated from the previous analysis. As the body of current work on logistical support

to warehouses and stores in the retail chain is derived from secondary source material, by undertaking a detailed analysis of the role of two main supply chain participants, namely grocery manufacturers and third party distribution specialists, only a partial understanding of relationships in the supply chain in a European context is gained. Nevertheless, results from this stage of the research investigation further substantiate the north/south divide evident between grocery retail markets in Europe.

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INTRODUCTION

The purpose of this research is to demonstrate that changes in the business relationships between grocery retailers and their suppliers will have a major impact on supply chain management practices, particularly distribution and logistics support to both warehouses and stores in the retail chain. The evolution of distribution networks is a function of the changing balance of power in the marketing channel and changes in these relationships vary in time and space throughout Europe according to a variety of factors.

Thus, the current research investigation is divided into two distinct stages; the first analyses grocery markets in a number of European countries in terms of a range of factors important in explaining these structures with particular reference to understanding changing supply chain relationships in a logistical context, while the second stage partially substantiates these differences by undertaking primary research with two main participants in the supply chain, namely grocery manufacturers and third party distribution specialists.

What is presented in this thesis provides a contribution to knowledge with regard to grocery retail market structures in Europe as no statistical analysis has been undertaken whereby data is modelled in such a manner that groups countries together based on having similar characteristics. However, only a partial insight into supply chain relationships and their impact on strategies of physical distribution is gained, as the absence of a retail perspective gained from primary empirical evidence renders the analysis incomplete.

The theoretical underpinnings of this research investigation lie predominantly in the field of marketing channels which sets the scene for an understanding of changing supply chain relationships between manufacturers and retailers and the constructs which explain the behaviour of retailers and their suppliers alike in the channel environment. The wide range of literature which exists through an analysis of behavioural concepts is

reviewed in Chapter 1 laying theoretical foundations for understanding relations between manufacturers and retailers.

The focus of Chapter 2 is on co-operation and the management of conflict, a behavioural phenomenon which arises as a result of the dependency and power relationships examined in the previous chapter. Literature from a number of areas in the marketing field is drawn upon in order to reflect the need for a changing outlook with regard to channel relationships as they move from discrete transactions to mutually beneficial “partnerships”.

The previous two chapters demonstrate a considerable body of theoretical research undertaken on marketing channels. Chapter 3, however, examines channels of physical distribution, specifically the impact changing supply chain relations have had on distribution and logistical support to both retail warehouses and stores in the retail chain. It is claimed that the evolution of distribution networks in Europe is a function of the balance of power in the marketing channel between manufacturer and retailer and that these relationships vary in time and space throughout Europe according to a variety of factors. Chapter 4 gives an account of the collection of secondary data for 18 factors important in explaining grocery retail structures in Europe with particular reference to understanding these relationships in a logistical context across 10 countries of the EU. Furthermore, the problems associated with collection of secondary data of this nature are considered.

In Chapter 5 the data generated from secondary sources is analysed by applying a variety of statistical techniques to determine if countries can be grouped together on the basis of having similar characteristics. From the analysis of secondary data, a marked north/south divide emerges between grocery retail market structures in Europe. While countries join different groups within the boundaries of these two broad regions depending on the individual characteristics assigned to them, they generally fall into the

following categories; the UK, France, the Netherlands, Belgium, Germany and Denmark comprising northern Europe and Greece, Spain, Portugal and Italy comprising the south.

The focus of Chapter 6 is two fold: firstly, to substantiate the groups of countries derive from the previous analysis by determining how distribution differs in time and space throughout Europe from the perspective of both manufacturers and third party distribution specialists operating in the grocery sector and, secondly, how changing market conditions have affected the distribution and logistics operations of pan-European grocery manufacturers. This chapter gives an account of primary research undertaken with a sample of manufacturers and distributors reporting the methods employed and the results obtained from this survey work. Both groups of respondents who participated in the survey work broadly confirm the north/south divide between countries which emerges on the continent of Europe. However, as grocery retailers were excluded from the sample of respondents which participated in the primary research investigation, only a partial view of supply chain links is attained.

Finally, Chapter 7 provides a summary of the main findings emerging from the research investigation with general conclusions drawn. Areas for further research are also suggested.

CHAPTER 1

MARKETING CHANNELS AND RELATED CONCEPTS

1.1 INTRODUCTION

The theoretical underpinnings of this research investigation lie predominantly in the field of marketing channels which sets the scene for an understanding of the relationship between manufacturers and retailers and the concepts which explain their subsequent behaviour in channel situations.

This chapter gives an historical account of the traditional base of literature that exists in this field providing a clear and coherent understanding of the workings of marketing channels, particularly behavioural concepts such as dependence between members and the problems of power and conflict which arise from these dependent relationships.

There exists a vast body of literature relevant to understanding manufacturer-retailer relations whilst very heterogeneous in nature, aiming at a number of different problems from often very different points of view (Gattorna, 1978), is still relevant to understanding such relationships through an analysis of channel specific behavioural concepts.

Co-operation, an equally important behavioural dimension in channel relationships, is not discussed in any great detail in this chapter, instead Chapter 2 gives an account of the way in which conflict is managed via literature which is more relevant to the understanding of co-operative relationships.

Three types of behaviour can be typically observed within marketing channels (Bowersox et al, 1980):

(i) As each firm *depends* on others in the channel to perform their tasks and fulfil their roles, necessary and vital behaviour among channel members manifests itself in the form of *co-operation*. If there is no dependence, no co-operation or reliance on others can exist in the relationship.

(ii) *Power* exists in channels arising as a result of dependent relationships.

(iii) *Conflict* then develops from the dependence and power relationship of firms in the channel as involvement of any kind results in the existence of a certain degree of conflict.

Each of these behavioural concepts evident in channel relationships will now be discussed in turn. Dependence will be examined first as from it varying degrees of power relations emerge, as power is said to be a function of dependence (Emerson, 1962). These power dependent relationships then provide the potential seeds of conflict, concepts which will be subsequently discussed. Conflict often arises as a consequence of vying for power in the channel, thus rendering the two concepts interrelated.

Interdependence is an antecedent of both conflict and co-operation and knowledge of ways to manage conflict and co-operation has significant managerial impact as it affects the channel's ability to function efficiently (Lusch and Brown, 1982). The resolution of channel conflict and co-operation, however, will be discussed in Chapter 2.

Although previous literature in this area has made a significant contribution to the understanding of the operation and functioning of marketing channels, it should be noted that the majority of these empirical studies have focused on channels which operate in the USA. While a general absence of examples from any other country is evident in this broad base of literature, the author still finds it useful to include them in order to illustrate these theoretical concepts in a clearer manner.

1.2 DEPENDENCY

Channel members were once viewed as a series of institutions arranged vertically performing marketing functions at each level in the channel, with the channel itself being viewed strictly in terms of functions, institutions and commodities ignoring the inherent complexities arising from firms operating in vertical alignment (Perry, 1991). Such complexities manifest themselves in the dependence of firms on each other bringing the dimension of behavioural concepts such as power and conflict into the channel and their subsequent influence on both individual channel member behaviour and impact on the channel as a whole.

Interdependence is a central behavioural dimension in the channels literature and is defined as "*the extent to which channel members depend on each other for resources/materials to accomplish their tasks*" (Stern and Gorman, 1969 p.156).

Interdependency among channel members arises as a result of *specialisation* and *functional differentiation* (Reve and Stern, 1979), two concepts which will be discussed in greater detail at a later stage in this chapter. Retailer-supplier relationships involve interdependency, a phenomenon which is not always balanced evenly as has been particularly evident in the UK grocery sector where the balance of power in these relationships has shifted dramatically over the years. This phenomenon, however, will be dealt with in Chapter 2.

It could be said that dependency gives rise to power, rendering the two concepts central to channel relationships. Thus, interdependencies specifically are thought to be central to behavioural dimensions in the marketing channel literature (Alderson, 1965; McCammon and Little, 1965; Stern, 1969; Stern and El-Ansary, 1977) for a number of reasons:

- (i) Ackoff and Emery (1972) state that in defining a system, interdependent relationships are adequate enough. The interdependency by itself presents reason enough for viewing a channel as an interorganisational system, i.e. as a set of

interdependent and interrelated components engaged in producing an output, for example, satisfaction of the end consumer.

- (ii) Interdependency is never evenly balanced and as the degree of this phenomenon varies between channel members and power relations subsequently emerge from this dependency (Reve and Stern, 1979).
- (iii) It could be argued that dependency sows the seeds of conflict in a relationship, a phenomenon which can arise over a number of issues pertaining to retailer-supplier relations (Reve and Stern, 1979), including:
 - (a) How much inventory various members should carry
 - (b) Who has the right to represent a product within a given territory
 - (c) Whether prices and service are being maintained at reasonable levels
 - (d) Why distributors and dealers are sometimes bypassed via direct selling.

1.2.1 Interdependent Organisational Relations

"Marketing channels are perhaps the most numerous and economically most important interorganisational networks in any society" (Reve and Stern, 1979) p.405.

The first notion of a "system" in a marketing context was first proposed by Clark (1922) who originally suggested that marketing activities could be viewed as a process (Gattorna, 1978). Glaser (1976) stated that Clark's work, specifically the acknowledgement of the interdependencies of structures and functions which exist within and between organisations, appears to have been the stimulus for the evolution of the systems approach to the marketing phenomena, especially that of marketing channels, which did not emerge until the 1950s and 1960s.

During the 1950s, Alderson (1957) and McCarthy (1957) were the first marketing academics to analyse channels of distribution from the social system's approach and from this were the first to classify such channels as organised behaviour systems.

According to Reve and Stern (1979), a number of academics have since taken the view that marketing channels should be viewed as complex interorganisational systems (see for example Fisk, 1961; McCammon and Little, 1965; Stern and Brown, 1969; and Vaile et al, 1952). Viewed as sets of interdependent organisations these systems are involved, by exchanging outputs, in the process of making a product or service available for consumption. Whilst studying marketing channels they also state it is useful to think of the channels as *superorganisations*, a term which implies that channels demonstrate the same characteristics as complex social organisations despite their being made up of collectivities of individuals rather than individuals alone. Adopting this superorganisational view is analogous with what organisation theorists referred to as a social action system (Aldrich, 1976; Van de Ven, 1976) or an interorganisational collectivity (Van de Ven et al, 1974) and what the traditional marketing theorist Alderson (1957) originally termed an organised behaviour system.

The rationale behind the classification of a marketing channel as a superorganisation is to illustrate that the channel demonstrates the same basic elements of any organised form of collective behaviour which Van de Ven (1976) lists as:

- (i) Activities among members aimed at attaining both *collective* and *self-interest goals*.
- (ii) A *division of functions and tasks* resulting in interdependent processes.
- (iii) *Integrated actions* taking place resulting in channels developing a unique identity separate from that of its individual members.

1.2.1.1 Collective and Self-Interest Goals

Collective goals exist within all channels of distribution, although they may not be made explicit within the channel situation, the rationale behind them is that in their absence the attainment of objectives is not possible if pursued by organisations independently of one another. In the context of this research Reve and Stern (1979) provide the desire to serve the end consumer in a satisfactory manner as an example of a collective goal.

In the packaged grocery market, thousands of independent retailers are often served by large multinational manufacturing companies who tend to be growth oriented. The smaller independent retailers, on the other hand, are perhaps more likely to maintain the status quo, tending to operate on a day-to-day basis with more short term tactical aims and objectives. This illustrates the type of self-interest goals which permeate the marketing channel. The following quote by Wittreich (1962) highlights this problem:

"The people who manufacture the goods and the people who move the goods into the hands of the end consumer do not share the same business philosophy and do not talk essentially the same language" (p.147).

1.2.1.2 A Division of Functions and Tasks

According to both Bucklin (1965) and Stigler (1951), an immense division of labour among the institutions and agencies is represented by marketing channels. Alderson (1954) describes this process as *functional differentiation* in the context of the role of the wholesaler in the marketing channel, arguing that sorting is fundamental to the distribution process:

"Wholesaling is a manifestation of sorting as an essential marketing process. Goods are received from numerous suppliers and delivered to numerous customers. The essence of the operation is to transform the diversified supplies received into outgoing assortments on their way to customers. The justification for an independent wholesaling operation rests largely on the ratio of the advantage growing out of the intermediaries sorting" (p.13).

Webster (1976), in a study of the role of the industrial distributor in manufacturers' marketing strategies, found that by performing marketing functions more efficiently than other channel members, wholesalers have maintained a key position in marketing channels, particularly in the USA. Rosenbloom (1989) examines this claim proposed by Webster in a study whereby he focuses on the role played by wholesalers in performing marketing functions as perceived by wholesalers themselves in addition to the manufacturers who supply them.

From this study of 3,300 wholesalers and manufacturers covering a broad range of industries in the USA, the following was concluded: both parties perceive that wholesalers are important performers of marketing functions; the perceived shift in performance of functions is from manufacturer to wholesaler, however, both parties did not perceive the existing allocation of functions between both parties to be optimal. Finally, both groups see an even greater role for wholesalers in the future as far as the performance of marketing functions is concerned. Thus, interdependency among these channel members arises as a direct result of this division of functions and tasks.

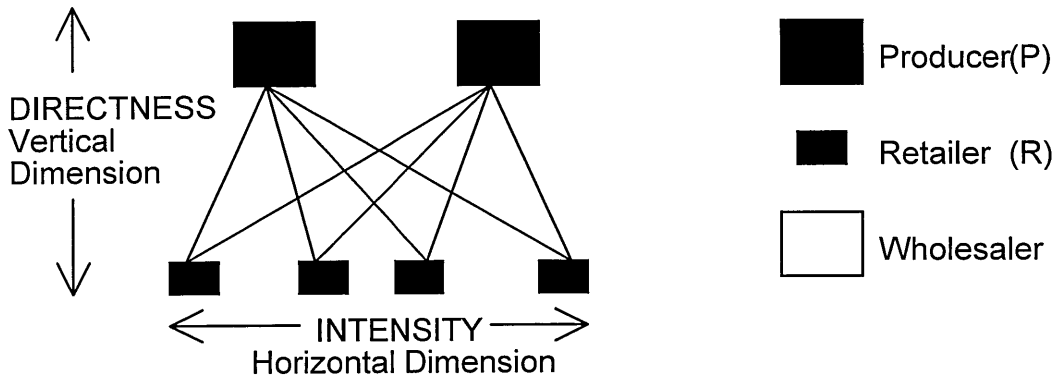
McKinnon (1989) believes that the use of wholesaler, or middleman as it is often referred to, can be justified on three main grounds:

(i) *Transactional efficiency*, whereby the existence of an intermediary between producers and retailers can reduce the total number of trading links in the marketing system, thus streamlining the network as the following diagram, Figure 1.1, illustrates. McKinnon (1989) adapted the simple example of Artle and Berglund's (1959), academics who first demonstrated diagrammatically the contractual rationale of channel intermediaries in reducing the number of transactions, to provide the following useful example. The number of direct trading links is calculated by multiplying the number of producers by the number of retailers in the absence of an intermediary. The presence of an intermediary can reduce greatly the number of transactions to the sum of the number of producers and retailers. By increasing the numbers of producers and retailers to make the model more realistic, the sum of these two numbers grows at a slower rate than their product, thus enhancing the advantage of trading through an intermediary.

In a system with 100 producers and 1000 buying points/outlets, without a wholesaler, 100,000 transactions would take place, as opposed to 1,100 in the presence of a wholesaler. The presence of a wholesaler reduces the number of transactions by 98.9%.

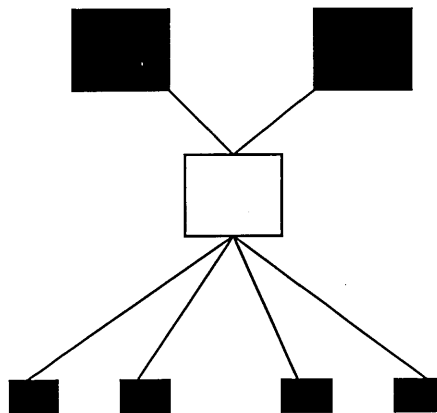
Figure 1.1: Marketing Systems With and Without Intermediaries.

Without Wholesale Intermediary:



No. of transactions:
 $= P * R$
 $= 2 * 4$
 $= 8$

With Wholesale Intermediary:



No. of transactions:
 $= P + R$
 $= 2 + 4$
 $= 6$

Source: McKinnon, A.C., (1989), Physical Distribution Systems, Routledge, London.

Many intermediaries may be needed where there are large numbers of final customers in order to serve them efficiently. A second tier of intermediaries may emerge where the

number of links between producers and intermediaries grows rapidly, thus streamlining the entire marketing system at a higher level. The number of transactions can be reduced and efficiency increased thereby condensing the number of flows of products and information on a number of smaller links by inserting additional intermediaries between any two levels in a marketing channel.

Artle and Berglund (1959) draw our attention to the fact that whilst illustrating that the number of contact lines varies according to the number of wholesale intermediaries, this approach oversimplifies what is in reality a complex situation. This approach is crude in essence as it fails to differentiate between the various types of contact lines in terms of, for example, cost, functions and other properties. Additionally, the number of suppliers with whom retailers trade in reality is actually far in excess of what this model demonstrates.

This approach was originally derived from Alderson (1954) who stated that the justification for an independent wholesaling operation rests largely on the ratio of advantage growing out of an intermediate sort function and is based on the situation in the US market. His study of wholesale intermediaries represents a seminal and invaluable contribution to the functional approach to understanding channel mechanisms (Gattorna, 1978).

(ii) *Product Assortment*, sees the role of intermediaries as assembling the wide variety of products drawn from many different producers and sorting them into mixed orders for distribution to agencies or customers further down the channel. Alderson (1954) argues that the need for individual agencies to condense and sort diverse product ranges is the *raison d'être* for the development of marketing channels.

(iii) *Functional Specialisation* is synonymous with Alderson's (1954) concept of *functional differentiation*. Intermediaries can develop greater expertise and provide a marketing service which producers could not hope to achieve by specialising on

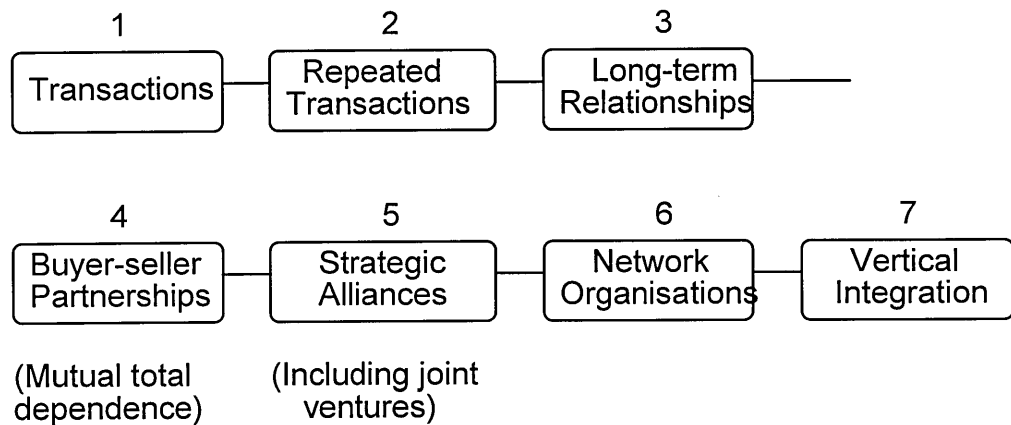
distributive functions. Producers can concentrate wholly on their core business if responsibility for distribution is delegated to intermediaries. Much of the financial burden of stockholding and the risks of ownership are also spread through the use of intermediaries. Intermediaries can also carry out physical distribution functions more economically than producers, thus obtaining larger scale economies, for example, by breaking bulk, consolidating mixed loads and decentralising storage and local delivery.

McKinnon (1989) argues, however, that physical distribution functions do not provide justification for the existence of full marketing intermediaries such as wholesalers and retailers as hauliers, public warehousing firms and other contractors can perform just as economically these functions, a phenomenon which is particularly evident in the UK grocery sector.

The notion of channel participants specialising in tasks at which they are best, did not begin to receive much attention in the marketing literature until the 1980s when academics referred to collectivities of such specialists as "value-adding partnerships" (Johnston and Lawrence, 1988) and "networks" (Thorelli, 1986), such groups being characterised predominantly by flexibility and specialisation, in addition to an emphasis on relationship management (an important concept in the context of current supply chain relationships in the grocery industry which will be further developed in Chapter 2).

Webster (1992) confirms this view in his analysis of the changing role of marketing in the corporation, whereby he states that new organisation forms such as strategic partnerships and network organisations are replacing discrete market transactions. Within these new organisation forms are different types of relationships and alliances which move along a continuum as the following diagram, Figure 1.2, illustrates:

Figure 1.2: The Evolution of Strategic Marketing Planning



Source: Webster, F.E. , (1992), "The Changing Role of Marketing in the Corporation", Journal of Marketing, Vol. 56, October, p.5.

Figure 1.2 illustrates a continuum of relationships ranging from a set of discrete market-based transactions to a situation whereby the firm is one of hierarchically integrated nature. At one end of the spectrum, discrete market-based transactions are evident which are essentially guided by price, specification and availability and are the types of relationship prevalent at Steps 1 and 2. Firms move along the continuum to Step 3 where relationships are very much adversarial, relying heavily on market control or governance. Step 4 witnesses real partnerships being formed where both partners are dependent on one another and mutual trust prevails. Strategic alliances are formed in Step 5 whereby the formation of a new "entity", e.g. a product development team which specialises in the development of own label products for a particular retailer in the case of an own label food manufacturer. As firms move towards such strategic alliances, they become more specialised in their core activities and acknowledge that the number of activities they can claim to be competent at carrying out has decreased, as Webster notes:

"The trick is to avoid trying to do everything, especially the things they cannot do well, and to find other firms that also need a partner that can do some of the things the large firm does best" (p.9).

In this stage, Step 6, network organisations (corporate structures that arise from strategic relationships and multiple alliances) emerge. In the context of the functional specialisation argument, this network approach is built around the premise that the appropriate independent entity which has the specialist expertise in a particular function or process should be responsible for that task, for example, in the context of the distribution function this argument would justify contracting out as opposed to operating an "in-house" operation (see Fernie, 1990 for a comprehensive discussion of the development of contracting out of the distribution function by UK retailers).

Thus, a phenomenon known as "*relational contracting*", as referred to by Bowlby et al (1993), has come to dominate in the manufacturer-retailer relationship, particularly in the UK, where both parties are involved in long-term relationships dealing with a limited number of suppliers as opposed to some type of pure market exchange and the choice of supplier is not made every time a new purchasing decision is made by the retailer. A situation arises whereby if the first few exchanges performed between supplier and retailer are performed to mutual satisfaction, costs are ultimately reduced, especially those of search and information, in addition to inventory and planning costs, as a consequence of improved time co-ordination (Skytte, 1994). Reduced costs of this nature will give a cost advantage compared to other suppliers and retailers. Such a relationship cost theory as proposed by, for example, Heskett (1987) and Reichheld (1993), is based on literature on transaction costs as originally proposed by Williamson (1975) which suggests that the existence of a mutually satisfactory relationship makes it possible for customers to avoid significant transaction costs involved in the selection of a new supplier or service provider.

Instead of Step 7, vertical integration, becoming the preferred option, therefore, the formulation of networks as described above is more favourable with "*the emphasis shifting from 'make' to 'buy', from ownership to partnership in the context of stable, long-term relationships*" (Webster, 1992, p.9).

Williamson (1975, 1985), is frequently quoted to explain the emergence of such relationships through transactions cost theory, a rationale which attempts to explain firms' decisions to 'make or buy'. The criterion for organising commercial transactions, he states, is assumed to be instrumental of cost economising and involves economising both on production expense and transaction costs. That is to say, if the transaction costs involved in using the market to procure goods is higher than the management costs of making them within the firm, then the firm will vertically integrate and vice versa. External procurement is additionally favoured in that many of the bureaucratic hazards of internal procurement are avoided whilst allowing firms to benefit from closer working relationships with suppliers. Bowlby et al (1993), however, highlight the fact that although the transaction cost approach offers an attractive rationale for the existence of relational contracting, the complexities of vertical integration in reality for retailers with a number of diverse products and the limited economies of scope to be realised through a regime of retailer/manufacturer integration would tend to suggest that the transaction costs involved in vertical integration would be prohibitive.

In a study of how changing market structures in food supply chains have affected the nature of collaboration between retailer and supplier, Shaw and Gibbs (1995) found that there is a need for understanding by marketing and procurement managers of the way in which different organisations interact and ultimately work together. In their case studies, reflecting what occurs at an industry level in two sectors of the primary food chain, they state that it is not entirely appropriate to follow Webster's (1992) suggestion of the general trend towards a *"real partnership in which each partner approaches total dependence on the other and mutual trust replaces adversarial assumptions"* (p.5) as relationships must be driven by the need for profitability for both partners, in addition to strategies which are viable for each partner together and independently. Improved results however, will only be achieved by working together (Hakansson, 1982) and in situations whereby managers have a clear understanding of the social systems formed by both companies and the inherent concepts of authority and control (Arndt, 1983).

1.2.1.3 Integrated Actions

The final element demonstrated by the channel to justify its classification as an organised form of collective behaviour is that of integrated actions. In the presence of such actions, the channel develops a unique identity from that of individual channel members as they act as a single unit (Van de Ven, 1976). The social structure among organisations in a social action system is such that the system can act as a unit which implies that activities in inter-organisational relationships can not simply be explained by analysing the individual behaviour of channel member organisations.

Van de Ven (1976) states that in order to attain goals as a unit, the social action system must adopt a structure and process for organising member activities, whereby the structure governs the administrative arrangements established to define the role relationships among channel members and the process directs the flow and frequency of resources and information flowing between channel members.

The concept of structure is concerned with three major dimensions which capture the notion of a social structure, namely formalisation, centralisation and complexity. Formalisation is concerned with the degree to which rules, policies and procedures govern the inter-agency contacts where an inter-agency agreement exists if any form of expression has been made between the parties regarding the terms of their relationship. The formalisation of such agreements increases as they become verbalised, written down and contractual. Formalising channel relationships, however, will be discussed in more detail in the next chapter.

An examination of Warren's (1973) concept of concerted decision making over time appears to be useful when considering the locus of decision making in a collectivity, the second notion captured in the notion of a social structure. He observes that individual organisations in an inter-agency relationship will continue to maximise their self-interests but certain aspects of decision making are pooled. What were earlier individual agency decisions are now inclusive decisions whereby an enterprise now

possesses its own system of differentiated roles and tasks and maintenance of functions. In this context, Van de Ven (1976) states that centralisation can be measured as *"the perceived degree of influence by these individuals in making decisions that are binding upon the member agencies"* (p.26).

Finally, the structural complexity of a collectivity refers to the number of differentiated elements that must be dealt with and subsequently integrated to allow the inter-organisational relationship to act as a unit. Van de Ven (1976) draws our attention to the fact that as the number of different projects, activities and problems increases in such a unit, so the complexity of the relationship increases.

Process dimensions of an interorganisational relationship are concerned with flows of resources (units of value transacted between agencies such as money, physical materials and facilities) and information (communications about the units of exchange such as written reports, letters, telephone calls and face-to-face discussions). Van de Ven (1976) believes that the process of co-ordinating these flows is vital as in the absence of these basic elements of activity in organised forms of behaviour, a social action system would cease to exist.

1.3 POWER IN THE MARKETING CHANNEL

The next behavioural concept which is central to understanding channel relationships is power which is conventionally defined in the behavioural science literature as *"the ability to evoke change in another's behaviour"* (Dahl, 1957; Emerson, 1962), that is to say getting another to do something he would not otherwise do. In the context of marketing channels, El-Ansary and Stern (1972) define power as *"a channel member's ability to control the decision variables of another member in a given channel at a different level of distribution"* (p.47).

Emerson (1962) viewed power as a function of dependence. In a channel scenario, for instance, the power of a retailer over a manufacturer is related to the dependence of the

manufacturer on the retailer. That is to say, for example, Kellogg may only account for 2% of Sainsbury's business, but Sainsbury may account for 10% of Kellogg's business, therefore rendering Kellogg more dependent on Sainsbury than vice versa.

French and Raven (1959) classified the sources of bases of power from a psychological/socio-psychological point of view which Stern and Beier (1969) later explored to investigate the applicability of such bases to channels of distribution.

1.3.1 Bases of Power - Channel Specific Applications

French and Raven (1959), stated that there were many possible sources of power, but chose to define five which they believed to be significantly important. These sources of power are *reward, coercive, expert, legitimate* and *referent*. Each will be discussed briefly, not in their original psychological context, instead adapted to demonstrate their applicability to marketing channel scenarios.

1.3.1.1 Reward Power

This type of power is characterised by one channel member's perception that the other has the ability to mediate rewards for him to give in order to enable their goal satisfaction. Retailer reward power materialises in the form of preferred shelf-space, featured space in advertising and sales support, all of which are desired by manufacturers to promote sales (Bowersox et al, 1980). Manufacturer reward power takes the form of providing financial incentives or support services, such as McDonald's promotional support to their franchisees or Goodyear's ability to grant allowances for returned tyres.

An important example of reward power, as cited by Bowersox et al (1980) which was also perceived as a major development in the grocery trade was the introduction of the Universal Product Code (UPC), as it is referred to in the USA, otherwise known as article numbering in the UK, (bar coding) and the benefits it promised to bring. The benefits to retailers were thought to be faster customer transactions, fewer errors at the

checkout, reduced labour in the checkout process and improved stock control information.

At the time of its introduction, food manufacturers were of the opinion that they too would share in the benefits of such a system and believed that retailers would share the abundance of market data that scanning provided. Consequently, manufacturers proceeded to develop the appropriate packaging, labels and symbols necessary for the implementation of the scanning concept. Retailers, in some cases, decided that the information was too valuable and as such manufacturers should pay for it, failing to share it with them as promised. In the UK Asda was the first retailer to offer suppliers information gathered from scanning developments as to both product line sales and performance against the sector in which they operate, but for a fee (Galloway, 1991).

1.3.1.2 Coercive Power

Coercive power is similar to that of reward power, but instead of rewards, it relies on a channel member's belief that if the desired course of action or behaviour is not forthcoming punishment will be administered by the other channel member. Kasulis and Spekman (1980) state that withholding important support or threatening termination of the relationship amount to coercive power. A retailer diminishing shelf-space for products from a particular supplier is an example of the former, whereas, a franchiser terminating a contract with a franchisee is an example of the latter. This type of power is normally only employed when the power advantage is clear and the influenced party's alternatives are limited.

1.3.1.3 Expert Power

This type of power is based on one channel member's superior knowledge or insight which is needed by other members in the channel. Once given, knowledge or information is no longer a source of power. In a number of industries, the primary role of the manufacturer's sales force is to provide information and advice to distributors in order to assist them with merchandising decisions, for example, a pharmacist following

a drug wholesaler's stocking suggestions (Kasulis and Spekman, 1980). Distributors may rely on the sales force as a source of information on products as well other topics such as market trends, however, this tends to be more relevant to industrial market situations. In these situations the manufacturer/wholesaler has a strong power advantage based on superior industry knowledge. Smaller retailers often rely heavily on wholesalers for expert advice, a good example in the UK are the voluntary chains such as Spar, who rely on their affiliated wholesalers for advice on a number of issues including; promotions, store layout and managerial counselling.

In the fast food retailing industry Burger King and McDonalds guard the expertise they have developed with fervour as it could be readily transferred to potential entrants to the industry and as such have no desire to share it with others (Merrion 1979).

Retailers refusing to share information with manufacturers gained from scanning could also be viewed as another form of expert power, as they possess important knowledge about the sales of the manufacturers' brands and the consumer base to whom they are sold. The whole issue of power in the UK grocery industry is centred around the fact that grocery retailers know more about their customers needs, thus instructing manufacturers what to supply in terms of both brands and own labels, if relevant.

1.3.1.4 Legitimate Power

Perhaps the most complex source of power, legitimate power, is based on the belief by one channel member that he has the right to dictate behaviour to another channel member. This type of power may be enhanced and given formal recognition through legal actions such as brand name registration, patent rights or contractual (franchising) arrangements. A pertinent example of this in the UK is the recent attempt by consumer goods manufacturers to stop retailers selling own-label products which are almost identical to their own brands. The newly formed British Producers and Brand Owners Group are pressing for a change in the law through the Trade Marks Bill which was

designed to harmonise UK laws on unfair competition based on the Paris Convention on intellectual property (Buckley, 1994).

Attempts have been made to expand the set of power sources to include so called "*legalistic*" and "*informational*" power bases (Brown, Lusch and Muehling, 1983; Kasulis and Spekman, 1980; Lusch and Brown, 1982). Information as a separate power base will be discussed at a later stage, while the division of legitimate power into sub-components will be examined in the context of the current discussion.

Legitimate power can be separated into two components, namely *legal legitimate* and *traditional legitimate* (Kasulis and Spekman, 1980). The former refers to contractual arrangements which stipulate behaviour, e.g. Sears requiring a manufacturer to conform to product specifications or Mobil requiring particular franchisees to stay open for 24 hours. Whereas the latter is a philosophical acceptance of channel roles as prescribed by the channel leader, for example, Coors' right to establish temperature controls for its distributors to maintain the quality of its beer. Lusch and Brown (1982) in a study of the measurement of power sources and their implications for the marketing channel also cite informational power and the segregation of legitimate into legal and traditional power sources.

Gaski (1986) argues that French and Raven (1959) have already captured this power base in their framework in that if a channel member is cognisant that a channel arrangement is such that there is a legal base for another's authority, this would represent a legitimate power source. The capacity to take legal action or to impose legal sanctions which would be regarded as unfavourable by the recipient channel member would be a manifestation of the coercive power source and thus would be perceived as a punishment (legal sanction).

Ketilson (1991) acknowledges that little work has been devoted to the investigation of either components of legitimate power and thus studies the role and importance of

legitimate power as it contributes to channel conflict. In particular the study examines the distribution and application of legal legitimate and traditional legitimate power bases.

1.3.1.5 Referent Power

The roots of this type of power are psychological, whereby one channel member wants to be identified with another or is attracted to another channel member. Kasulis and Spekman (1980) give an example of the desire to share the reputation of another as being a department store carrying Cardin, Dior and Estée Lauder cosmetics to portray a fashionable or prestigious image.

While retailers may pride themselves in carrying certain brands, similarly manufacturers may pride themselves on having their brands carried in certain outlets, e.g. in the UK the suppliers of own label products for Marks and Spencer such as Sara Lee which produces own label chilled and frozen cakes and desserts for this particular retailer.

1.3.1.6 Informational Power

As was stated previously, when discussing legitimate power, a number of academics have attempted to include *informational power* as another potential power base. This source of power is based potentially on the extent to which *B* perceives *A* as providing information not previously available to *B*, or when *A* points out the consequences of the actions *B* may not have been aware of, then *A* has information power over *B*. A sales agent demonstrating the savings which could be incurred by a retailer by purchasing the same volume of product but in larger orders at a time is an example of informational power.

On the face of it, informational power appears to be very similar to expertise or expert power. Again, as with legal legitimate power, Gaski (1986) maintains that this power source has already been included in the French and Raven (1959) framework in that the degree to which information is accepted by one channel member would surely depend

on the perceived expertness of the channel member providing the information. The information would thus constitute as a reward if it were regarded favourably by the channel member receiving it.

Stern et al (1989), however, argue that the two bases of power are really quite different as *A's* information power is based on *B's* acceptance of the logic and clarity of *A's* arguments rather than *A's* perceived expertise. The influence attained, therefore, through information power is sometimes referred to as *persuasion*. Retailers and industrial distributors obtain information power by virtue of the close contact they have with consumers. By gathering, interpreting and transmitting valuable market information, an organisation can enhance its power over other channel members, as is the case with information obtained from scanning developments by retailers in the grocery market

The clarification of arguments as stated above corresponds with the way in which Raven and Kruglanski (1970) viewed informational power almost 20 years previously as "*the ability of one party to explicate information or contingencies not adequately considered by the other party*" (p.73). Their definition would tend to indicate that the information is used to explain points to an otherwise unsure recipient of the information.

1.3.1.7 Manipulative Power

One source of power not included in the French and Raven (1959) taxonomy described above, according to Gaski (1986), is the *manipulative power source* or *ecological control*. Tedeschi and Bonoma (1972) define this power source as "*the ability to control critical aspects of W's environment in such a way that the new environment will bring about a desired change in W's behaviour*" (p.15). Gaski criticises the French and Raven (1959) taxonomy by stating that as this manipulative ability would have significant implications in a marketing channel scenario, then perhaps the power sources proposed by these authors is only representative of a subset of the power source categories. Despite this criticism, the French and Raven (1959) taxonomy of the bases

of power captures perception-based elements and has been utilised successfully in many empirical studies in the channels literature over time as the following section will illustrate.

1.3.2 Studies of Power

Power and its associated bases have been subject to much empirical attention in the channels literature. The following section, however, will examine a number of important studies which explore the concept of power. Simon (1953) proposed that an index of influence might be determined from the magnitude of the power sources, that is to say for example, a manufacturer who advertises directly to consumers maintains an influence base or power source relative to dealers who distribute his brand. An index of the manufacturer's power over his dealers, therefore, might be a measure of the magnitude of advertising and resultant consumer preference.

Nonetheless, El-Ansary and Stern (1972) state that the power of any given channel member is probably a function of the sources of power available to him at any given time and in a study of the power relationships between wholesalers and dealers in the heating and cooling supply channel, they attempt to measure power, dependence and power sources. Although the study represents a first attempt to empirically measure power relationships within a specific channel of distribution, it failed to establish a relationship between a channel member's power, dependence and sources of power, a factor which they attributed to the lack of a well defined power structure in the channel when the research was conducted (heating and cooling equipment distributors, an example of a conventional channel).

Hunt and Nevin's (1974) study built on that of El-Ansary and Stern (1972) by using a channel with a more clearly defined power structure, a fast-food franchise system (an example of a contractual channel). They use this type of structure as in the franchiser-franchisee channel, the existence of a formal franchise contract has already governed the direction of power for most decisions in the relationship. In the light of the previous

definition of power and the control of certain decision variables (El-Ansary and Stern, 1972), power in this specific relationship refers to the franchiser's ability to control the business decision variables of the franchisee.

From this study, a classification of power into *coercive* and *non-coercive sources* arises, whereby the former includes, as the name implies *coercive* power and the latter all those non-coercive source, i.e. *reward, legitimate, expert* and *referent power* where the individual yields "willingly" to the power of another, unlike coercive sources which sees the individual yield "begrudgingly" to influence attempts. They state that although no published research has examined the consequences of exercising coercive and non-coercive sources of power in a channel of distribution, some authors have suggested that non-coercive sources appear most effective for enhancing the satisfaction of weak channel members (French and Raven, 1959; Stern and Beier, 1969). Their study, therefore, aims to test this hypothesis where non-coercive sources are defined as assistance, e.g. day-to-day business advice, and coercive sources manifest themselves in some sort of punishment, e.g. a threat to revoke the franchise.

From their results it was found that a significant relationship exists between the power of a channel member and the sources of power available to him. In one franchiser-franchisee relationship, the former was found to rely heavily on non-coercive sources of power. Similarly, franchisee satisfaction could be increased by relying less on the coercive sources available to the franchiser.

Hunt and Nevin's (1974) model, studied manufacturer-dealer relations in the automobile industry from a franchise point of view and empirically investigated two potential determinants of franchisee satisfaction, namely coercive and non-coercive sources of power. Lusch (1977), in an attempt to explain more completely the determinants of the strength of coercive and non-coercive power sources, replicated the results of Hunt and Nevin (1974), i.e. the use of coercive sources of power on the part of the franchiser was

found to decrease franchisee satisfaction whilst the use of non-coercive sources were found to increase satisfaction.

In contrast, Etgar (1976a) examined non-contractual relationships and empirically explored the relationship between power and the sources of power in a conventional channel of distribution, namely independent insurance agents and companies. This particular study showed that measures of insurers' power are significantly correlated with their power over agents' business practices.

In a later study Etgar (1978) expresses the need to further categorise power sources as he states that in practice marketing managers are concerned with converting the theoretical concepts (reward, coercive, expert, referent and legitimate power) into practical terms for subsequent application to channel management strategies, specifically the effectiveness of various power sources as generators of control and leadership opportunities. An important issue, therefore, is the advantage of using *economic* as opposed to *non-economic power sources* to generate control for channel leaders. *Economic sources* involve direct economic incentives and disincentives which he refers to as *rewards* and *penalties*, whereas *non-economic sources* involve the development of a channel environment *conducive* to channel leadership and draw on French and Raven's (1959) expert, referent and legitimate power sources.

This study empirically explores the advantages, in terms of control generation, of the economic reward and penalty power sources as opposed to non-economic power sources. The results indicate that economic rewards and penalties are positively linked to a channel leader's power and were thus useful for generation of control, whereas those of a non-economic nature were found to be inversely related to power. Also highlighted is the motivation by direct economic incentives and disincentives in those channels of distribution studied with little regard for the wider channel environment.

These earlier studies of power in marketing channels are conveniently summarised by Reve and Stern (1979). Their summary acknowledges it has been proven that sources of power, in addition to dependency, play an important role in determining the allocation of power in a marketing channel.

Lusch and Brown (1982), through undertaking a survey of franchised new car dealers in the USA, aimed to extend the Hunt and Nevin (1974) model, whilst providing an empirical test of the modified power model to afford greater insight into the theory and measurement of power sources and their consequences in marketing channels. As was stated previously, Hunt and Nevin (1974) acknowledge both the existence of informational power and the separation of legitimate into legal and traditional and state that these should be placed in Etgar's (1978) framework to result in informational sources and traditional legitimate sources, resulting in their re-classification as non-economic sources of power. Legal legitimate power, on the other hand, is considered as an economic source of power.

On these grounds, the original Hunt and Nevin (1974) model should be recast as: economic power sources are reward, coercive, legal legitimate, whereas non-economic power sources should be informational, traditional legitimate, expertise and referent. From their study it emerged that the power model proposed proved to be no better than that of Hunt and Nevin, which they see as more precise. Their results do, however, corroborate those of the aforementioned and Etgar (1978) who both found channel member power to be negatively related to the non-economic power source and positively to the economic power source. Additionally, they develop further the logic for the categorisation of power sources into economic and non-economic classes.

Frazier (1983a) acknowledges Reve and Stern's (1979) criticism of previous studies which pay little attention to measure validation in previous empirical research on power in channels of distribution, and aims to aid channel researchers in developing and utilising adequate measures of power in a study of a franchise system, an automobile

channel distribution system. Previous studies have focused on either attributed influence measures to measure a firm's achieved influence to reflect power, e.g. El-Ansary and Stern, 1972; Etgar, 1977, 1978; Lusch and Brown, 1982, or have devised an index of influence to reflect power based on whether or not insurance agents had to consult with their current insurers as to the choice of additional insurers (Etgar, 1976a).

Frazier's (1983a) study, however, aims to develop an approach for measuring interfirm power based on dependence theory, that is to say the role performance of a firm in its primary channel responsibilities is seen to influence the level of the other's dependence in their relationship. This dependence, in turn, determines the former firm's level of power over the latter firm. Frazier (1983a) concludes that there is a close similarity between dependence and sources of power in terms of providing a basis for authority in the channel. He indicates that *"a potential for influence...will be generated for each firm " and that "this potential for influence is based on authority"* (p.164) which is defined as the firm's *"right to influence or specify certain behaviours that are accepted by the other firm"* (see for example, El-Ansary and Stern, 1972).

Based on close examination of Frazier (1983a & b) and the summary of literature provided by Reve and Stern (1979), Lusch and Ross (1985) set out to provide answers to two questions regarding power relationships which they believed to be unanswered, namely: (1) is power in the channel issue-specific or pervasive?; (2) are sources of power pervasive in their creation of power in a channel, or do they have a more limited impact by creating power in only specific policy areas? In a study of broker-wholesaler relations in the US grocery channel, the following results emerged: there was evidence to strongly support the notion that power in a marketing channel is limited and not pervasive and that each power source had specific influence on certain areas of power but not a pervasive influence over all other areas of power.

Although considerable research has been undertaken on the effects of coercive and non-coercive power sources in marketing channels, particularly the work of Hunt and Nevin

(1974) and Lusch (1977) described earlier which indicated that coercive power sources are positively related to intrachannel conflict, whereas non-coercive power sources exhibit the opposite, no research has examined the effects of power sources that have been exercised as opposed to unexercised.

Gaski and Nevin (1985) examined this issue in a study of the distribution system of a large manufacturer of heavy industrial machinery. They are of the opinion that if sources of power are present but application is withheld, the consequences may be entirely different from what they may be if the sources are actively exercised. For example, harsh sanctions imposed on channel members (exercised coercive sources of power) seem almost certain to cause both conflict and dissatisfaction, but the dormant presence of the potential to invoke such sanctions (unexercised coercive sources) could be regarded by dealers and franchisees as benevolent restraint. Similarly, the granting of beneficial assistance (exercised non-coercive sources) should be received favourably, whereas the withholding of such benefits (unexercised non-coercive sources) may not be. In essence, the research question they are proposing is "does the exercise of power make a difference?". Their results would tend to support this question in that the exercise of a coercive power source by a supplier has a stronger effect on dealer satisfaction and channel conflict than the mere presence of that power source. In contrast, exercise of the reward power source (non-coercive) seems to have only a marginal impact on these dependent variables.

The work of Gaski (1986) was to address an issue which he felt to have been neglected in the channels literature, that is the effect of the various power sources on each other. He states that not only does each individual power source affect power, conflict and satisfaction in the channel directly, but may also affect the other sources of power. For example, although the direct impact of reward power on power may be positive, if it actually decreases other power sources (e.g. by reducing the power of expertness) its net affect may be negative. To clarify this point he uses the following illustration whereby a manufacturer who grants excessive rewards may be perceived as foolish by dealers and

thus less expert. In an earlier study Frazier and Summers (1984) reported correlations among intrachannel communications such as promises, threats, legalistic references and requests.

In an examination of casual relationships between sources of power, specifically the effects of reward and coercion on expert, referent and legitimate power, Gaski (1986) found that the application of reward power sources has a positive effect on expert, legitimate and referent power sources and the use of punishment has a negative effect. Apparently the granting of rewards by a supplier may lead the dealer to perceive expertise, legitimacy and attractiveness. The imposition of punishments, however, is the mirror image of reward power as it produces the opposite effects. These findings could be put to use by channel managers in their own distribution systems in identifying particular rewards and punishments that have the greatest impact on the qualitative power sources (in the context of this study "give business advice" and "demonstrate products" seem to be the most important). Additionally, to build on the fact that some punishments might be used without undesirable consequences.

Influence strategies, the alternative means for applying power, e.g. threats and suggestions that can be used by a firm's boundary personnel in their influence attempts with associated channel members, have received little empirical attention in the literature (Frazier and Summers, 1986). In this context, Frazier and Summers point out that boundary personnel refers to those employees of the firm whose position involves facilitating product, service and informational flows within the distribution channel through personal contacts and associated channel members. Data from a field study of the automobile distribution channel are used to examine how dealers' perceptions of their manufacturer's power are related to the latter's use of coercive and non coercive influence strategies. As they predicted, dealers are likely to perceive their manufacturers' intentions as less accommodative when manufacturers resort to coercive influence strategies. Such coercion invites retaliation in a reciprocal action and the dealers use of coercive strategies correlates positively with the manufacturers' reliance

on coercive strategies. In sharp contrast, request and information exchange (non-coercive) strategies is related positively to the degree to which the dealer perceives the manufacturer as accommodative.

Overall their results support the positive role of interfirm power in promoting the effective co-ordination in channel relationships, in that manufacturers' representatives resort to coercive influence strategies only when all other types of influence strategy have failed to produce a satisfactory response on an important issue.

Frazier et al (1989) aim to shed light on the nature of reciprocal actions in channel relationships by linking the use of coercive influence strategies by the manufacturer to the use of coercive strategies by the dealer, as was suggested in the study above by Frazier and Summers (1986), in a conceptual framework for channel relationships involving the exchange of industrial products within sellers' markets in developing countries.

The explicit linkage between dependence structure and influence processes is again highlighted as an area which has been subject to little research in the channels literature (Keith et al 1990). These authors examined the effects of alternative influence processes on channel relationships under two different dependence structures whereby influence "treatments" are applied to food brokers who assume positions of either high or low dependence on a source principal. It was found that the broker's readiness to respond to the principal's requests was determined mainly by the broker's dependence and their subsequent attitudes were affected by dependence and the principal's influence strategies. This would suggest that the relationship is very one sided. Therefore, it must be borne in mind that channels are made up of organisations which are interdependent.

Research has shown that different levels of interdependence necessitate different modes of co-ordination and its effects have received considerable interest in the organisational

sciences (see for example Fry et al, 1986). Low levels of interdependence would warrant co-ordination by standardisation, specifically policies and procedures, whereas high interdependence requires mutual adjustment and feedback to prevail. Results from the work of Fry et al (1986) would tend to suggest that the most effective leadership behaviour may vary according to the level of task interdependence in the work group. Price (1993) states that no studies have considered channel member interdependence as an appropriate factor to acknowledge when devising an appropriate channel leadership style. By identifying the effects of different leadership behaviours under varying conditions of interdependence it may be possible for channel leaders to develop a style which improves channel relations and minimises conflict. Which leads to conflict, another behavioural dimension present in marketing channels, which arises as a result of power.

1.4 CONFLICT IN THE MARKETING CHANNEL

Conflict, another behavioural dimension which is inherent in all social systems, will now be discussed in the context of marketing channels. Essentially it is a phenomenon which occurs when channel members have mutually exclusive or incompatible goals, values or interests (Stern, 1970). Both Pondy (1967) and Thomas (1976) note that the early literature shows little consensus on the exact nature of the phenomenon of conflict. Pondy (1967) states that writers have referred to these aspects as antecedent conditions, affective states and cognitive states, whereas Thomas (1976) notes them as being referred to as incompatibilities, competition and conflicts of interest.

To assist in understanding the conflict process, Lusch and Ross (1982) give Pondy's model as an example which indicates that the presence of four, not necessarily sequential stages: a latent stage (causes of conflict present); a perceived stage (awareness of conflict); a felt stage (conflicting parties experience tension or stress); and a manifest stage (actual conflictual behaviour takes place). The outcome of one of these episodes sets the scene for the next. Thomas (1976) also developed a similar model.

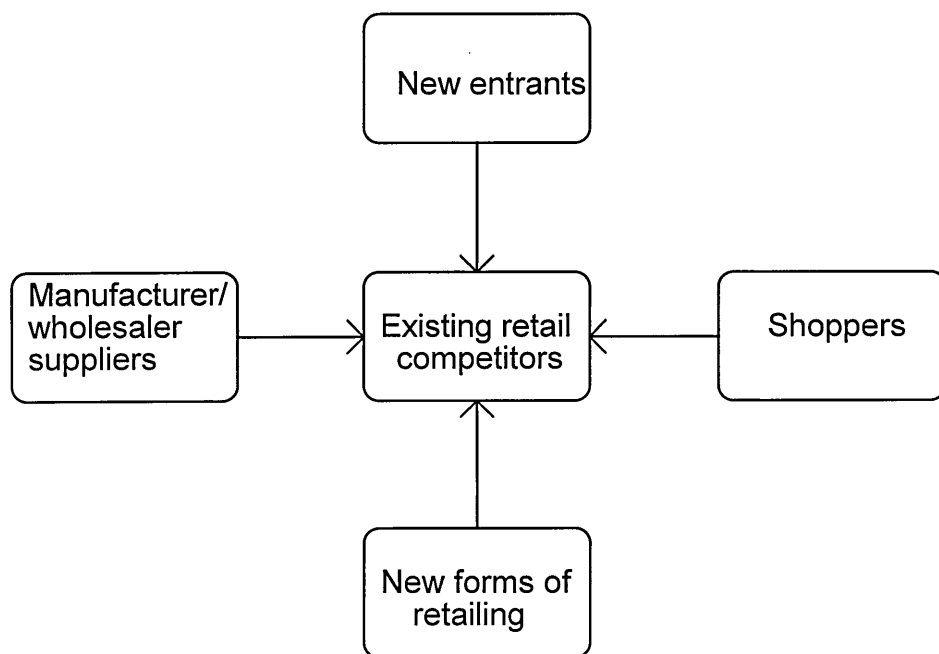
These concepts, however, are derived from the behavioural sciences and as a result a myriad of concepts and terminologies have evolved which can easily lead to confusion (Rosenbloom, 1973). To overcome this confusion, Rosenbloom believes that more conceptual models are needed to allow the marketing manager to gain a greater insight into how a "behavioural tool kit" might be applied to deal with conflict as it arises in channel situations.

Pioneering work on the concept of conflict was first carried out by Palamountain (1955) who identified three types of distributive conflicts, namely horizontal, intertype and vertical. Horizontal conflict is usually treated in the field of micro economics as it relates to competition. This type of conflict occurs among similar firms on the same level in distribution channels. For example, two DIY superstores in the same retail park competing with each other amounts to horizontal conflict. Intertype competition occurs

among different types of players at the same level in the channel, for example, multiples, independents and co-ops in the fighting for market share in the UK grocery sector. Some view it as a type of horizontal conflict occurring between dissimilar institutions which compete for the same customer. Finally, vertical competition occurs among different levels within a given channel of distribution, that is to say between a manufacturer and a retailer or a manufacturer and a wholesaler.

The following diagram, Figure 1.3, represents the main competitive forces adapted from Porter (1985) by Howe (1992) to identify the participants in retail markets and forms of retail competition. In the context of the previous discussion, horizontal competition takes place in the central box as does intertype competition, except that the former type takes place between retailers from the same sector as opposed to the latter which is between retailers from different sectors. Vertical competition is represented in the box containing manufacturers and wholesaler suppliers.

Figure 1.3: Framework of Competition in Retailing



Source: Adapted from Porter, M.E., (1985) Competitive Advantage, Free Press, New York, by Howe, W.S., (1992) Retailing Management, Macmillan, London, p.46.

1.4.1 Effects of Conflict on Channel Performance

Conflict has always been viewed as harmful in the marketing channel, often thought of as dysfunctional (for example, Mattsson, 1969 and Thompson, 1960). A number of academics, on the other hand, have viewed the existence of conflict as highly functional. For example, Rosenbloom (1973) highlights three possible effects of conflict on channel efficiency:

(i) A Negative Effect - reducing efficiency. This is the most common belief as previous authors have stated. As the level of conflict increases, channel efficiency is reduced.

(ii) No Effect - efficiency remains constant. In this scenario each party feels that the dependence on each other is so great that to achieve their respective goals, conflict has no more than a superficial effect on efficiency in goal attainment. In such situations, channel members learn to accept the conflict that is present.

(iii) Positive Effect - channel efficiency is increased. There is a possibility that conflict results in an increase in efficiency as the level of conflict increases. For example, picture a channel scenario whereby a wholesaler and manufacturer enjoyed a profitable relationship, until the manufacturer decided to bypass the wholesaler as he is of the opinion that the wholesaler has not been selling his products vigorously enough. The initial reaction of the wholesaler amounted to hostility towards an "ungrateful" manufacturer. However, the conflict may provide an impetus to reconsider their respective policies as the wholesaler could endeavour to sell the product more effectively and the manufacturer may decide that to invoke this behaviour he has to make a more concerted effort to maintain the support of the wholesaler (this example was provided by Assael, 1969). This type of conflict, therefore, is considered to be functional.

Bowersox et al (1980) confirm this positive effect of conflict as they believe a low level of tension may lead to better performance in the channel, with the channel becoming

passive and non-innovative in its absence. They do concede, however, that as conflict escalates, the system can be disrupted. There is little empirical evidence to determine when conflict would have no effect, a negative effect or a positive effect on channel efficiency as Rosenberg and Stern (1970) state *"whether the impact of conflict upon a channel member's performance is functional or dysfunctional remains to be settled"* (in Rosenbloom, 1973 pp.45-46). As conflict can produce either functional or dysfunctional consequences, channel members should endeavour to confine it to functional levels (Stern, 1970).

1.4.1.1 Pathological Conflict

A certain form of conflict, however, has been identified as having a negative effect on the overall channel system which is defined by Boulding (1965) as; *"in attempting to injure or thwart the competitor in goal attainment one's own resources are expended and self-attainment of goals is thwarted"* (p.172 -191).

The existence of conflict tends to motivate members to adapt and seize new opportunities but because conflict is opponent-centred behaviour, degeneration of the relationship can occur resulting in calculated actions which destroy, injure or thwart another party in an independent relationship. This phenomenon was first described by Boulding (1965) as pathological conflict. Therefore, channel members must seek to avoid this type of conflict or risk the breakdown of the entire channel system. An example of pathological conflict is the breakdown of international relations by armed warfare. Whilst engaging in behaviour to harm another country, the aggressor also kills off its own civilians.

In marketing channel relationships, pathological conflict is less evident but easily enough defined. Loomis (1979) uses Sears (USA) to illustrate this point as they are notorious for some of their supplier interactions. When in 1987, for example, the suppliers of Sears complained about the great pressure they were under as Sears changed strategies abruptly, reducing inventories and sharply cutting promotional efforts, they

were advised publicly by the chairman of Sears that the company had its own business to run and did not owe them a living. Similar examples are a supplier slowing up deliveries if a reseller is slow with his payments and a retailer boycotting brands that customers expect to find in their stores.

1.4.2 Studies of Conflict

Much of the channel literature on conflict has focused on three main areas:

- (i) The nature of conflict in distribution channels
- (ii) Sources and consequences of interorganisational conflict in marketing channels
- (iii) Conflict management mechanisms in vertical marketing systems

1.4.2.1 The Nature of Conflict in Distribution Channels

Brown and Day (1981) state that to control conflict, channel members should strive to control it by monitoring it and measuring its impact on channel performance.

Instruments for measuring this channel conflict have not been fully developed. The authors summarise such previous studies of conflict which have used a wide variety of research designs and empirical and theoretical settings as follows. Rosenberg and Stern (1971); Foster and Shuptrine (1974); Kelly and Peters (1977); and Etgar (1979) investigated the nature of distribution channel conflict. The relationship between channel conflict and other important constructs such as channel member satisfaction, channel performance and power was examined by Rosenberg and Stern (1971); Pearson (1973); Lusch (1976b); and Brown and Frazier (1978). In terms of the measurement of channel conflict both Rosenberg and Stern (1971) and Lusch (1976a), for example, found that channel conflict can be measured and that, as conceptually postulated, that vertical conflict in marketing channels is a pervasive phenomenon, particularly in channels which demonstrate high interdependence between members.

In their study of the franchised distribution channel for new automobiles, Brown and Day (1981) build on these previous contributions to the measurement of channel conflict to develop and test an approach to testing conflict which has reached the overt or

manifest stage. This type of conflict arises when the parties go beyond the cognitive and affective states (perceived and felt conflict) and engage in behaviours to overcome it. These behaviours take place when one channel member is seen as frustrating the other channel member's attempts to reach their goals and manifest themselves in mild disagreements to violent actions. This type of conflict is included in their conflict process as the last stage before the outcome or aftermath of the conflict is known.

According to Brown and Day (1981) conflict is dynamic and like products and institutions follow a distinct life cycle, each progression through the process is referred to in the literature as a conflict episode. The extent that a conflict episode is not completely resolved forms the basis for future conflict episodes. Conflict as a process progresses from a latent state of incompatibility to perceived conflict to affective conflict to manifest conflict to outcomes or aftermath.

A limited amount of work has focused on channel conflict and performance, an important aspect of channel relations (Perry, 1991). The current state of knowledge Perry states is that the relationship between channel conflict and performance is not "general" across all types of channel systems. Therefore, Perry has proposed a revised model of the relationship between channel conflict and performance which suggests an indirect relationship between channel conflict and performance. This indirect relationship is mediated through variables which interact with conflict and lead to stronger performance results, e.g. a channel member's level of involvement in implementing a decision response and the level of compliance with a decision response.

Despite the development of this model, the nature of the relationship between conflict and performance in channels still remains unresolved. Although the model offers conceptual guidelines, Perry states that further empirical research is needed to accurately depict the relationship between these concepts.

Conflict is an inherent behavioural dimension in all social systems which can arise when the achievement of the goals of one organisation is impeded by another. This concept is clearly associated with power, which will be discussed at a later stage. Conflict may be less in highly dependent relationships as the dependent party accepts that it cannot alter the situation, therefore accepting the power of the channel leader. Own brand suppliers often occupy this position of dependency vis-à-vis the retailer (Hogarth-Scott and Parkinson, 1993).

1.4.2.2 Causes of Conflict

The amount of conflict in marketing channels is to a great extent, a function of goal incompatibility, domain dissensus and differing perceptions among channel members (Rosenberg and Stern, 1971; Etgar, 1979; Reve and Stern, 1979). Goal incompatibility is a direct result of a channel member having a set of goals and objectives that are very often incompatible with those of other channel members. Underlying most sources of goal incompatibility are differences in goals, aims or values. Domain dissensus is essentially a term which refers to disagreement that arises between channel members when their respective "territorial" roles are disturbed. For example, conflict may arise over who has the right to represent a product within a given territory or similarly when distributors and dealers are bypassed via direct selling.

In a study of the franchised distribution network of a large industrial installations manufacturer, Eliashberg and Michie (1984) found very different sets of goals for the franchiser and his franchisees. In the marketing of packaged groceries there are thousands of small retailers served by manufacturers, i.e. independents. Large manufacturers tend to be growth oriented, whereas small retailers are more interested in maintaining the "status quo". The likelihood of conflict is high in such situations because in pursuit of their dynamic goals, including increased market share, the former will probably adopt innovative programs that contradict the more static orientation of the latter. During the 1980's, goal incompatibility and the subsequent conflict that arose caused Coke to re-evaluate its entire bottler strategy when the main aim of the parent

company, to sell as much syrup as possible, clashed with that of the bottler who was more interested in increasing profitability than in volume (Bernstein, 1981).

Another example of a potentially conflicting issue in retailing is that of shelf space. The retailer looks for the maximum return on space and contribution to overall retailer image. The supplier, however, seeks maximum shelf space as trial for new products and preference over competitors. Both sets of players have different, even conflicting goals, therefore it is easy to see where a potential conflict episode lies (Hogarth-Scott and Parkinson, 1993).

Changes in the positions or poorly defined positions within the marketing channel may precipitate conflict among channel members (Bowersox et al, 1980), which is a situation referred to as domain dissensus in the channels literature. Often a position may be clearly specified but the expected behaviour of the firm filling that position may not. A lack of agreement concerning domain overlap occurs when two or more firms claim they carry out the same function. Four main elements comprise channel domain (Stern and El-Ansary, 1988), namely, the population to be served; the territory to be covered; the functions or duties to be performed and the technology to be applied in marketing.

Frustration over issues of domain are often present in channels of dual distribution. Brown and Fern (1992) studied conflict in channels of dual distribution, i.e. the use of multiple marketing channels to reach target markets, and found that the nature of channel conflict was found to be different between single and dual distribution systems although no evidence was found to support the differences in the mean levels of conflict found. The study did find that structures of dual distribution exacerbate channel conflict, while single channel structures contain it in a more effective manner. Thus, the type of conflict which was found to be most applicable in their study was dissatisfaction or dissensus concerning their respective domains, with friction arising over individuals' responsibilities for serving particular markets.

Conflict can occur when perceptions of the real facts differ resulting in varied perceptions as a result of each channel member bringing a different background and prejudices to the relationship. Consequently behaviours stemming from these perceptions are likely to produce frustration and conflict. This type of conflict is again particularly relevant in channels of dual distribution, especially those that include a vertically integrated channel (Brown and Fern, 1992). These authors give an example whereby independent dealers and distributors sometimes perceive suppliers to shower their own channels with benefits such as low prices, advantageous product allocation and higher quality support services. Frustration would arise in these situations where these independent intermediaries fear that suppliers will gradually shift business away from these channels to their own.

Stern and Gorman (1969) originally stated that there were seven possible causes of conflict and added role incongruities, communication breakdown, ideological differences and resource scarcities to those listed above.

Although conflict management mechanisms were established as another main area of research pertaining to the issue of channel conflict, these will be discussed in the following chapter. The final section of this chapter will briefly outline the relationship between power and conflict in marketing channels.

1.4.3 The Relationship Between Power and Conflict

Due to the fact that power and conflict are considered to be functions of the interdependence between organisations in a marketing channel both constructs should be directly interrelated (Emerson, 1962). Therefore, studies of the relationship between power and conflict may be considered another important area of interorganisational channel research.

Power and conflict in channel relationships have close ties. Both concepts arise from mutual dependence in a channel system, an indication of their similarities.

Palamountain (1955) gives a clear link in the relationship between power and conflict, which is illustrated by the following:

"It is apparent that a principal factor differentiating vertical conflict from horizontal and intertype conflict is that it is so directly a power conflict. Power relationships among horizontal competitors occasionally are significant, but this power is narrowly limited...The latter type of competition (intertype) is almost devoid of power relationships...In the plane of vertical conflict, however, power relationships are direct, obvious and important to the extent that the market is imperfect" (p.51-52).

Therefore, to summarise, utilisation of power in the marketing channel may actually precipitate conflict episodes. Little empirical work in this area has been carried out, however, those studies undertaken do provide some useful results. Stern et al (1973) found, in a laboratory study, that when referent and expert power are used, conflict is lowest, whereas, it is highest in the presence of reward and coercive sources of power.

Raven and Kruglanski (1970) put forward theoretical arguments relating conflict and power with which these results are consistent, that is to say that coercive power tends to provoke increased conflict in the channel. In a later study, Rosenberg and Stern (1971) found that the greater one member's dissatisfaction with another's performance, the higher the conflict between them.

Hunt and Nevin's (1974) results, as discussed previously, provide the basis for Lusch (1976b) to further establish that coercive power sources are more likely to evoke more conflict than their non-coercive counterparts. Gaski (1984) states that Lusch (1976a) was the first to explicitly incorporate conflict into the analysis of channel power, he then went on to provide modest evidence to suggest that channel conflict tends to reduce dealer operating performance, specifically return on assets and return on asset turnover. Etgar (1976b) found the opposite to be true of administratively co-ordinated channels, as opposed to non-co-ordinated systems, where operational efficiency of the former could be attributed to the existence of power in the channel. As was stated earlier, Lusch (1977) reproduced the results of the Hunt and Nevin (1974) study, i.e. franchiser power is a function of the sources of power available and franchisee satisfaction is more when

non coercive sources of power were operationalised. Etgar (1978) found reward and coercive power sources to be positively related to channel power, a proposition which Brown and Frazier (1978) contest as they found an interrelationship between manufacturer power and certain power sources, specifically reward, coercive and legal, indicating that the more manufacturer power is perceived by dealers, the less those power sources need to be used. Wilkinson and Kipnis (1978) found a wide variety of business organisations less likely to use coercive sources of power and more likely to use non-coercive sources as target influences as the most influential.

In the period after the Reve and Stern (1979) summary of studies of power and conflict, Gaski (1984) developed an overview of the status of theory on power and conflict in marketing channels, earlier studies reviewed by Reve and Stern are examined in addition to those emerging in the early 1980s. Dwyer's (1980) experimental results demonstrated that a channel member's satisfaction was strongly correlated with its perception of a channel partner's co-operativeness. Co-operation is accepted as the reciprocal of conflict which can be construed as further evidence that an inverse relationship exists between conflict and satisfaction. Ross and Lusch (1982) confirm this concept that conflict and co-operation have common roots as was first proposed by Schmermerhorn (1975), in a study of brokers and wholesalers who trade with each other in the US grocery trade, where clearly specified domains and congruent perceptions of reality exist, higher levels of co-operation prevail. Both Phillips (1981) and Wilkinson (1981) report the same essential relationships as Etgar (1976b), Hunt and Nevin (1974) and Lusch (1976a) respectively. Phillips reports a positive association between wholesaler dependence on suppliers and supplier power over the wholesaler. Lusch and Brown (1982) found an inverse relationship between non-coercive power sources and power.

The reporting on the broad base of research on these interrelated concepts according to Gaski (1984) "*contributes to a much needed process of refinement by which channel*

conflict and power arrives at a mature stage of development" (p.27). Literature in this area, however, has been scarce since the time of writing of this article.

Ong et al (1990), however, further explore the power/conflict relationship in a study of petroleum retailing in Western Australia building on an earlier study by Guilhaus (1980), who in the context of a similar background found that the use of non-coercive power sources explained significantly more the level of intra-channel conflict than the implicit use of coercive power. His finding is focal to Ong et al's (1990) study which also explores the relationships between the various sources of power and their effects on the perceived level of conflict in Western Australian petrol retailing.

1.5 CONCLUSION

This chapter has given an historical account of the traditional base of literature which exists in the field of marketing channels, an area which provides a broad basis for the understanding of channel relationships and the underlying behavioural concepts which govern them.

Three types of behaviour were found to be typically observed within channel relationships, namely dependency, power and conflict. Firms were found to be dependent on each other to fulfil mutual goals and objectives. Such interdependency, however, was found to be unevenly balanced in many channel relationships which ultimately gives rise to power relations emerging within the channel. Thus, central to channel relationships is power, another important behavioural dimension which was found to have five main sources as provided by psychologists French and Raven (1959), a taxonomy which has since been expanded by subsequent academics. Power was defined as *"the ability to control the decision variables of another channel member in a given channel at a different level of distribution"* (El-Ansary and Stern, 1972, p.47).

Studies of power and its associated bases have attracted much empirical attention in this field, the findings from which generally concluded that coercive sources of power were

positively related to intrachannel conflict, whereas the opposite was true with non-coercive sources. Conflict, thus arises as a result of the imbalance of power which can arise as a result of goal incompatibility. Conflict, it was found, is generally harmful to the channel, but instances do exist where it can be seen as beneficial. Studies of conflict examined the nature of the concept and its causes and subsequent effects on marketing channels.

Power and conflict, as functions of interdependence between organisations should essentially be viewed as interrelated. Thus, the final section of this chapter examined the link between the two concepts in the channel environment, although this area has been subject to a lesser degree of empirical work compared to their examination in isolation as concepts in their own right. Studies generally concluded that non-coercive sources of power were more likely to prevent conflict than their coercive counterparts.

Co-operation, another important behavioural dimension in the channel environment is now developed in the following chapter, essentially as a tool or mechanism to prevent conflicting channel relationships and nurture stability between channel members to the benefit of the channel as a whole.

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CHAPTER 2

MANAGING CONFLICT - CO-OPERATIVE BEHAVIOUR IN CHANNEL RELATIONSHIPS

2.1 INTRODUCTION

The purpose of this second chapter is to examine the way in which conflict is managed in channel situations and how co-operation, another important behavioural phenomenon present in marketing channels, is achieved and maintained. The focus of this theme reflects the need for a change in outlook towards channel relationships as they have moved from one-off "arms-length" transactions to fully integrated value-added partnerships in some instances (Webster, 1992). Consequently, literature in the area of industrial buying behaviour is discussed as Sanghavi (1993) believes this type of literature is of relevance to the area of buyer-seller relationships in the current retail environment.

In addition, the changing role of marketing is addressed in this chapter as changes in this field have been necessary in order to reflect the emphasis on building and maintaining channel relationships. This is achieved through a brief overview of relationship marketing literature and the changing role of marketing.

2.2 CO-OPERATION IN CHANNEL RELATIONSHIPS

The final type of behaviour which Bowersox et al (1980) identified as being observable in the marketing channel is co-operation which is seen as necessary and vital for firms to perform duties and fulfil their roles successfully. Deutsch (1949) defined co-operation as a scenario whereby the individuals comprising a group are "*pursuing promotably interdependent goals*" (p.150). In channel situations, Robicheaux and El-Ansary (1976) defined this phenomenon as "*a state or condition characterised by members'*

willingness to co-ordinate their activities in an effort to help all channel members achieve superordinate goals" (p.22).

Co-operation is inherent in channels and arises from the existence of interdependency between channel members. Lusch and Ross (1982) draw attention to the fact that co-operation has received less attention in intrachannel studies, the only reported empirical example being that of Pearson (1971) in an unpublished PhD thesis. With interdependence being antecedents of both co-operation and conflict, they state that knowledge of ways to manage conflict and co-operation in channel settings has significant managerial impact as it ultimately affects the channel's ability to function effectively.

As there has been no reported research examining the effect of different causes of conflict on the levels of conflict and of co-operation in a channel, Lusch and Ross (1982) examined the relationship between two causes of conflict, namely domain dissensus and perceptual incongruity and the levels of conflict and co-operation within a marketing channel dyad. Their results found that while there was no significant relationship between either of these types of conflict and the level of conflict in the dyad, a significant negative relationship was found between both types of conflict and the level of co-operation which prevailed, that is to say, clearly specified domains and congruent perceptions of reality are associated with higher levels of co-operation. They concluded from these findings that, managerially, there is a need for concentrated attention to establishing mutually agreed domains in addition to congruent perceptions of reality. Stern and Heskett (1969) suggested that a bargaining process enhanced by the presence of an agreed power structure results in the successful accomplishment of these functions. Power structures of this nature, however, will be discussed at a later stage in the chapter.

Co-operation among channel members is far more prevalent than any other behavioural pattern (Bowersox et al, 1980). A minimal degree of co-operation is required for any

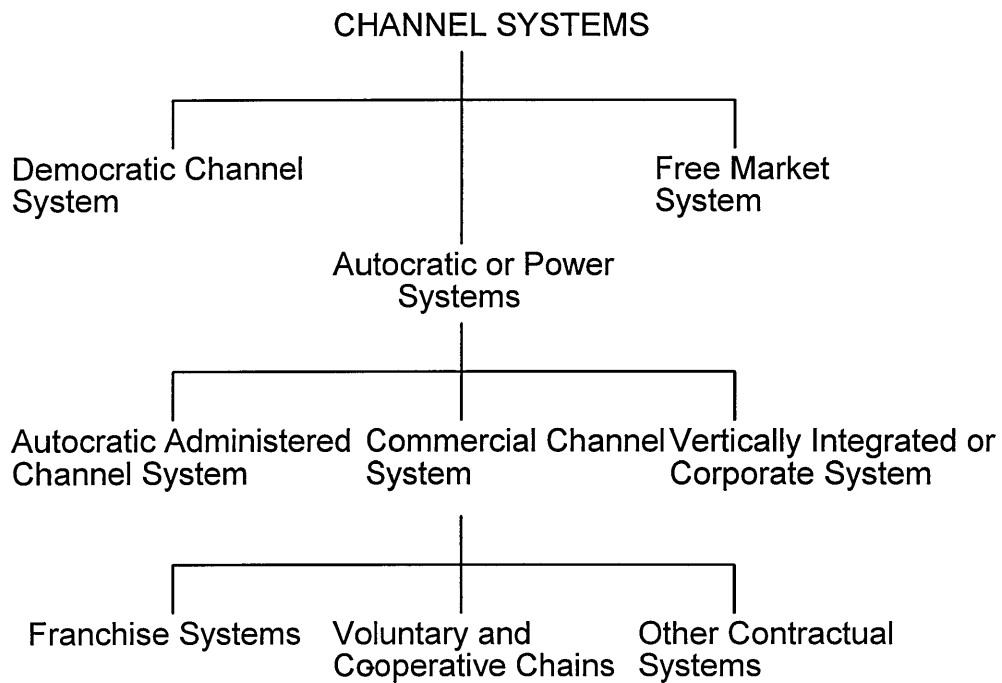
relationship and the greater the co-operation the more likely higher levels of trust and mutuality will prevail. Channel members face a basic trade-off between the effort required to create a collaborative relationship and the potential returns from that effort. In terms of co-operative behaviour, two fundamental human drives exert opposite forces on an individual (Alderson, 1969). These are monostasy and systasy. The former is the desire to be independent and the latter the drive to stand together, an urge which arises from the realisation that more can be accomplished by working together than as individuals.

When systasy predominates, co-operation results, whereas conflict can be expected when monostasy is predominant. The drive for systasy typically outweighs monostasy due to recognition that the welfare of all parties is enhanced and superordinate goals can be accomplished in its presence.

2.3 EFFECTIVE CONFLICT MANAGEMENT

Mallen (1978) identifies three distinctive ways in which the channel can adjust to a conflicting environment which is necessary as when sufficient levels of conflict prevail the channel could disintegrate or operate inefficiently resulting in, for example, poor financial performance for channel members and higher costs or lower service levels for consumers. Whereas power and conflict discussions were previously "*limited to valueless topics*" (p.195), Mallen examines ethical-social issues, such as the fairness and the benefits to society these constructs bring. He provides the following generic chart of categories of channel systems represented by Figure 2.1:

Figure 2.1: The Categories of Channel Systems



Source: Mallen, B., (1978), p.195.

Problems may be solved automatically through the operation of the free market.

Alternatively, a system can be operated whereby members co-operate, creating a true democratic joint relationship. In this situation there may be a channel leader/captain but this organisation has no power to superimpose its wishes on the channel as a whole. It assumes that buyers and sellers are of reasonable size and have adequate resources to offset each others power potential. Ray (1994) provides a good illustration of this in the UK food industry where there is a relatively high concentration in both retailing and processing with five or less firms dominate the purchase of farm products in many product categories.

On the other side, supply is fragmented among hundreds of co-operatives and tens of thousands of farmers. In these channels, the "captains" possess superior information about the nature of final demand. As leaders they can exact payment from channel

followers (farmers) in the form of enhanced revenues, but as captains they also have the costs of leadership, whilst followers have the costs of conforming to this leadership.

Finally, a system can be operated whereby the leader forces members to co-operate through a centrally controlled power relationship. Power still exists and can be used if necessary, even though the management style appears to be democratic. Centrally controlled power systems are sub-divided into: administered systems; vertically integrated systems and contractual systems, which will be discussed at a later stage in the chapter.

2.3.1 The Resolution of Conflicting Situations

Most types of co-operative behaviour involve the utilisation of power or leadership to return the system to equilibrium. Channel members draw upon their reserve of power resources to solve problems, persuade and bargain in order to resolve a conflict episode and continue normal system functioning, and as such are dynamic and constantly subject to change. The means by which channel members attempt to dominate or reach the system's activities are nothing more than methods by which co-operation is enforced. Such actions resulting in system equilibrium are illustrated by the following example whereby new channel systems emerge in response to the emergence of new retailing and wholesaling institutions.

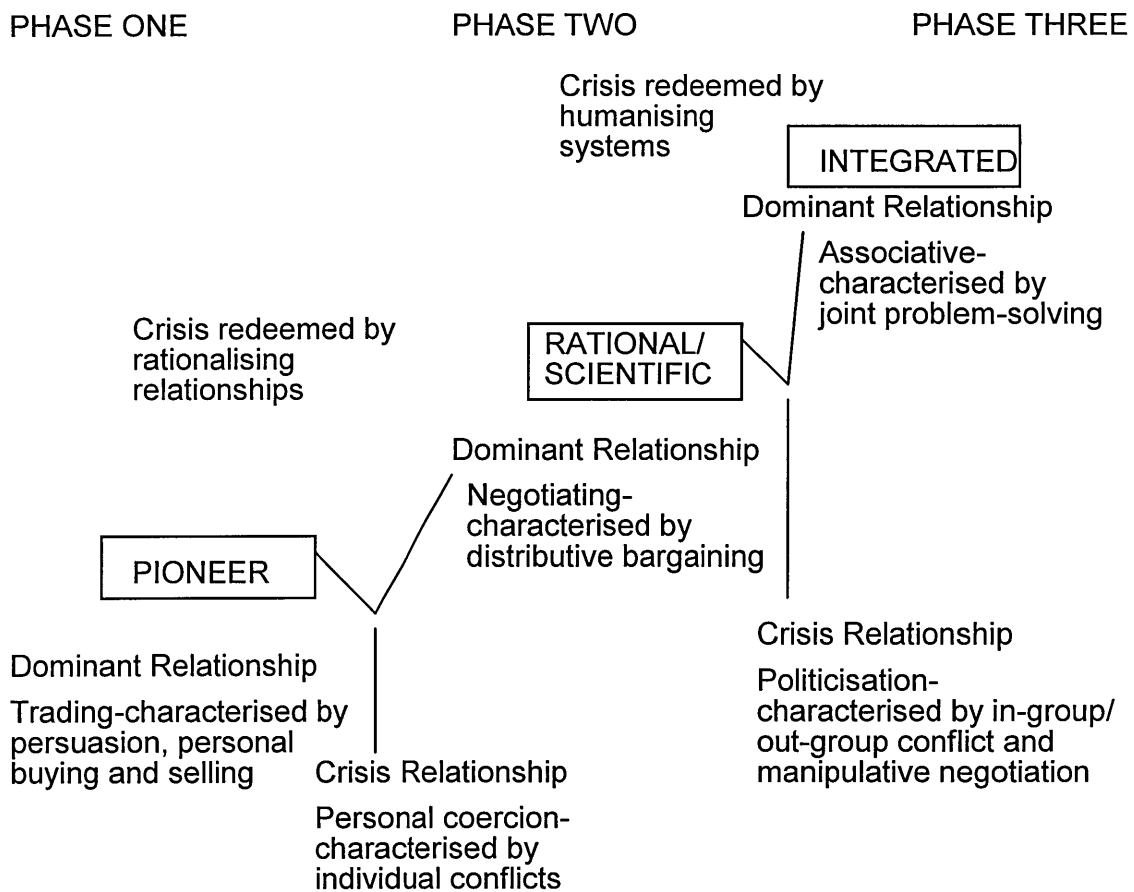
Fink et al (1971) developed an action-reaction synthesis model to explain the actions taken by members of the channel in response to any change agent which could alter the equilibrium within either vertical or horizontal relationships. The resolution of crisis occurs in a five step sequence of shock, defensive retreat, acknowledgement, adaptation and change.

If the example of the innovation of hypermarkets is taken, this represents a shock to the status quo of channel relationships. Members likely to be affected negatively by the innovation adopt a defensive retreat position invariably trying to secure government

intervention to minimise the spread of perceived threat (Dawson, 1976b,1977; Burt, 1985). Once acknowledgement is recognised and suppliers push their products to the leaders of the innovation, then it follows that affected members build their own hypermarkets. The change is now fully accepted and equilibrium in channel relationships is realised.

Carlisle and Parker (1989) propose a three phase model of the distributor and supplier at a micro level to illustrate the changing form and character of manufacturer-retailer relationships in the marketing channel which highlights this idea of resolving a conflicting situation. Progress is made in the following model through a series of crises and their subsequent resolution in the usual sequence of: shock, defensive retreat, acknowledgement, adaptation and change (Fink et al, 1971). This model is represented digramatically by the following diagram, Figure 2.2.

Figure 2.2: Phases in the Changing Nature of Retailer-Manufacturer Relationships



Source: Carlisle, J.A., and Parker, R.C., (1989), p.22.

Phase one the "pioneer" stage, is purely a trading relationship, similar to Stage 1 in Webster's (1992) model of the changing nature of marketing in organisations, as was discussed in the previous chapter. From the buyer's viewpoint, the supplier is one of many and vice versa and they play suppliers off against each other and vice versa.

When the buyer or supplier gains a dominant position, thus gaining an enhanced negotiating stance, the phase ends. A supplier may become the more dominant partner through controlling a leading brand or a buyer may become more dominant by controlling a large share of the market.

The second phase is one of negotiation whereby both buyer and supplier are seeking to negotiate improvements in their power positions. Similarities can be drawn between this phase and Stages 3 and to a lesser extent 4 in Webster's (1992) range of marketing

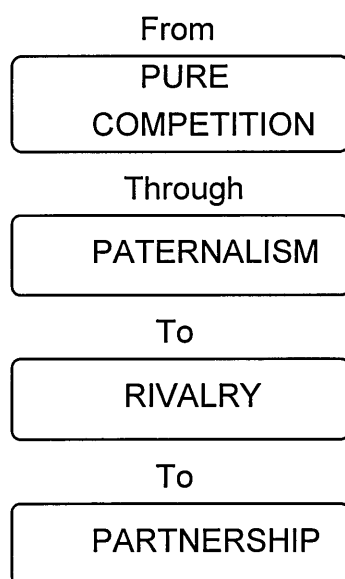
relationships as discussed in the previous chapter. Changes in power and dependency relationships take place as negotiations are undertaken. In this "rational-scientific" phase, information is used as a superior tool in the negotiations which ultimately affects the power relationship.

The "integrated" phase sees joint activities and ventures taking place. Both buyers and suppliers who aim to manage the supply chain are seeking mutual benefits as a result of their negotiations. Power is no longer a tool used to resolve negotiation between buyer and supplier, but instead is used externally to the marketing system to enhance their competitive positions and also internally to ensure and optimise efficiency and effectiveness of the total supply chain. This final phase is again reflected in Webster's continuum of marketing relationships as Stages 4 and 5.

2.3.2 An Industry View of Changing Relationships

It has been widely agreed, by a number of academics, that in the UK there has been an increase in retailers' power vis-à-vis manufacturers and others in the supply chain (see for example Davies et al, 1985, 1986; Wrigley, 1987). This power, often described as "retailer tyranny", is an important feature of grocery supply and distribution in the UK (Duke, 1989). To sum up the changing manufacturer-retailer relationship, and the underlying shift in the balance of power which is at the heart of such relationships, the following analysis provided by Stout (1990) from an industrial standpoint is a useful starting point. The relationship between manufacturer and retailer, as discussed by Professor Stout, in his position as Head of Economics at Unilever, has gone through three distinct yet overlapping stages and has now entered a fourth, as is demonstrated by Figure 2.3.

Figure 2.3: The Evolutionary Stages in the Manufacturer-Retailer Relationship



Source: Adapted from Stout, D., (1990).

In this model, Stout (1990) proposes the first phase "pure competition" whereby producers brought goods to a single local market place, set up their stalls and announced their prices. A multitude of buyers, e.g. butchers and greengrocers, would face a multitude of sellers for the purchase of homogeneous products, e.g. bacon and potatoes. "Paternalism" soon displaced this phase which witnessed manufacturers taking control of branding and advertising, by-passing the retailer and selling directly to the consumer. Stout (1990) links this second phase to the early history of his company where William Lever was the first to guarantee his soap, by wrapping it, branding it "Sunlight" and advertising it before selling to the retailer. Relationships between both parties were changed completely by this type of national advertising rendering retailers little more than paid agents of manufacturers.

In the period after the Second World War retailers grew from small family run businesses into large national, even international public companies, sowing the seeds for a period of countervailing power and concentration which began in the mid-1960s. Grant (1987) endorses Stout's analysis by citing various reasons to explain the pre-

eminent position manufacturers enjoyed in distribution channels until the mid-1960s. Until this time manufacturers were responsible for product innovation and development, setting retail prices, advertising, stocking and display of products and physical distribution of goods to both wholesalers and retailers.

With the rise of the multiple retailers and their increased store size, specialists were soon edged out of the market. In this unstable and adversarial phase, multiple retailers started to struggle with manufacturers for parts of the value added chain as a result of their increased buying power. Increasing rivalry among both parties began in the 1960s lasting for around 20 years and has laterally given way to a partnership approach, more associative in nature (Dawson and Shaw, 1990), as manufacturers and retailers began to realise they both had complementary contributions to make to the value-added chain. The fourth phase in Stout's analysis "partnership" is already well underway in the UK, even though it is a little less developed throughout parts of Europe

The retail climate today in the developed retail markets of northern Europe has changed dramatically especially in the UK, the Netherlands, Germany and France. For some time in the European grocery market manufacturers were considerably larger and more powerful than their counterparts in retailing. However, this situation has changed markedly as the power position they once had over retailers has been consistently eroded as they face fewer and more knowledgeable customers who not only demand the best terms, but are becoming increasingly selective about the products they are willing to stock.

The development of associative relationships, as is becoming the way forward in the UK according to Dawson and Shaw (1990), would require a dramatic change in the attitudes among retailers in countries such as Germany and France.

For example, Martenson (1992) found that French manufacturers demanded considerably more information than retailers were prepared to share with them. The

type of information manufacturers required included scanning sales data, shelf facings per product, information on strategies and positioning of the company, number of store visits, how store space was allocated and at what price products were purchased. The only information retailers were prepared to share with suppliers, however, was limited to turnover, inventory turn, relative importance of different products in a category and the percentage of stock in the sales area.

In the same way, the Germans can be seen to display antagonistic relations towards their suppliers. Martenson (1992) again cites an example whereby Tengelmann, the third largest retailer in Germany, refused to sell Pepsi-Cola in its 3892 stores throughout Germany as a result of a Pizza Hut joint venture where Pepsi wanted to buy the retailer out. The ban was in danger of spreading to Tengelmann's stores in Austria, Italy and the Netherlands, in addition to its US interest the, A&P chain of stores. Pepsi, therefore, would have been severely disadvantaged if the ban had gone ahead in terms of losing market share in a number of countries in continental Europe.

In the Netherlands, however, a more passive relationship has emerged between retailers and their suppliers. In common with their counterparts in the UK, Dutch grocery retailers have been eager to establish relatively stable and amicable relations with food manufacturers, a characteristic which is also evident in the Swedish grocery market .

It is clear from examples such as those cited above that the balance of power has clearly swung towards the retailer in recent years, not only in the UK, as retailers on the continent of Europe are beginning to assume more control for responsibility of the supply chain. This trend is likely to continue throughout Europe, although at different rates (Wileman, 1992). Crucial to long-term success in the grocery industry, however, will be the establishment of partnerships between supply chain participants in order to drive down unwanted stock and costs, whilst continuously improving service to the end consumer. This notion of collaborative relationships is summarised in the following

quotation by Drayer (1992) of Procter and Gamble, speaking at an international conference:

"Experience has taught us that recognition of interdependence, good communication and the elimination of mistrust and arrogance between manufacturer, wholesaler and retailer is absolutely crucial to mutual success".

Thus, the next logical development in supply chain relationships will be the American "Quick Response" system, built on the premise that companies in the supply chain establish a partnership based on trust and sharing of information to the benefit of the supply chain as a whole.

Much has been written by academics (Hellberg and Engh, 1990; Matthysons and Van den Bulle, 1994; Ganesan, 1994), consultants (Walker, 1991; Hollis and Vadenboncoeur, 1993) and industry practitioners (Whiteoak, 1993; Machell, 1993) on the concept of partnershiping and associative relationships which is of direct relevance to the fast moving consumer goods industry. Furthermore, a corresponding body of literature has emerged with specific reference to the purchasing function in the development of partnering relationships (see for example Bessant et al, 1994; Macbeth, 1994; and Gadde and Hakansson, 1994). While the aforementioned authors generally conclude that business relationships should not simply be viewed as an exchange of goods for payment, but as ***"managing the relationship to deliver both short-term operational and medium to long-term strategic benefits"*** (Macbeth, 1994, p.25), it must be borne in mind that this body of literature is more applicable to industrial sectors, drawing on analogies from, for example, the car industry.

Consequently, throughout the 1990s the partnershiping issue has become the subject of intense debate at many industry conferences and seminars. The underlying aim of partnershiping is to allow manufacturers and retailers alike to be able to achieve supply chain efficiencies achieved largely by managing the whole supply chain in an integrated and more cost efficient manner.

It appears to be theoretically possible to assume that the concept of quick response partnershiping will be the next logical development in supply chain relationships, but the real issue is the translation of such a theory into a practical application at an industry level throughout Europe.

Cottrell (1993) speaking at an IGD conference was quoted as saying that the idea of a partnership, where the relationship changes for the better for all parties concerned, is fictitious. Similarly, Harland (1994), speaking at an ILDM conference is sceptical about the validity of the concept, stating that what really exists is not a partnership, but a dependency, a relationship in which one party is reliant on the other for goods in return for a price and nothing more. This idea would seem to correspond with the notion of one-off transaction based relationships which once prevailed, as was discussed in the first chapter.

Harland (1994) also goes on to claim that where there is tension between buyer and seller, the performance of businesses is enhanced, thus benefiting society as a whole. A partnership, however, is generally characterised by reduced levels of conflict and tension, concepts which he believes to result in the emergence of innovation, lower costs and the search for new opportunities. This point was discussed in Chapter 1, where a number of academics, e.g. Rosenbloom, (1973), cited conflict as being functional in channel situations, with the channel becoming passive, non-innovative and non-viable in the long run in its absence.

Whiteoak (1993) is more optimistic about the overall concept of partnerships stating that there is an increasing willingness to work together by channel members, but a number of factors must first be considered in order to facilitate its existence in terms of, for example, the sharing of forecast information to permit accurate production planning. However, to embrace the concept properly would involve breaking down the remaining attitudes, prejudices and corporate cultures, and exposing hidden agendas prior to the

realisation of the full range of possibilities which might emerge from the development of associative relationships.

2.3.3 Formalising the Locus of Power

Organisations often desire to formalise their marketing channel relationships by using contractual agreements to co-ordinate their activities as they have recognised the importance of others to their success, whilst unwilling to have their behaviour determined by the behaviour of others in the channel (Kasulis and Spekman, 1980).

Prior to a discussion of these formalised relationships and to gain a better understanding of the nature of channel relationships, McKinnon (1989) suggests an examination of the distribution of bargaining power among the various channel members must first be undertaken. He identifies three types of relationship, namely consensus, contractual and commanded.

Where power is distributed evenly, a factor which can often be observed in trades consisting of many small producers and intermediaries, consensus channels emerge where the various agencies work together to their mutual benefit. Agencies remain independent in these channels and are free of contractual obligations to other members of the channel. Co-operation only exists because it is in their best interests to engage in such behaviour. This is similar to the democratic channel relationship proposed by Mallen (1978) and discussed in section 2.3.

More formal contractual links have been forged between different agencies in the channel which result in more co-ordinated approach to distribution activities, pertinent examples of contractual channels in the UK are wholesaler-sponsored voluntary groups which have emerged as a result of the increasing competition from multiple retailers. Wholesalers and retailers alike are members of these groups but remain financially independent. However, agreements are made concerning various conditions that benefit the group as a whole, e.g. retailers agree to purchase the bulk of their supplies from a

group wholesaler in return for benefits such as advertising support, lower prices and even financial advice.

Finally, commanded channels are those which are dominated by large firms whose phenomenal buying power allows them to exert a greater degree of control over other channel members. Before the Second World War, such channels existed in industries in the UK where production was concentrated in the hands of few very large firms. The proliferation of the multiple retailing concept since then has allowed retail organisations to countervail the influence of these powerful manufacturers, ultimately resulting in their ability to dictate the nature of the distribution operation and the style and quality of the merchandise, the latter point being pertinent to retailers' own label products.

Carlisle and Parker (1989) claim that there is empirical evidence to suggest that the first move in this process is towards either manufacturer or retailer domination, then subsequently shifting its focus to a more associative form of relationship in which relations are more stable, supportive and mutually beneficial. Such a belief was also confirmed by an industry practitioner, Stout (1990) in section 2.3.2. Carlisle and Parker also highlight the fact that there is a full spectrum of relationships in the marketing channel which run from entirely transactional, where each individual relationship is complete in itself with both parties undertaking a market transaction, to the entirely integrated where the relationship is internalised within a single organisation, a belief which was further endorsed by Webster (1992) in his continuum of marketing relationships discussed in the previous chapter.

2.3.4 Types of Channel Relationship

The traditional taxonomy of channel relationships commonly found in the classical marketing texts, tend to be derived from the work of McCammon (1970) and comprise conventional, administered and corporate relationships. It is generally agreed that the transactional, individual relationships of the "conventional" nature are less relevant to the developed world than was the case when McCammon wrote about them over two

decades ago. Similarly, the corporate relationship, which is a fully integrated vertical relationship internalised within the company, has not been significant in the grocery sector among multiple retailers. Instead, retailers have tended to favour the formation of strategic alliances with, for example, food manufacturers drawing on their expertise to develop and modify own label products, in addition to ventures with third party distribution specialists to manage the warehousing and transport of grocery products, thus allowing retailers to concentrate on their core competencies. In the co-operative sector, however, the situation is very different whereby this form of organisation controls successive stages in the supply chain, namely, manufacturing, wholesaling and retailing of food products. Such a level of control may appear to have been damaging to this form of retailing as Hutton and Vis (1993) state that the future of this movement throughout the UK is uncertain and the downward trend in performance seems likely to prevail in the future.

In recent years there has been a move away from these extreme positions, i.e. transactional and corporate relationships, to administered and contractual types of relationships which lie somewhere between these two positions. The contractual system is a formalised co-operative relationship which has gained importance through buying and franchising agreements, while administered systems have resulted in retailers taking the key role in co-ordinating activity in managing channel relationships (Dawson and Shaw, 1989). These intermediate positions will now be discussed in more detail.

2.3.5 The Growth of Vertical Marketing Systems (VMS's)

One of the most significant developments in marketing channels is the evolution of vertical marketing systems (VMS's) which have emerged to challenge conventional marketing channels. McCammon (1970) first contrasted the conventional concept of channel arrangements with vertical marketing systems and found two major benefits associated with the latter, namely a greater co-ordination of marketing efforts and a greater capacity to take advantage of economies of scale.

Traditionally, conventional channel relationships tended to be towards the transactional end of the spectrum referred to by Webster (1992) and discussed in the previous chapter. These channels usually consist of an independent producer, a wholesaler and a retailer each of which is an independent business entity seeking to maximise its own profits. Their motivation is purely profit driven, even if it is at the expense of maximising the profits of the system as a whole. A traditionally defined set of marketing functions is performed by each member where no one channel member has influence or control over other channel members, with little concern shown for other members in the channel. Thus, a lack of loyalty among members in the channel prevails.

Conventional channels of distribution, however, are disappearing, with the increasing formation of retailer buying groups, wholesaler-led voluntary chains, franchising and other hybrid arrangements (Powell, 1987; Burt, 1989; Shaw et al, 1994). Although highly co-ordinated VMS's are replacing conventional channel systems, Urban (1989) states that few guidelines exist for marketers wishing to alter existing channel systems to improve efficiency or effectiveness of channel outputs.

Conventional marketing channels are relatively unstable, seldom achieving the efficiency or effectiveness of the VMS. They do, however, have the ability to meet rapidly the changing needs of the marketplace as the informality of any agreements made render it easy for firms to enter and exit from the channel as they wish. VMS's, in complete contrast, consist of the producer, wholesaler and retailer acting as a unified system. In these systems one channel member owns the others or franchises them or possesses so much power that all channel members have no option but to co-operate. Centralised power within the system provides for channel leadership. VMS's came into being to control channel behaviour and eliminate the conflict that often arises as a result of independent channel members pursuing their own goals and objectives. In the previous chapter a study by Etgar (1976a) found that administratively co-ordinated channels produced superior operational efficiency as opposed to a non-co-ordinated

system, which can additionally be interpreted as power having a positive effect on channel performance in the context of this study.

Channel co-ordination is achieved by three main types of vertical marketing system, administered, contractual and corporate which can be dominated by the producer, the wholesaler or the retailer and have become the dominant mode of distribution in consumer marketing. These different types of system governing channel co-ordination will now be discussed in turn.

2.3.5.1 Administered VMS's

This type of channel system witnesses the co-ordination of marketing activities through programs developed by one or a limited number of firms. Individual members generally pursue individual goals and have no formal organisation structure to hold them together. Informal collaboration, however, does take place on goals they do happen to share. The channel members are willing, on an ad hoc basis, to share the marketing channel tasks, even though they are independently owned. Commitment is self-oriented, but some degree of system wide orientation exists (Warren, 1972). Dawson and Shaw (1989) highlight this fact in their survey of 42 British retailers and their suppliers in four product categories which found that commitment to the relationship was considerable with examples given of retailers providing loan finance for investment programmes by suppliers and education in new production technologies.

One of the most innovative approaches to developing administered systems according to Stern et al (1989), is the emergence of programmed merchandising agreements whereby suppliers and retailers formulate specialised merchandising plans to market the supplier's product line. For example, in the USA Campbell Soup Company, who possess a strong brand franchise, are able to command unusual co-operation from their re-sellers in connection with displays, shelf-space, promotions and pricing policies (Kotler, 1991). To develop effective merchandising programs, however, suppliers and retailers must co-operate to a high degree undertaking joint planning, communicating

their intentions clearly and effectively and closely co-ordinating the performance of marketing flows. Mohr and Nevin (1990) develop a model to establish how communication can be used to attain and enhance levels of channel outcomes. In the case of own label lines, however, whilst working closely with manufacturers on product development, retailers tend not to take a fully specified marketing package from them, preferring to develop their own (Dawson and Shaw, 1989).

2.3.5.2 Contractual VMS's

Contractual arrangements are often favoured by organisations to formalise their marketing channel relationships and co-ordinate their activities. The functions to be performed by each channel member are specified in writing by contracts. Three types of contractual VMS's typically exist; wholesaler sponsored voluntary chains, retailer co-operatives and franchise organisations (including manufacturer sponsored retailer franchises systems, manufacturer sponsored retailer franchise systems and service firm sponsored retailer franchise systems. A brief explanation of each will now be given.

Wholesaler sponsored voluntary chains witness a scenario whereby by bringing together a number of independently owned retailers in a voluntary group, goods and services can be provided more economically than the retailers could have secured individually. This has been a response by small independent retailers to increasing competition from multiple retailers (Hardy and McGrath, 1987). Similar to this specific form of contractual VMS is the formation of retail buying alliances which Dawson and Shaw (1992) define as *"co-operation between two or more retail companies whereby each partner seeks to add to its competencies by adding some resources with those of its partners"* (in Shaw et al, 1994, p83). Alliances of this nature have been particularly evident in the European food industry as retailers come together to pool resources in order to possess more buying muscle when dealing with their increasingly concentrated food manufacturing counterparts (Hughes and Ray, 1994).

Retailer co-operatives are also a form of voluntary organisation, with the impetus for the existence of the co-operative coming from the retailers rather than from a wholesaler. In a study of a retailer-owned co-operative wholesaling-retailing system in Canada, Ketilson (1991) found that this type of system offers a model of distribution where the benefits of independence and co-ordination have been integrated. For the retailer, there exists autonomy for the independent retailers and a degree of control over channel decisions, while for the wholesaler, the decision-making structure provides a model for managing relations between large and small organisations, incorporating a mechanism for conflict resolution in addition to maintaining standardised delivery of products and services. Results also indicate that the democratic structure and decision-making process of such co-operative retailing systems, with a regime of district, regional and annual general meetings and a network of committees for channelling information, conflict can remain constructive rather than destructive.

Manufacturer/wholesaler/service firm sponsored retail franchise systems are established in order to allow the franchiser, for example in the case of a manufacturer, to grant a franchisee the ability to manufacture his products using the specified materials and techniques. The franchisee then distributes the product using the same techniques as the manufacturer, a practice which ultimately enables a national manufacturer to distribute regionally, when distribution costs from central manufacturing facilities are prohibitive (Pintel and Diamond, 1987). Prominent examples of this include Coca-Cola's independent bottler strategy (Friedman, 1992) and the fast-food chains McDonalds, Burger King and Pizza Hut (see Schul and Dant, 1992 for an introspective view of conflict resolution in the franchised distribution channel for fast food products). A similar approach applies to both the wholesaler and service firm.

2.3.5.3 Corporate VMS's

A corporate marketing channel exists when channel members at different levels of distribution for a specific product are under single ownership and operated by that single organisation, for example, the clothing retailer Benetton obtains supplies for its outlets

from manufacturing facilities under its control and Ellis and Goldstein with their DASH range sold through in-store concessions in a number of department stores, although in general most retailers are unwilling to embark on a programme of full vertical integration (Dawson and Shaw, 1989). An analogy could be drawn between this and Step 7 in Webster's (1992) model, where firms prefer to form strategic alliances as opposed to embarking on a programme of full vertical integration (see Chapter 1).

The importance of channel structure as a factor affecting intra-channel relationships is found in studies examining the corporate VMS. In a comparative study of four types of distribution channels within the pharmaceutical industry (wholesaler-sponsored chains, independent retail stores, franchised agencies and corporate retail chains), Robbins et al (1982) found that the corporate retail chains experienced higher levels of conflict as inherent in such channel structures, a certain amount of conflict is generally expected and can be tolerated by channel members. Consequently, conflict resolution assumes a lesser degree of importance among channel members, thus contesting the long held contention among some academics that corporate VMS offer the best channel management model which less structured channel structures should seek to emulate.

Power differentials exist in all of the above types of channel and are either exploited formally or informally (Carlisle and Parker, 1989). A consistent and continuing trend in administered channels, whereby one party undertakes co-ordination in the marketing channel on the basis of power or leadership, has been the shift in power towards multiple retailers away from manufacturers of consumer goods. This shift in the balance of power and its subsequent distribution in the marketing channel between retailers and manufacturers of packaged groceries was discussed at length in section 2.3.2.

Thus, the remainder of this chapter will be devoted to literature pertaining to industrial and organisational buying behaviour and relationship marketing as channel relationships have moved from being transaction specific to those of a more stable and long-term nature, and as such are reflected in this type of literature.

2.4 CHANGING RELATIONSHIPS AND THEIR RELEVANCE TO OTHER AREAS IN THE MARKETING LITERATURE

From research undertaken out in the 1980s and 1990s and the subject of many industry conferences and debates, there exists an increasing body of evidence to suggest that market conditions have led to more stable and planned supply chain relationships than in previous decades. Markets have become more sophisticated and in many countries both manufacturers and retailers have increased concentration in specific product sectors. This has subsequently led to a rationalisation in the number of participants in the negotiating process and the emergence of a more focused approach to buyer-seller relationships.

This does not mean, however, that adversarial relationships and the notions of power, dependency and conflict are any less significant, alternatively relationships should be seen in the light of more balanced and co-operative channel conditions (Hogarth-Scott and Parkinson, 1993). In essence, these types of relationships have more relevance to literature concerning industrial buying behaviour, a field which is typically characterised by a seller dealing with a small and identifiable number customers whereby relationships are of a stable, complex and long-lasting nature (Sanghavi, 1993).

2.4.1 The Contribution of the International Marketing and Purchasing (IMP) Project Group

In order to comprehend the wide range of factors which may influence a buying decision, including environmental, organisational and more importantly individual and the interrelationship between factors, it is useful to examine those models of buying behaviour proposed by the organisational buying behaviour theorists. Webster and Wind (1972), in their general model of organisational buying behaviour, developed the idea of organisational buyers as being not one, but many individuals in an organisation known as a buying centre. They identify a number of organisational buying roles and examine the relationship among these members of the buying centre. Sheth (1973) provides a less complex model compared to that of Webster and Wind (1972) which examines psychological influences and processes and how they interact in the buying

process. Factors thought to be important in influencing the buyer's expectations are background, which includes both education and experience.

Weaknesses with the models of both Webster and Wind (1972) and Sheth (1973), however, manifest themselves in the fact that the focus is on the buying firm alone, with no due consideration given to the wider environment in which they operate. This weakness, however, is rectified by the research work carried out by the IMP group, whereby Hakannson (1982) proposes that central to an understanding of the buying process are the social aspects of the buyer/seller relationship in the wider atmosphere and environment.

Thus, an important contribution to this field was the long-standing research undertaken by the IMP Project Group whose work was borne out of the need to recognise that the marketing and purchasing of industrial goods was really quite different from its actual portrayal in the literature. The group carried out extensive research across five European countries studying the operations of companies involved in both buying and selling industrial products. Their comparative study examined the organisational relationship manufacturing companies established with customers and suppliers in order to operate efficiently (see Hakannson, 1982; Turnbull and Cunningham, 1981; Cunningham, 1982).

They developed what became widely known as the interaction approach, a process which acknowledges the role played by the various individuals in the buying/selling process in customer and supplier organisations. The original view that business transactions are rational and impersonal was replaced by one whereby organisational buyers and sellers are influenced by their attitudes and beliefs, feelings and sentiments in the interaction process. The research highlights that between parties in a network, various interactions take place whereby exchanges and adaptations to each other occur. A number of exchanges occur in the network including goods and information, financial and social. All exchanges which occur have an impact on the position of all parties in

the network. Interactions may occur for a long period of time, several years are reported in some cases. Essentially, the focus of the IMP Group's work was on factors which lead to close relationships between buyer and seller.

The IMP Group's research provides a unique contribution to the knowledge of industrial marketing and purchasing across a number of countries, emphasising the importance of the establishment of relationships between suppliers and their customers. Wilson and Mummalaeni (1986) view this as the model best equipped to deal with the various issues pertaining to buyer-seller relationships and consequently, a number of researchers have subsequently adopted this approach as a framework for their work.

For example, Campbell (1985) draws on this work in order to study how Germany and Japan, two countries with enviable records of success in economic growth and technological developments, have come to enjoy this status. This success, he found, is partly attributable to the development and management of relationships between suppliers and customers in both countries. Turnbull and Vaila (1986), the latter being directly involved with the original IMP project work, draw extensively on the research evidence and theoretical contributions from this work to derive a model of interactive strategic planning, stating that existing approaches to planning are inadequate when relating them to the realities of strategic planning in the industrial marketing field.

In more recent studies, the theoretical framework forming the basis of the work of Pels (1992) is founded in the IMP Group's interaction approach. This particular study outlines a methodology designed to identify the appropriate marketing team which should face each of the firm's key clients. Such an approach is deemed necessary as few studies develop models for firms facing concentrated demand, i.e. the selling firm faces a small number of clients. This particular study was undertaken as a result of the number of long-term relationships evolving in mass markets where it is critical to determine clients worthy of a single marketing strategy and how to manage subsequent relationships. Metcalf et al (1992) identified a need to develop the constructs in the

model further, stating that they need to be operationalised in order to test the model in non-European settings.

2.4.2 The Distinction Between Consumer and Industrial Markets

Hakansson (1982), who documented the work of the IMP Project Group, draws a clear distinction between both consumer markets and industrial markets and how consumer satisfaction is recognised and met in each to highlight the salient factors which render current buyer-seller relationships in the grocery sector comparable to those in industrial markets.

Consumer markets witness a scenario whereby the seller is dealing with a large and anonymous group of individuals with an impersonal relationship existing between buyer and supplier. Marketing primarily takes the form of the supplier manipulating the individual elements of the marketing mix (product, price, promotion and place) against perceived customer preferences. Changes in the product/service, as offered by the supplier, are a consequence of market research results. The marketing offering is determined "unilaterally" on the behalf of the seller.

In marked contrast, in industrial market situations, the seller deals with a small and distinguishable number of important customer relationships which are of a stable, complex and often long-lasting nature. The marketing company cannot, therefore, due to what can be referred to as mutual dependence, unilaterally change elements of the marketing offering. Details such as product specification, price, delivery terms, spare parts, service back-up are sometimes negotiated with individual customers (depending on the product offering itself).

This scenario is becoming more apparent in the grocery industry in relationships between retailers and food manufacturers. For example, in the case of the UK grocery sector, food manufacturers are dealing predominantly with five key accounts

representing the major grocery multiples which accounts for a significant proportion of their business (Helleman, 1991).

Two key terms underlined above are further identified by Webster (1984) as two of the four unique elements which characterise industrial marketing, namely the sheer complexity of the process of organisational buying and the high degree of buyer-seller interdependence which extends far beyond the transaction itself.

The phenomenon of buyer-seller interdependence is seen as the hallmark of industrial marketing. In such buying situations, the buyer becomes dependent on the supplier for a stipulated supply of raw materials, components or sub-assemblies, a continued supply of maintenance and repair parts and a skilled repair service for capital equipment (characteristics applicable to industrial markets only). However, efficient order handling, delivery and extension of credit terms are all functions also inherent in industrial buying situations which are applicable to the packaged grocery market.

In industrial marketing, a significant amount of negotiation occurs as the functions above would tend to indicate, with the "sale" only being a minor part of the entire process, although an important one. Whereas the relationship in consumer marketing ends with the sale, relying on an "arms-length" transaction. The notion of interdependence was first discussed in the first chapter as players in the marketing channel are dependent on one another to perform various roles and functions in order to facilitate the attainment of their respective goals.

As far as the complexity of the buying process is concerned, Webster (1984) states that buying in an industrial setting is much more complex than that which occurs in consumer markets. The complexity of that in the industrial environment is never achieved as there are different kinds of buying decisions, according to Webster, such as straight rebuy or routine purchase, modified rebuy and new buy.

2.4.3 Retail Buying as a Special Case of Industrial Marketing

In the marketing literature, buying functions in retail organisations have received comparatively less attention than areas such as marketing and operational issues, despite assuming a large proportion of the responsibility for the commercial performance of retail organisations (Sanghavi, 1993). The buying function, however, will become an increasingly important issue in the future development of retailing as the sector continues to concentrate and mature. Additionally, cost control will assume more importance in an attempt to maintain margins in a highly price competitive sector. Factors such as this are leading to changes in the relationships between manufacturers and retailers as close and long-term relationships between buyers and suppliers, can in some instances lead to a distinct competitive advantage for both parties concerned. Little, however, has been published about the buying behaviour of retail organisations and their inherent relationships with suppliers.

Ettenson and Wagner (1986), thus, found it useful to consider retail buying as a special case of industrial buyer behaviour, although some factors affecting retail buyers have no equivalent in industrial purchasing. This proposition was later confirmed by Davies (1993) who stated that, "*retail buying is certainly structurally different from other forms of industrial buying where what is bought is used to build or make something different. A retailer sells exactly what is bought, albeit in a smaller quantity*" (p.64). Additionally, Ettenson and Wagner (1986) observed a lack of both conceptual and empirical evidence in the literature relating directly to retail buyer's decisions.

Parkinson and Baker (1986), in response to this observation, state that it is difficult to generalise about retail buying as less appears to have been written in this area, whilst much is known about both industrial and consumer buyer behaviour. Given the diversity of buying organisations, McGoldrick (1990) found that it was not considered meaningful to represent a typical buying structure as a result of the wide range of factors which may influence a buying decision and the interrelationship between such factors.

However, it is interesting to consider the buying function, although far from typical, of the highly successful UK retailer Marks and Spencer which Tse (1985) examined.

In Tse's (1985) analysis, a breakdown of the buying function into four major elements with regard to the company's buying team for textile products is given. Selectors were found to be responsible for market appraisal, identifying styles comparable with the retailer's position, whilst the responsibility of merchandisers was to forecast and ensure sufficient raw material supplies, agreeing on range, colour and sizes. In this particular buying scenario, the role of the technologist was unusual and his input included advising on matters of production methods. Quality controllers were found to undertake much of their work in association with the technologist, but assuming more specific responsibilities. More characteristic of industrial buying, this type of specification buying, whereby close contact with the manufacturer is maintained, will become increasingly popular as retailers become more involved in product development in their growing commitment to own label development.

It would appear from this example, that the complexity which Webster (1984) states as being characteristics of industrial markets, is prevalent in consumer oriented markets. However, it must be borne in mind that while a number of analogies can be drawn between industrial and retail buying situations, as the following examples endeavour to illustrate, the underlying difference manifests itself in the scale of the process. That is to say, retail buying occurs on a much greater scale in terms of the volume of suppliers, often in excess of 2000, whereas in the industrial buying scenario relations are limited to a significantly smaller number of suppliers with an emphasis on higher value items. Thus, while similar trends are apparent in both areas, for example building and maintaining close relationships, the application of the buying process is actually very different and as such only a broad and general comparison between these forms of buying should be made.

The issue of complexity is further illustrated in a study by Shaw et al (1992), who examined the decisions made by individual retail buyers in the purchase of retailer branded products from a number of different sources. The study involved undertaking a series of semi-structured interviews with buying controllers to establish the broad framework within which buying decisions were made and the types of evaluative criteria employed by buyers. Interviews of this nature indicated that buyers draw on a wide range of evaluative criteria when faced with assessing those products which best meet their objectives.

A number of authors have previously identified criteria to be considered in any selection decision (see for example, Doyle and Weinberg (1973); Montgomery (1975); Nilsson (1977); Nilsson and Host (1987); Brown and Purwar (1980); Hirshman (1983); McGoldrick and Douglas (1983); Shipley (1985); and Wright (1985). McGoldrick (1990), however, states that while it is beneficial to evaluate the consistency and objectivity of buying situations through a specific framework, it is dangerous to generalise too widely from factors borne out of a particular product area, store type or country. Nevertheless, the aforementioned studies do highlight the diversity of criteria and the potential complexity in their evaluation which pertain to buying decisions in a retail context.

The retail buying structure previously outlined by Tse (1985) is atypical of most retail buying scenarios, in that involved in product selection decisions is an array of individuals from different functional areas participating in the decision process. McGoldrick (1990), however, would argue that most large retail companies have developed some form of buying committee, which is in essence similar to what Webster (1984) refers to in an industrial context as a decision making unit. Benefits of the existence of such a structure, he notes, include the wealth of experience which is applied to the decision making process, the making of decisions in a more scientific atmosphere and the level of pressure in the buyer-seller relationship is generally reduced.

Host and Nilsson (1983) identified the roles and orientations of industrial buyers compared to the buying committee, whereby the buyers gather information and negotiate and analyse offers which are then compiled on "item sheets" for presentation to a formal committee. Although their respective goals and objectives may have much in common, the differing perspectives and responsibilities of these two different groups of individuals may result in conflict. Formal committee participation of this nature is likely to occur in larger retail organisations (McGoldrick, 1990). From this brief synopsis of selected studies, one can conclude that retail buying, on closer examination has a degree of commonality with industrial buying scenarios.

This belief is further compounded on consideration of the buying process itself. At the heart of the retail buying process, in common with industrial marketing scenarios, a number of different buying decisions exist. Whether decisions are made by individuals or input from groups is offered, the decisions with which retail buyers are faced are often very complex.

The buying process has been sub-divided into a number of stages ranging from the initial purchase decision to a review of both the product and suppliers' performance. Robinson et al (1967) originally formulated the buying process to include eight significant events in any buying situation. While their model describes the buying stages passed through, the type of purchase essentially governs the amount of time and effort devoted to any one phase. Thus, they identified three types of purchase: new task; modified rebuy and straight rebuy. With a new task purchase, the organisation has no previous experience of buying the brand, and as such a considerable amount of information concerning a number of different brands will be necessary for this high risk option. In the modified rebuy situation, while considerable experience of sourcing brands in the product field has been gained, the buying organisation in this situation feels it is appropriate to consider if significantly better brands are available.

The straight rebuy is the least complex type of purchase as it essentially involves the routine purchase of existing lines. Factors which may result in the retailer modifying purchases of an existing line are numerous as a study by Chanil (1991) of buyers purchasing for American discount retailers highlights. Buyers were asked to identify which of the problems they had with suppliers which would prompt a modified rebuy or initiate the search for an alternative supplier. From this study 83% of buyers cited late deliveries and 52% cited lack of communication as such problems to be high on their agenda.

The issue of reliable delivery is of a pervasive nature in the appraisal of new suppliers as McGoldrick and Douglas (1983) found reliable delivery as being of great importance in the selection of a new supplier in a study of factors influencing the choice of supplier by grocery distributors in the UK. Davies (1989) states that although reliable delivery is obviously more important in some sectors, e.g. grocery, it is also a crucial factor in the fashion industry where lead times can be of considerable length. Therefore, the ability to offer short delivery times, in addition to making reliable delivery promises, seems to be gaining importance.

In common with industrial buying scenarios, a host of environmental, interpersonal and individual factors have some degree of impact on the buying decision. Sheth (1973), an organisational buying theorist, argued that factors influencing a buyer's expectations, including their background, education and experience (see Warner (1988); Diamond and Pintel, (1985); Forrester, (1987); and Swindley (1992) for a discussion of the influence of personal characteristics on retail buyers).

Those selected studies in the field of retail buying, predominantly undertaken throughout the 1970s and 1980s, essentially highlighted the nature of the retail buying decision making process, drawing on evidence proposed by organisational behaviour theorists. Furthermore, a bias towards the grocery industry was witnessed in a number of cases. Into the 1990s, however, there has been a resurgence of interest in the subject

of retail buying which is mainly concerned with the apparel industry and dealing with operational issues such as a product sourcing decisions (see for example Sternquist et al (1992); Sternquist (1994); Wall et al (1994); Chang and Sternquist (1994). Other studies, however, still focus on the grocery industry, examining issues such as the development of the buying function as an important marketing tool in the attainment of a competitive edge (see for example, Knox and de Chernatony (1990); Swindley (1992)).

Swindley (1992) provides a useful perspective on the position of retail buying literature stating that whilst acknowledging the role of the buyer and the decision making unit in which he operates is still underdeveloped, more interesting perspectives on retail buying could perhaps be provided by analyses of other areas other than the food and apparel sectors which have attracted the greatest amount of attention in the marketing literature.

2.4.4 The Evolution of A "New" Type of Marketing and Its Relevance to Changing Supply Chain Relationships

Bagozzi (1975) first criticised the insufficient emphasis in the marketing literature that was placed on the exchange process in marketing, a paradigm which he stated as being central to marketing theory. A number of academics in the marketing field have since supported this claim and over the past decade, reinforcing that the exchange process should not be perceived as a discrete transaction, but as part of a wider relationship (see for example Arndt, (1979); Macneil (1980); Levitt (1983); Anderson and Narus (1984); Shapiro (1985); Dwyer et al (1987); Anderson and Narus (1990); Day (1990); Berry and Parasuramon (1991); Achrol (1991); Morgan and Hunt (1994)). Thus, a significant directional change has been witnessed in marketing theory and practice emphasising the formation of relationships and their inherent exchange processes.

Interactive marketing exchanges and the notion of building interactive relationships is closely related to the concept of relationship marketing. Christopher et al (1993) acknowledge that fundamental changes have occurred in nature of marketing since the

1950s and state that the overall shift in the nature of marketing essentially reflects a move from a transaction based focus that focusing on relationships. The former approach focused on a single sale, with emphasis placed on product features, the quality of which were the primary concern of the production function. Short time scales prevailed under such a regime with little emphasis placed on customer service as client contact was minimal.

The "new" focus of marketing, however, will increasingly be directed towards a relationship marketing approach, oriented towards product benefits, with quality the overriding concern of all business functions. Emphasis is placed on a long-term orientation, whereby customers are retained as a consequence of frequent contact and high levels of service. Thus, relationship marketing studies draw upon the frameworks and findings of the customer service/service quality schools, literature of this nature according to Butler (1993) demonstrates that success of the service encounter is influenced directly by the nature and quality of the relationship between the buyer and seller. An example of frequent customer contact and high levels of service is in the US grocery market where Spethmann (1993) cites Kraft General Foods and Borden as food manufacturers who are offering better service to their retail customers by revising their operations, thus tailoring promotions to key retail accounts. She cites Coca-Cola, Procter and Gamble and Kraft General Foods as being leaders in retailer specific marketing programmes in the USA.

Kotler (1992) emphasises the need to move from a short-term transaction oriented approach to a longer term approach characterised by relationship building . Webster (1992), another authority in the US marketing literature, also supports this proposition in his wide ranging review of the changing role of marketing. In this article he concluded that during the 1980s, new forms of business organisations emerged in which flexibility, specialisation and relationships became important to the detriment of factors such as managerial control and formal contracting, with the development of partnerships becoming an increasingly important concept (see p.11 and 12).

In the UK, a managerial model of relationship marketing is subsequently presented in the text of Christopher et al (1993) which is based on the integration of marketing, customer service and quality management. They propose that the critical management components in developing relationship management are the service quality delivery system, service quality management, customer order management and customer retention management.

Nixon (1993) is also cognisant of the fact that the 1990s will increasingly become the decade of customer service, a concept which is at the heart of relationship marketing. Emphasis will be placed on meeting volatile customer demand through a flexible and responsive supply chain. He is talking in the context of the revolution which has taken place in the UK grocery industry with regard to the supply chain which was mainly witnessed in the 1980s. He puts both the decade of customer service and that dominated by logistics in the context of post war history and found that the past forty years have been clearly dominated by a number of different business functions, namely from production in the 1950s, moving through marketing, finance, logistics until the 1990s, a decade dominated by customer service.

Similarly, Sheth and Parvatiyar (1993) found it was worthwhile to consider the evolution of relationship marketing and the factors causing this reconceptualisation. Their model is based on widely known marketing practices in pre-industrial, industrial and post-industrial eras which proposed that in the pre-industrial era ongoing trade relationships were a crucial factor in business, trust and commitment being central to success. With the onset of mass production in the industrial era a situation of oversupply prevailed leading to aggressive selling with a more transaction oriented relationship evolving. The current post-industrial era, the third stage in their evolution model, witnesses a change in favour of a relationship orientation in business, as a result of three main factors: the importance of customer retention; the emphasis of market segmentation and specialisation and the growth in vertical marketing systems.

Barrell (1990) acknowledges that marketing, manufacturing, customer service and other business functions can not exist in a vacuum or in compartments within companies. Instead, what is needed is an integrated approach to marketing which is concerned with getting and keeping customers as opposed to just getting them. This ideal, however, has permeated the marketing literature for almost three decades as Keith (1960) was one of the first marketing academics to state that every functional area of the organisation, from finance to production to sales must work to satisfy the needs and desires of the consumer. Keeping these customers is reliant on the service and building of bonds with them to develop long term mutually advantageous relationships. Service is the process of allowing time and resources to include, with regard to the exchange process with the customer, pre-transaction, transaction and post-transaction considerations (Christopher et al, 1993). Quality customer service exists when the motives for the purchase are understood and added value that can be attributed to that product is identified.

To ensure quality customer service, therefore, customer service management must be embraced at a company level rather than continuing to be a narrow phenomena restricted to the confines of the customer service department (Kotler, 1992).

Additionally, quality is also under review, with responsibility for the concept being allocated across all departments and not just being confined to the traditional production concept which emphasised conforming to specifications.

Therefore, in order to keep customers, "wrap around marketing" should be practised (Kotler, 1992). The notion of "wrap around marketing", however, is far from revolutionary as Keith (1960), proposed more than three decades previously that companies revolve around the customer and not the other way around. He maintained that the concept of the customer assuming a pivotal role will continue to remain valid into the future, but in order to succeed, organisations must adjust to the shifting tastes and likes, desires and needs which will always characterise consumers.

Butler (1993), however, brings our attention to the fact that the current and crusading approach to relationships in business should be viewed with a degree of caution.

Jackson (1985), for example, clearly believes that relationships are an inappropriate response to some markets and specific marketing situations and that the transaction based model is the most effective model in certain situations. Similarly, Achrol (1991) proposes that, while strong arguments for the adoption of a relationship approach to marketing exists, as economies evolve and their inherent market segments change and are subjected to continual restructuring, opportunities to forge and maintain relationships will become narrower and short-lived.

2.4.5 The Four P's - Too Narrow a View?

Since its introduction by Borden (1964), the concept of the marketing mix, the ubiquitous "Four P's" (product, price, promotion and place), has come to dominate all facets of marketing. Various prominent authors in this field, however, state that there is a shift in the nature of marketing with new approaches emerging, as a brief review of literature in this area has demonstrated.

However, perhaps the most widely quoted and printed paper demonstrating the need for a broader interpretation of the marketing function is that of Levitt (1960) written more than thirty years ago. He proposed that essentially, marketing had become too short-sighted. This idea, however, had been suggested some years previously by other prominent academics such as Drucker (1946), but Levitt's article tied marketing more closely to business policy with more clarity and simplicity. He stated that marketing management should not think of itself as producing products, instead providing *"customer creating value satisfactions"* (p.17). Such a concept should permeate all facets of the organisation and in a continual fashion, otherwise the company will merely be *"a series of pigeonholed parts, with no consolidating sense of purpose or direction"* (p.17). At the time of writing he found that the article had more impact on industrial than consumer goods companies, with the former lagging most in achieving

customer orientation as the latter, being more capital intensive and technical in nature, has traditionally relied on extensive face-to-face communication and selling effort.

At around the same time Kotler and Levy (1969) were also calling for a broadening of the concept of marketing to include those organisations which are non-profit oriented which is highlighted by the following renowned quote from their paper, "*marketing is a pervasive societal activity that goes considerably beyond the selling of toothpaste, soap and steel*"(p.38).

Many industry practitioners are currently of the opinion that this old school of marketing is no longer viable in today's changing business environment. The variables listed as part of this mix and their management are all too often a panacea with too much emphasis being placed on their management as opposed to the nature of the firm's market relationships and fulfilling the needs and wants of customers. Additionally, the list of variables is too often inflexible and not adaptive enough to different situations. As McKenna (1992), a prominent venture capitalist and fashionable marketing guru in the USA states:

"It's too slow, its unresponsive to customers' needs and it doesn't do a good enough job of differentiating your product from the masses of others in the market" (p.7).

While McKenna's ideas are often cited as prominent in the debate concerning the nature of marketing, Thomas (1994) states that his criticism contributes nothing new, but merely adds to the growing body of marketing literature which is critical of conventional marketing wisdom.

To overcome the perceived rigidity of the concept, a number of marketing academics have offered additional P's to the list several suggesting the inclusion of service in the list (Collier, 1991 and Lambert and Harrington, 1989). Grönroos, (1994), however, dismisses this idea believing that by isolating customer service as a separate variable

would curb the attempt currently being made in industry as a whole to embrace customer service a corporate wide responsibility.

The limited nature of the marketing mix as proposed by Borden witnesses a scenario whereby the seller is active and the buyer and consumer passive and no personalised relationship between the producer and consumer is supposed to exist. This latter view of marketing essentially does not fit with the reality of industrial marketing and retail buying, a special form of industrial marketing, as was previously discussed.

Moller (1992), notes in a recent overview of research traditions in marketing that alternative theories have been developed since the 1960s when these prominent marketing academics called for a revision of the nature of the concept of marketing, in an attempt to propose a useful theory of marketing:

"...from a functional view of marketing "mix management" our focus has extended to the strategic role of marketing, aspects of service marketing, political dimensions of channel management, interactions in industrial networks; to mention just a few evolving trends" (p.197).

The traditional marketing mix and its essentially production oriented definition is a clinical approach with an active seller and a passive buyer, with no elements of a personal nature which is supposed to exist in the market oriented or customer approach in both industrial marketing and the marketing of services. While simple in the teaching of marketing and useful at one time to the marketers of consumer packaged goods, the original Four P's are not applicable to all types of marketing situations (Grönroos, 1994). He views the universal adoption of this theory as the theory of modern marketing as a direct result of its straightforwardness to teach.

The shift from marketing to an anonymous mass market, however, to developing and managing relationships with a known group of customers reflects the need for relationship marketing, although this is a concept which is still not fully welcomed into the field of marketing as yet.

2.4.6 Criticisms of the New Approach to Marketing

A major criticism of these and other calls in the marketing literature to redefine the theory of marketing is proposed by Morris (1993). He believes that we should not convince ourselves that this is current and a relevant new way of thinking, but instead we are witnessing a repackaging of the old paradigm of marketing as references to the work of marketing academics from the 1960s has shown. The change which calls for relationships to replace the old school of marketing is only, he states, a change in the scope of the field of marketing, while remaining unchanged is the underlying nature of the field. The old functional strategy is still alive and well in the academic world of marketing, although it seems to have failed in practice in the business world. Morris states that although marketing leaders have recognised that their views are out-of-date, they have failed along the route in their attempts at reconceptualisation as they are unable to drop their 1960s attitude. A new approach will not succeed *"until the relevant philosophies are expanded"*.

Grönroos (1994) concedes this point as he writes that much of the academic research into marketing, especially in the USA, reflects the marketing mix and its Four P's as still being the theory of marketing. He sees the way forward in Europe is through the adoption of relationship marketing approach, but not enough is being written on the subject, the two notable exceptions being the textbooks by Christopher et al (1993) in the UK and Blomqvist (1993) in Sweden.

However, some would contend these ideas, for example, Gummesson (1987) is of the opinion that the current concept of marketing is unable to absorb new developments and the rigid attachment to traditional consumer goods marketing, an ideal which is both unrealistic and ready for replacement. Similarly, Day (1992) also believes that academics in the marketing field have been slow to respond to changes in wisdom such as relationship marketing and are contented working on outdated problems and issues. Furthermore, he argues, traditional marketing strategy approaches are not adequate enough to deal with long-term buyer-seller relationships and strategic alliances.

Brady and Davis (1993) confirm that doubts are emerging as to the very basis of contemporary marketing which are subsequently reinforced by the difficult operating environment increasingly facing consumer goods companies today. That is to say the dominance of increasingly sophisticated retailers with strong own label products in a number of cases placing pressure on profit margins. Thus, as value shifts from manufacturers to the point of sale, new marketing frameworks will be called on to build long-term relationships, although there are currently few in existence in their opinion. With more emphasis on developing relationships with the trade, specifically trade promotions and deals, the end consumer is being by-passed. Therefore, they suggest that marketing is a dying phenomenon and that the way forward is to focus on product innovation and improvement, concepts which ultimately affect the end consumer.

This focus, however, was suggested almost forty years previously, as Alderson (1958) stated that *"some day marketing may need to look beyond the act of purchasing to a study of consumption proper. The occasion for such studies will arise out of the problems of inducing consumers to accept innovations or the further proliferation of products to be included in the household assortment"* (p.27).

Broadbent (1995), argues that as marketing now operates as part of a multi-disciplinary team, its role and importance has to be reinstated to a much wider audience. His paper essentially discusses the evolution of the marketing department and its long-run survival, criticising the traditional management of the concept as being isolationist and confrontational. Over forty years ago, the consumer goods business was straightforward, with marketing perceived as the way forward and a powerful phenomenon. However, the drive for efficiency assumed more importance and suddenly, marketing became accountable by undertaking measures such as cost effective purchasing of, for example, advertising, involvement in new forms of communication such as direct marketing and database management, in essence quantifying its very existence. Consequently, numerical justifications assumed greater importance over building strong brands and understanding consumer wants. Broadbent (1995), thus

proposes practical ways in which the teams responsible for managing brands can strengthen their branding and ultimate customer loyalty.

2.5 CONCLUSION

While the first chapter examined issues of power and conflict, the focus of this chapter has been on conflict management, specifically how co-operation, another important behavioural dimension in marketing channels, is achieved and maintained in the channel environment. By drawing heavily on the academic literature, there is evidence to suggest that a profound shift has taken place in channel relationships, from a discrete and often volatile "arms length" approach to more of a partnership type of approach, where relations are more of a stable and associative nature. In the attainment of a more co-operative relationship, the literature has shown that organisations can formalise and co-ordinate their relationship with channel participants via contractual arrangements, one of the most significant developments in this area being the evolution of vertical marketing systems whereby all participants in the channel system act as a unified system.

Commensurate with the emergence of more sophisticated markets and the increasing concentration of manufacturers and retailers alike in a number of product sectors, a more focused approach to buyer-seller relationships is appearing with the number of participants in the negotiating process substantially reducing. Thus, as relationships have changed, they must now be considered in the context of a broader base of literature. More specifically, relationships of this nature have been shown as having increasing relevance to industrial marketing, a field which is typically characterised by a seller dealing with an identifiable number of consumers, whereby the relationship is often very complex and long-lasting. The changing role of marketing, an area which was briefly considered in this chapter, is also an important consideration in the context of the current research investigation with the emergence of new and relevant concepts such as relationship marketing, whereby an increasingly important emphasis is placed on customer service. This chapter, therefore, has illustrated that there are many more issues

worthy of consideration in the light of changing supply chain relationships than, for example power and conflict.

The wide ranging base of literature encompassing those issues relevant to understanding relationships between members in marketing channels was presented in these two introductory chapters as channel relationships ultimately affect the physical flow of goods from one channel member to another. That is to say, where the balance of power in a channel relationship lies clearly in favour of retailers, as is a common scenario in the UK grocery sector and an emerging trend throughout continental Europe, then it follows that retailers will assume control of the physical distribution function, effectively dictating to suppliers how stock should be channelled to suit their requirements.

Therefore, prior to gaining an appreciation of how changing relationships between retailers and their suppliers have affected the physical flow of stock to both warehouses and stores in the retail chain, one must first understand the changes that have occurred between such parties as participants in complex channel relationships, the underlying aim of the first two chapters.

As relationships in the grocery sector specifically have changed considerably over time, evolving from a once adversarial stance to the current ethos which reflects an increasing willingness to work together for mutual gain, the implications of a changed relationship state and its impact on supply chain management techniques in the context of the international grocery retailing scene is now developed in the following chapter.

The wider international grocery sector has been selected as the focus of this discussion as international collaboration in the supply chain is receiving increasing attention in the literature, particularly on the conference circuit as a consequence of the internationalisation of retailing as individual retail groups expand their interests

overseas whether through the acquisition of local chains or through the formation of buying alliances and as such are sourcing at an international level.

CHAPTER 2 - REFERENCES

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CHAPTER 3

SUPPLY CHAIN IMPLICATIONS OF CHANGING MANUFACTURER-RETAILER RELATIONSHIPS

3.1 INTRODUCTION

Research in the field of distribution and logistics has been an area largely neglected in international retailing research by academics in the UK, and to an even greater extent in continental Europe. While a considerable body of theoretical research has been undertaken on marketing channels and related behavioural concepts, as the first two chapters discussed, few researchers have considered channels of physical distribution in the international logistics arena, with the exception of academics such as, Dawson, 1993; Fernie, 1992, 1994; Christopher and Peck, 1994. This is surprising in view of the changing nature of relationships within marketing channels and the impact such changes have had on distribution and logistical support to both retailers' warehouses and stores.

McKinnon (1989), in his comprehensive text on physical distribution systems, which essentially addresses prominent issues that have arisen as the profile of the distribution function has been enhanced over the years, provides the reader with a number of reasons to account for the upsurge in interest in distribution and the elevated position it has come to enjoy in industry as a whole. Prior to exploring these, however, the author believes it is useful to define the term physical distribution, as provided by McKinnon (1989). It is, he states, *"the collective term for the series of inter-related functions (principally transport, stockholding, storage, goods-handling and order processing) involved in the physical transfer of finished goods from producer to consumer, directly or via intermediaries"* (p.1).

Essentially, during the 1950s, physical distribution was looked upon as merely "trucks and warehouses", assuming a secondary role to those functions considered far superior such as production, purchasing and sales (Stacey and Wilson, 1958). It was regarded as

somewhat of a "Cinderella" activity, with academics such as Drucker (1962) contending that distribution in the USA, at that time, was the looked upon as "*the economy's dark continent*". Such a view was also adopted in the UK.

Since Drucker's original proposal, over 30 years ago, that a new approach to distribution was needed, the physical distribution function has undergone radical structural change throughout the developed world in terms of patterns of stockholding and the movement of freight. In today's highly competitive grocery industry, for example, distribution is now considered to be an important marketing tool, in addition to being a crucial determinant of profitability and a major cost centre. Consequently, distribution and its elevated profile in industry is reflected in its representation at board level, and terms such as supply chain management, quick response and fast flow replenishment are all in daily use by directors in today's retail and distribution sector.

This chapter, therefore, essentially explores the effect of changing channel relationships as described in the previous chapter on the physical flow of goods in the grocery supply chain. Consequently its focus is centred on an international comparison of supply chain practices in the grocery sector, demonstrating that the logistical environment differs greatly between countries, specifically when comparing practices in the USA with those present throughout continental Europe, although the level of supply chain collaboration prevailing across European grocery retail markets also varies from country to country.

Differences between individual countries can mainly be attributed to, for example, intensity of price competition, conflict rather than collaboration between suppliers and retailers, commodity purchasing and holding of promotional stock and the varying rates of adoption of information technology, specifically the uptake of EDI (Ferne, 1995). Whilst acknowledgement of these "operational" type factors is important in the development of a logistics strategy for different country markets, other factors such as geography and distribution "culture" must also be assessed.

The implications of changing relationships and their subsequent effect on supply chain management have been highlighted recently by a number of international reports compiled by international consultants. As this literature tends to originate predominantly from the USA, this market will be discussed at the outset, with the remainder of the chapter being devoted to analogies that can be drawn with the grocery sector in continental Europe.

3.2 THE ORIGIN OF COLLABORATIVE SUPPLY CHAIN RELATIONS

The formation of collaborative relationships or "partnerships" between participants in the supply chain, namely manufacturers and retailers, is a concept becoming widely referred to as Efficient Consumer Response (ECR) or Quick Response (QR).

Essentially, it is concerned with eliminating unnecessary stock and inefficiency from all components of the supply chain, passing the benefits of these actions to end consumers.

This latest concept appears to be the stimulus for the growing interest which is continually evolving on supply chain management on an international and comparative basis and is defined as *"a grocery industry strategy in which distributors and suppliers are working closely together to bring better value to the grocery consumer. By jointly focusing on the efficiency of the total grocery supply system, rather than the efficiency of individual components, they are reducing total system costs, inventories and physical assets while improving the consumer's choice of high quality, fresh grocery products"* (Kurt Salmon, 1993, p.1).

Heralded as the blueprint for successful supply chain management in the USA, the Kurt Salmon Associates (1993) report "Efficient Consumer Response" is perhaps the most thorough review of the adoption of quick response technologies in the grocery retail sector. Similarly, the Mercer Management Consulting report (1993), conducted on behalf of the Coca-Cola Retailing Research Council, also provides a useful foundation for removing unnecessary costs from the food distribution system through improved practices of replenishment and logistics.

The strategy of Quick Response was borne primarily out of a need to revolutionise response times in the US fashion industry at a time when domestic suppliers faced stiff competition from overseas suppliers of garments. As the pursuit of legislative protection was not sufficient in response to the ever increasing influx of cheaper imports, industry practitioners were forced to consider alternative strategies. Thus, in the late 1980s, Kurt Salmon Associates, a leading management consultant in the USA, was commissioned to undertake an analysis of the supply chain which revealed that overall efficiency in the garment industry was very low. By pursuing independent cost reducing strategies, fibre, textile, apparel and retail industries were undiscerningly adding unnecessarily high costs to the supply chain as a whole. In addition to the escalation of costs, the length of the supply chain and its ultimate impact on the efficiency of the system were significant findings to be borne out of this study. According to Kurt Salmon, from raw material to consumer purchase at the point of sale, the supply chain for clothing was in the region of 66 weeks. Broken down into its component stages in the supply chain; 11 weeks were in the plant, 40 weeks in warehouse/transit and a further 15 weeks in store. Disadvantages arising from this long supply chain were the expense of its financing and losses resulting from inaccurate forecasts of future demand causing either too much or too little product to be produced. The overall cost to the system was projected by Kurt Salmon to cost around \$25 billion in total.

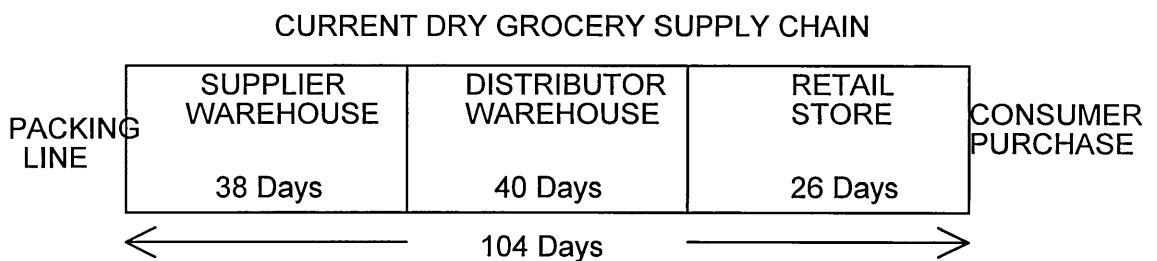
3.3 EFFICIENT CONSUMER RESPONSE IN THE US GROCERY INDUSTRY

As a result of the successful identification of inefficiencies in this particular industry, Kurt Salmon was engaged to carry out a subsequent analysis of apparent inefficiencies in a further supply chain configuration. On this occasion, they were commissioned to examine the grocery industry in the USA as result of growing concern by industry practitioners that it was beginning to lose its competitive edge. Concern was being voiced that growth in the industry had slowed leading to increasingly strained relationships between channel participants as they continued to increase profitability at the expense of others. Industry leaders, therefore, formed a task force known as the

Efficient Consumer Response Working Group, the aim of which was to identify possible opportunities for improving practices or technology which would ultimately enhance the overall competitiveness of the grocery supply chain.

Consequently, their investigation into supply chain inefficiencies in the garment industry led to the development of the QR strategy for retailers of general merchandise and their suppliers. Applied to the grocery industry, to reach the consumer at the checkout, it takes a dry grocery product on average 104 days, under existing supply chain conditions, as Figure 3.1 illustrates. Perishable products, however, would take 75-80 days as they are moved more quickly in order to preserve freshness and quality.

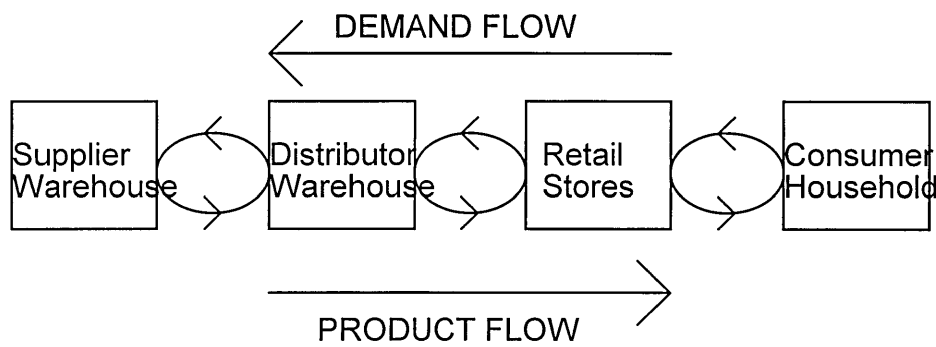
Figure 3.1: Average Throughput Time of Dry Grocery Chain Before ECR



Source: Kurt Salmon, (1993), p.26.

The long lead time for dry groceries can be explained by the fact that no system for coordinating the whole chain exists, whereby a continuous flow of information and products between manufacturer and end consumer would ideally prevail, instead three single systems which are linked by buffer stocks at the store and retailers warehouse are present. Such a configuration is represented in the following Figure 3.2:

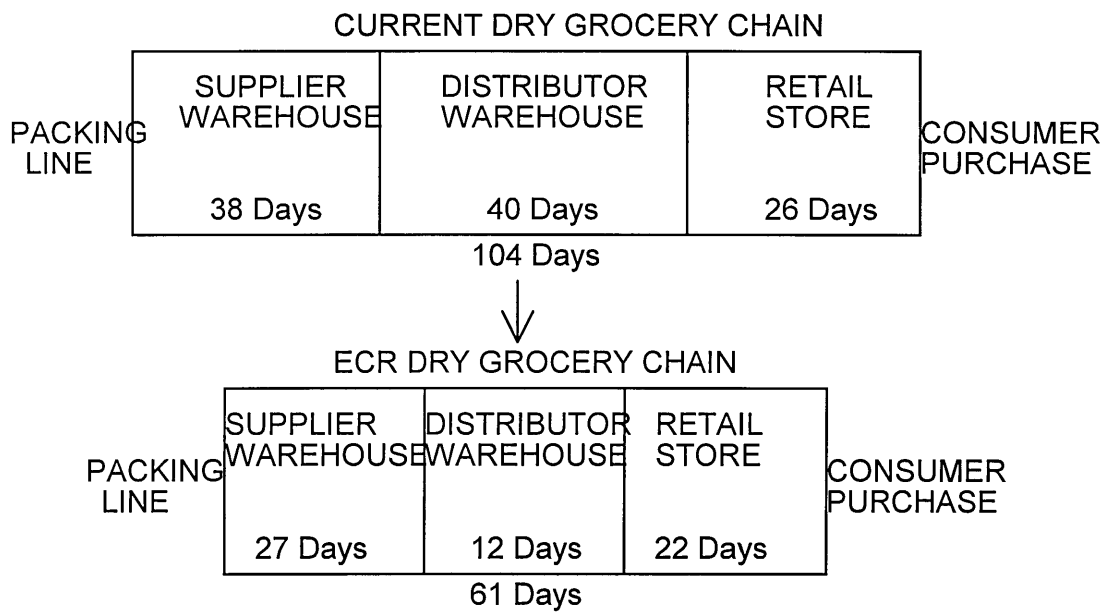
Figure 3.2: An Unlinked System for Supply Chain Replenishment



Source: Kurt Salmon, (1993), p.26.

Both information and product flow quickly, reliably and continuously through the supply chain under a regime of ECR, as opposed to the configuration illustrated above. Kurt Salmon recommends the following improvement in lead times that would be recognised under an ECR regime (a reduction of 40%) as opposed to the current situation, thus illustrating one of the maxims of ECR, to eliminate unnecessary time from the supply chain. The following figure compares lead times and amount of inventory in the traditional grocery chain compared to that under an ECR regime:

Figure 3.3: Comparison of Average Throughput Time of Dry Grocery Chain Before and After ECR Implementation.



Source: Kurt Salmon, (1993), p.28.

One of the main reasons such a large volume of stock exists in the supply chain pipeline is the fragmentation of the chain, particularly in the replenishment process (Fernie, 1994). As is illustrated in Figure 3.2, products and information presently flow through three independent information and product flows: from store to consumer; from distributor warehouse to store and from supplier to distributor warehouse.

Under this regime, stock should be replenished by being pulled through the supply chain by store replenishment orders driven by consumer demand as opposed to the situation in reality whereby inventory tends to be pushed into the warehouse by forward buying and trade deals as individuals in the supply chain seek to fulfil their short-term sales and profit targets. Kurt Salmon identifies trade promotion practices, specifically forward buying, as a major contributory factor to inefficiencies present in the supply chain.

Conceptually, trade promotions seem perfectly logical, a supposedly co-operative marketing activity whereby manufacturers extend promotions or deals in the form of

temporary price reductions to encourage retailers and wholesalers alike to increase their purchase commitments and build inventories (Quelch, 1983; Walters, 1989). The trade then publicises these price reductions to consumers in order to increase their subsequent purchases, with all participants in the supply chain receiving potential benefits. Quelch (1983), however, draws our attention to the fact that such deals are subject to abuse by all parties in the supply chain. During a particularly harsh inflationary period during the 1970s, retailers in the USA took full advantage of this practice, realising that a greater purchase of goods than they would normally sell at a particular time should potentially earn them substantial profit after the deal period through the resale of goods at the original list price. Therefore, retailers were abusing their position by failing to deliver the promise of fully discounted consumer prices. Additionally, manufacturers were unhappy at the escalating costs associated with these trade promotions as retailers failed to adhere to in-store displays as extra resources in terms of time and money were expended on subsidising extra trade promotion and sales representatives time responsible for negotiating discrepancies in deals. Similarly retailers were equally unhappy with these trade deals as a result of the administrative nightmare which accompanied retailers having anywhere in the region of 7-8,000 deals on file at any time (Kurt Salmon, 1993). In an earlier study, when this practice was rife in the industry, 76.4% of retailers complained that they were being offered more promotions than the previous year (Chain Store Age, 1981).

Levy et al (1983) proposed a managerial approach for examining the sales and profit impact of alternative push marketing strategies which has direct implications for managers competing in industries where push marketing strategies are important, drawing our attention to the margarine industry as an example of this. In a later investigation, Hardy (1986), in an exploratory study examining the key success factors for manufacturers sales promotions in the packaged goods industries, establishes the differences between those sales promotions that achieved their objectives and those that did not. He emphasises that for both consumer and trade promotions, the key factors for success differ accordingly to the objectives set and achieved. As most success factors

are within the control of managers, the future management of sales promotions, he recommended, demands a significantly higher level of planning. This corresponds with both the opinions of Quelch (1983) and Levy et al (1986) who each state independently that deals which tend to focus on a short-term orientation at the expense of long-term strategic planning should be tailored individually to the evolving needs of the marketplace.

Walters and McKenzie (1988) highlighted the importance of trade promotions especially in the grocery industry; in fact they quote an American survey in (*Advertising Age*, 1985) which found that \$65 billion was spent on promotions, almost 71% more than the amount spent on media advertising. According to them, once viewed as a strategic weapon against those competitors who were not practising this concept, such promotional activities became common practice throughout the 1980s and were set to encourage increasing attention into the 1990s as competitive pressures were set to increase in the industry.

For the individual distributor, even if carried out in a shrewd fashion, forward buying is now losing its financial appeal as a result of the inefficiencies an increased level of stockholding brings. Similarly, a multitude of additional costs are added in its presence as was highlighted by these authors. Lal (1990), however, would argue with the detrimental effect of trade deals, as in a study of manufacturer trade deals offered for frequently purchased consumer goods (e.g. soft drinks and detergents), he analyses a formal model of manufacturer-retailer-consumer interactions in the distribution chain to explain why trade deals may be in the best interests of manufacturers. In his paper, Lal models the competition between firms to argue that price promotions can be as a result of a long-run profit-maximising equilibrium strategy. Generally, it is thought that the ideas underpinning the practice of forward buying, therefore, are in opposition to the ideals of ECR as unpredictability is encouraged, in addition to the existence of highly variable demand.

The strategies to achieve reductions in both costs and inventory, as proposed by Kurt Salmon, range from category management and space management programmes to maximise sales and margins at store level to making the replenishment cycle more efficient, in addition to the efficient promotion and introduction of new products.

Both distributors and suppliers will recognise almost equal benefits under this regime, with suppliers recognising 54% of total system savings, retailers realising 46% of total system savings and savings to the consumer in the form of reduced prices by approximately 11%.

The principal driving force behind the early developments of ECR have been initiatives embarked upon by individual participants in the supply chain. However, to ensure the widespread penetration of ECR practices throughout the grocery industry, more collaboration and working alliances must be forged between all parties throughout the supply chain as a whole.

Dutton (1993), on reporting on a study of the top US grocery manufacturers conducted by the Grocery Manufacturers of America and Cleveland Consulting Associates (CCA), states that although positive signs exist pointing to the development of ECR in the US grocery industry as a whole, most grocery manufacturers are largely unprepared to capitalise on the concept. This opinion is further confirmed by Khermouch (1993) who states that ECR appears to be facing an uphill climb in most grocers' perceptions. A study conducted by the Myers Research Centre, he writes, reveals that 24% of high level grocery executives claim to be pursuing an ECR strategy, while a mere 12% plan to actually adopt such a strategy. The remaining 64% are not pursuing a strategy of ECR, of which 72% of that group are unfamiliar with ECR practices and procedures.

At an industry conference in the USA on the management of inventory in the supply pipeline, the CEO of Shaw's Supermarkets and an executive from the leading manufacturer Procter and Gamble, whilst crediting ECR for spreading a recognition that

interdependence, improved communication and the elimination of mistrust among manufacturer, wholesaler and retailer is critical to mutual success, state that it will take a number of years for those results achieved in the garment industry detailed previously as it has taken a total of seven years for QR to be embraced by two thirds of the grocery industry (Chain Store Age Executive, 1993).

3.4 MANAGEMENT OF THE SUPPLY CHAIN IN CONTINENTAL EUROPE

Shortly after the publication of the Kurt Salmon report, The Coca Cola Retailing Research Group, Europe, sponsored a project between March 1993 and January 1994 to assess if retailers and their suppliers should collaborate and the potential benefits that would arise as a result of such a collaborative relationship. The programme of research was based initially on five seminar debates attended by 175 companies in five different European locations and an analysis of 127 questionnaires of data and opinions on collaboration which were completed after the seminars. This research was conducted primarily by GEA Consulenti Associati, an Italian consultancy, and their associates ACE, DWP, ITECA, and P-E International.

3.4.1 Analogies Between the USA and Continental Europe

GEA (1994) compare SRC in Europe with ECR in the USA and illustrate three similarities and one major difference between both systems, as they see the cross-fertilisation of both ideas and experiences from the USA a useful exercise. Firstly, a similar driving force exists on both sides of the Atlantic, that is to say the competitive pressure prevailing is to reduce costs in all elements of the supply chain. Similar sets of actions in operations and marketing exist, in fact GEA even agreed to use the same terminology as the American report for comparative purposes. Finally, similar processes of implementation both internally and externally, are present (a club of leading companies, creation of a critical mass of participants, follow-up case studies, development of methods and working instruments, training and communication).

The major difference, however, lies in the potential benefits to be gained. An overall benefit of 10.8% of retail sales turnover is estimated in the USA over a time period of between two and three years. The benefit for Europe is only 2.3% to 3.4% depending on the country concerned, which would tend to indicate that retailers in Europe are much less experienced in terms of logistical excellence than their American counterparts. The research undertaken by GEA (1994), however, does not reveal a programme of collaboration which is applicable to all countries in continental Europe in the same way ECR is being universally applied in the USA. This is a direct result of the fact that individual grocery markets in Europe and their inherent positions on the supply chain experience curve are all at varying stages of development. Starting conditions in Europe in general for such a system of collaboration, however, would appear to be quite efficient. For example, one only has to compare the stock levels in the supply chain in Europe which range from the lowest in the UK at 28 days to 42, in Italy and Spain respectively, 43 in France and 50 in Germany, to the level that the ECR dry grocery chain in the USA would estimate in an ideal scenario, 61 days. From this it would be fair to say that conditions are right for the development of this regime in Europe, as one of the most useful indications of supply chain efficiency, stockholding, is considerably lower in all of the aforementioned countries compared to that in the US. On the other hand, however, it could be argued that such levels of supply chain efficiency has reduced the need for ECR in some countries on the continent of Europe.

A more detailed analysis of where stock is held in these European countries, however, reveals that the UK model of supply chain management is certainly very different to that prevalent on the continent of Europe with distribution practices quite unique to UK grocery retailers.

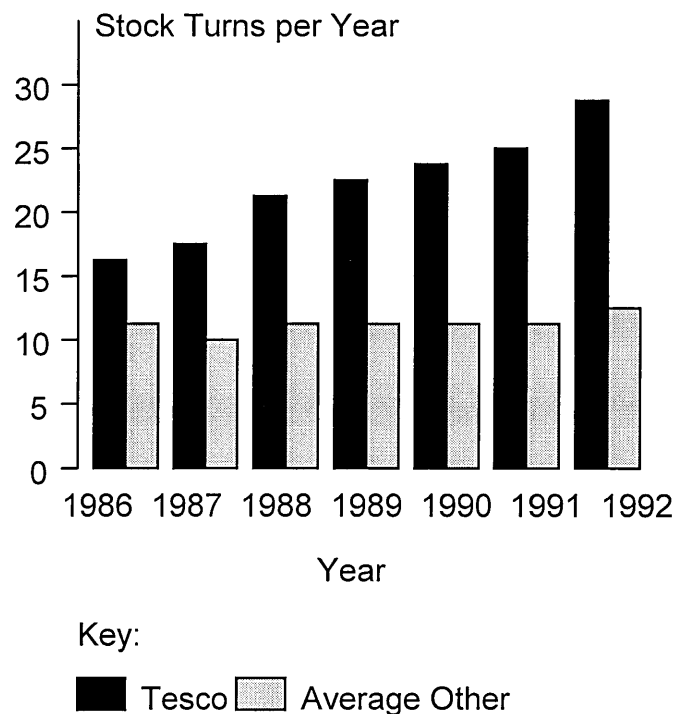
According to Andersen Consulting (1992), QR techniques, or Fast Flow Replenishment as they refer to it, have been used for a number of years by UK grocery retailers and their suppliers of chilled prepared meals. The system works whereby a forecast order is sent to the supplier indicating the likely demand a week in advance by Electronic Data

Interchange (EDI). The retailer then sends a final order often as late as noon on the day of production with the finished meals supplied to a retailer's cross dock overnight for early delivery the next day. They claim that the way forward is the application of the very same techniques to the production and flow of packaged groceries.

It must be borne in mind, however, that unlike the clothing industry which is subject to a variety of different fashion trends and influences, the grocery trade is characterised by fairly predictable demand, which is only really subject to seasonal fluctuations, and a relatively stable product range. Williams (1993) also claims that the grocery trade could lay claims to having practised QR for a number of years.

In recent years in the UK grocery sector, many retailers have made significant moves to reduce the amount of stock held both in their stores and at their distribution centres. Demands by Tesco for more frequent deliveries in order to have a "stockless" back store, as they have increased the number of deliveries from 2-3 per week to 4-5 per week, has in turn impacted on the distribution, inventory and manufacturing strategies of their suppliers. An historical examination of Tesco's pattern of stockholding reveals that this particular grocery retailer consistently had the best stock turnover of any grocery retailer operating in the sector with an average of 30 stock turns per year as Figure 3.4 illustrates.

Figure 3.4: Stock Turnover in the UK Grocery Industry



Source: IGD Research Services.

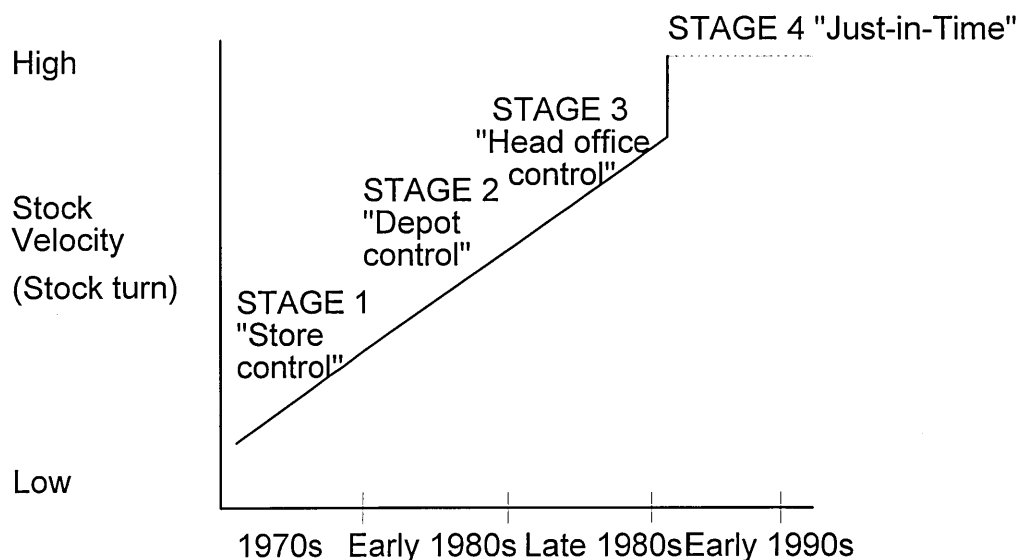
The channelling of stock through a network of regional distribution centres (RDC's), one of the most highly successful innovations introduced by the major multiple retailers in the 1970s and 1980s, and the upgrading of depot networks, was the first step taken by them to embrace the concept of Quick Response. Stores were provided daily delivery of products and lead times were progressively reduced to less than 24 hours for a great deal of the product range. All the major grocery retailers and other significant grocery retailers now have over 90% of their products channelled through a network of RDC's.

Closely linked to the strategy of centralisation, has been the development of composite distribution (Smith and Sparks, 1993). As the name implies, a composite embraces products from all temperature ranges under one roof, from ambient to frozen. Specially designed compartmentalised trailers undertake the physical distribution of products from these different temperature ranges, thus streamlining the delivery process whereby the RDC distributes to large superstores in one trailer rather than sending separate ones for three different temperature ranges; frozen, ambient and chilled.

In parallel with the introduction of such innovations, centralised stock control emerged, a concept which completely altered patterns of ordering and stockholding . The former practice of the store manager, assisted by the supplier's sales force, pushing stock into stores as a consequence of being enticed to buy in volume for enhanced trade deals, began to disappear. The practice of making and receiving orders and deliveries on a weekly basis, which existed prior to the introduction of centralised distribution, additionally began to disappear. Centralisation of this nature, therefore, reduced the ability of the store manager to influence stock levels, resulting in a more consumer oriented approach to inventory control. With responsibility of this function being assumed by head office in the late 1980s, further improvements in lead times and order review frequency were attained with stock in the system continuing to fall to between one and three weeks in some cases (Ferne, 1992).

These stages in the evolution of grocery retail distribution are summarised by Whiteoak's (1993) diagram, Figure 3.5, whereby efficiency in inventory is measured in terms of stock velocity or rate of stock turn:

Figure 3.5: Evolution of Retail Grocery Distribution Practice in the UK



Source: Whiteoak, P., (1993).

Greater supply chain efficiencies are being achieved by a number of multiple retailers in the grocery sector who are providing fast replenishment of stock to stores from RDC's, sometimes referred to as "just-in-time" distribution. Characteristic of this stage, the final stage in Whiteoak's diagram, is the concept of "nil" stock which has been a reality in the movement of short shelf-life (under 21 days) products for some time now, although some of these principles have been applied to a number of ambient goods. Pick by line and cross-docking methods are both important features of this stage whereby goods are transferred from supplier vehicles directly to cages where goods are then transferred to cages in marshalling areas with no put away into storage. Products are then assembled into store specific cages for onward delivery to stores in the chain shortly after receipt.

Consequently, warehousing and transport arrangements are now vital to ensure timeous deliveries to stores as more RDC's are storing less stock with cross-docking fast becoming the preferred method coupled with more stores also holding considerably less stock. The internal layout of the RDC itself is changing as "reserve" slots on the upper racking used for storage is now being replaced by more "picking" slots. Smaller quantities of goods delivered more often are being increasingly required by retailers which is causing manufacturers to reassess their transport arrangements. Fernie (1994) believes that common user transport in the UK may even reappear as a result of retailers' changing delivery requirements.

In terms of achieving further supply chain efficiencies, UK grocery retailers have moved beyond the fourth stage of Whiteoak's diagram to a situation whereby, in order to drive an even greater amount of stock from the supply pipeline, they are assuming control for both primary and secondary distribution, in other words, management of the whole supply chain. Primary distribution involves collecting stock directly from the manufacturer for forward delivery to RDC's. The practice of driving an increasing volume of in-bound stock on to transport fleets at an earlier stage has been commonplace in the non-food sector for some time, for example in the case of white and brown goods.

Penman (1991) has shown that the UK approach to logistics is very different to that followed in Europe and the USA, and will be the model for retailers to aspire to in the future. The situation, however, is complex and dependent on a range of factors pertaining to individual countries. It is not surprising that the UK and other countries, for example, Belgium and the Netherlands, can practice JIT methods of delivery to stores from distribution centres as they are small, densely populated and are high in prime retail locations with road transport dominating in the distribution of fast moving consumer goods (Fernie, 1994).

In marked contrast to stock holding in these countries, in France and Italy, for example, a high proportion of stock is held both at the RDC and at individual store level. This would suggest that parallels can be drawn between these countries and their counterparts in the US as all forward buy and store such promotional stock in mere "sheds".

Bedeman (1990) is of the opinion that the emphasis on promotional goods in more price competitive markets of Europe puts more strain on the supply chain compared with in the UK. For example, he brings our attention to the fact that French retailers were found to be holding 12 to 16 weeks of stock to support promotional campaigns, a marked contrast to Tesco who won an industry award in 1991 for the use of IT which ultimately helped to cut stockholding from 3.0 to 1.9 weeks of stock during the period 1986 to 1991. The practice of forward buying which is prevalent in the US was confirmed to be still in evidence in Europe by Pellew (1993), particularly in France and Spain.

3.5 EXPLAINING DIFFERENT EUROPEAN DISTRIBUTION NETWORKS

From this line of discussion, it is clear that distribution networks and their inherent management practices vary considerably between different countries. Cooper et al (1991) highlight that circumstances in different countries, for example, variations in the type of retailing format, which affects the type of retail innovation that is applicable in different grocery markets, such as centralisation. Fernie (1994) identifies eight factors, among which Cooper et al's observation is included, to explain such variations between different grocery markets, each of which will be discussed in turn:

The extent of retail power

The penetration of store brands

The degree of supply chain control

Different types of trading formats

The geographical spread of stores

Logistics costs

The relative sophistication of the third party contract industry

The level of information technology (IT)developments

3.5.1 The Extent of Retail Power

As was discussed in the previous chapter, the last 30 years has witnessed a tremendous shift in the balance of power between manufacturers and retailers, with retailers assuming responsibility for aspects of the value-added chain such as product development, branding, packaging and marketing. Fernie (1992) has shown that changes in such relationships vary in time and space according to the extent of retail concentration and the degree of fragmentation of suppliers' markets.

The situation in the USA seems to be finely poised as the combination of brand pull and innovative product development guarantees manufacturers' brands space on retailers' shelves (Ohbora et al, 1992). The sheer size of the market renders it very much regional in essence, also adding to the power of the manufacturer as grocery chains tend not to have developed into national concerns for this reason. In marked contrast their

European counterparts have grown from regional into national and in some cases international grocery chains, constantly increasing retail concentration in these markets. Actual concentration levels, as measured by market shares, are subject to intense speculation, an issue which is developed in the next chapter.

Nevertheless, the grocery retail markets of northern Europe, for example, the UK, the Netherlands, Belgium and Germany exhibit high levels of concentration, whereas, those in southern Europe such as Greece and Portugal are the most fragmented grocery retail markets as the wave of concentration which has occurred in the markets of northern Europe has yet to take place in these less developed markets.

It is in the concentrated markets of northern Europe that retailers are the driving force behind both significantly reducing costs and reinforcing relationships with suppliers as they are the most focused in their domestic markets, viewing collaboration as an important competitive advantage (GEA, 1994).

While GEA (1994) believe that conditions exist in Europe which will lead to greater collaboration, they emphasise that it is impossible to create a simple model for application throughout continental Europe. Stronger retailers, however, will make the best partners for collaboration, provided that the strength is not masked as arrogance. Although unable to suggest uniform standards for the adoption of collaboration, GEA placed the larger countries in the study on an adoption curve in order to demonstrate how attitudes towards collaboration differ from country to country, see Figure 3.6:

Figure 3.6: Life Cycle of Attitudes Towards SRC

SPAIN	GERMANY	ITALY	FRANCE	UK
* Little reciprocal knowledge	* Very positive: ready to go	* First SRC attempts	* Very high conflict due to "squeeze and push"	* Very advanced
* Little trust	* Leaders will drive	* Some mistrust, lot of fear	* Some leaders block SRC	* Determined to continue towards strategic SRC
* Busy with other priorities: -growing -infrastructures	* Trust derived from "common goal"	* Some reciprocal knowledge	* High professional potential	* Reciprocal knowledge and trust
* Poor basis of information	* Agreement on key rules	* Need for : - set of rules - a catalyst * "Let's do easy things first"	* Need for an industry catalyst	* Good infrastructures and technology

Source: Interviews and Field Research Seminars, GEA (1994).

At the early stages of the adoption curve are Italy and Spain, where companies feel the need for a catalyst to initiate collaboration which GEA define as *"some process which compares and evaluates the practical advantages of collaboration when compared to the status quo"* (p.92). Although France demonstrates high professional potential, i.e. strong retailers, they too feel the need for a catalyst. Germany appear to be ready for "take-off", with a positive attitude and trust established between supply chain participants, while the UK is the most advanced country on this curve showing a strong commitment towards SRC.

3.5.2 The Penetration of Retailers' Brands

An interesting point concerning retailers' own labels which emerges from the GEA (1994) study is the positive role retailers' brands play in fostering the development of SRC. Commensurate with the growth of powerful retailers has been the development of their own label products. Wileman (1992) states that concentration, i.e. power, is a prerequisite for developments such as own labels and a strong correlation has been found

between own label and retail concentration (see for example Davies, 1992; Boston Consulting Group, 1992).

Traditionally, retailers developed their own labels in direct competition to leading manufacturers' brands often relying on smaller manufacturers for supply of these products (Glemet and Mira, 1993). The GEA research would tend to indicate, in marked contrast, that as own label penetration in some categories has increased (by 25% to 35% in some cases) and a willingness by some of the largest manufacturers to supply such products, strategic collaboration is likely to take place in this area from an enhanced understanding of the end consumer and a clearer definition of their respective market positions.

3.5.3 Supply Chain Control

In the UK the transition from a supplier-driven distribution system to one that is retailer controlled is almost complete (see for example Quarmby, 1990; McKinnon, 1990; Fernie, 1992). Therefore, in terms of the extent of retail control in the supply chain on the continent of Europe, it is logical to assume that countries with a higher concentration of grocery retailers and strong retail branding will assume greater control of the supply chain, establishing their own distribution networks and assuming responsibility for delivery to stores in the retail chain.

The extent of retail control of the supply chain is much less in other parts of Europe and in the USA. Recent reports would suggest that in Europe such control is more evident in the Benelux countries, followed by France, Germany and the Scandinavian countries, with the southern European countries such as Italy and Spain continuing to be dominated by a supplier-led distribution system (Wileman, 1992; Jourdan and Irving, 1992; Cullis, 1992b). Wileman (1992), for example, claims it is still possible to find sales and merchandising forces of 3,000 people providing direct coverage of 80-100,000 retail outlets in Italy and Spain.

The GEA research confirms these findings, to an extent, stating that the UK and France are the most advanced countries in terms of the flow of products passing through retailers' centrally controlled warehouses (RDC's). On the other hand, countries such as Spain and Italy have been left behind in this respect. To rectify the situation, they suggest that greater collaboration between suppliers and retailers in areas such as reducing the high levels of stock that exist in RDC's (partly as a result of forward buying) would allow for greater levels of centralisation of stock leading to a marked improvement in efficiency in the supply chain. Companies in these countries are presently devoting resources to the development of new stores at the expense of rationalising the current stockholding pattern by building new or upgrading existing RDC's.

3.5.4 Trading Formats

The evolution of distribution networks in the UK has been driven partly by the growth of the superstore concept in the grocery industry (Smith and Sparks, 1993). Despite increasing pressure from discounters in a variety of formats and forms (Burt and Sparks, 1994), the UK grocery market still remains untypical of much of continental Europe (Eurostat, 1993), with existing distribution networks being driven predominantly by a single trading format, the superstore. The distribution networks designed to service these stores consist of a small number of strategically located RDC's, often located along the main motorways (McKinnon, 1990), thus facilitating supply on a Quick Response basis to these predominantly out-of-town sites. For example, in 1991 Tesco served its 389 superstores, each with an average floorspace of 25,200 square feet, from 18 RDC's, eight of which were composites, located throughout the UK (Smith and Sparks, 1993).

The situation is very different on the continent of Europe as retailers can have a variety of different formats in their store portfolios, ranging from the smallest superettes, to discount stores, to hypermarkets at the other end of the spectrum. For example, in 1994, the German retailer Rewe, derived the following percentages of sales from a range of

four different grocery retail formats: hypermarkets, 10.6%; supermarkets 32.6%; local/convenience stores, 23.3% and limited line discount stores, 33.4% (Burt and Sparks, 1994). This is in marked contrast to the situation in the UK where the leading retailers Tesco and the Argyll Group derived the vast majority of their sales from predominantly one format, the superstore. Definitions and the penetration and importance of such different formats is discussed in more detail in the next chapter.

3.5.5 The Geographical Spread of Stores

In addition to the type of trading format being served, the geographical spread of stores will also influence the form of logistical support to the retail operation. In the case of the limited line discounters, e.g. Aldi in Germany, few problems are encountered by warehouse managers as deliveries are small in size and are made up of a limited number of lines, as the type of format would suggest (Ferne, 1994). On the other hand, transport arrangements are more complicated as a large number of stores have to be served which are predominantly located in neighbourhood areas and town centres, as are common characteristics of this type of format (Burt and Sparks, 1994). Under such delivery conditions, consideration has to be given to the time of day, perhaps avoiding evening deliveries if made in residential areas and the size of the trucks must be assessed if delivery to stores in difficult to access pedestrian shopping precincts is necessary.

Ferne (1994) contrasts this with retailers who have extensive product ranges, for example, who will require strategies for slow-moving items in addition to an area in the warehouse dedicated to quick response requirements.

The physical distances covered between depots and stores are also an important consideration when comparing differences in distribution networks. Smaller countries where smaller distances have to be covered, for example, the UK and Benelux countries, are more likely to be able to carry out fast flow replenishment from RDC's to stores.

Thus, Cooper et al (1991) found that the development of the RDC was more applicable to the highly urbanised countries of northern Europe, with innovations in retail logistics such as centralisation and composite distribution enjoying limited application in countries such as, for example, France and Spain. In both of these countries, retailing is predominantly based on the hypermarket retailing format, stores which often have a largely "stand-alone" status within regions. Thus, it is not always feasible to serve them from separate distribution centres. Furthermore, the sheer physical size of countries such as France and Spain and the distances which have to be travelled often make it difficult to guarantee next day delivery of products. Factors such as these explain why a greater amount of stockholding occurs at store level rendering another link in the supply chain in the form of a centralised distribution system redundant.

Fernie (1992), however, states that those retailers who have centralised have done so differently to the UK and that such depots resemble the product category warehouses of the British retailers operated a number of years ago. For example, Auchan, one of the leading hypermarket chain in France, operates a limited RDC facility in Paris and even where RDC's are used 80% of volume is delivered direct to stores (Fernie and Penman, 1994).

Centralisation in Spain, however, tends to be less developed than it is in France, although sophistication in distribution is becoming clearer, for example, in Spain the multiple retailer Mercadona has highly automated centralised warehouses with a level of centralisation of between 85% and 90% (Cullis, 1993).

3.5.6 Logistics Costs

Fernie (1994) states that the make-up of components of logistics costs is complex and dependent on a range of factors relatively unique to individual countries. Cullis (1993) also confirms that it is interesting to compare the relative expenditure and costs attributable to the logistics function in Europe prior to considering the individual retail operations in European grocery markets.

As a percentage of sales, the highest expenditure on logistics is in France at 7.22% of sales, with the lowest in the Netherlands at 4.62%. The European Logistics Association (ELA, 1991) who undertook this survey suggest that demographics may have an impact with regard to these costs in France where there is a low population density, compared to the Netherlands, a very densely populated country. Thus, Fernie (1994) states that is not surprising that in countries with high urban densities such as the Netherlands, retailers have moved furthest down the route to fast-flow replenishment systems.

The ELA survey highlights France as having the highest costs for holding inventory, a factor which could be explained by the presence of the hypermarket format and their capability to hold stock in the back store as a result of their stand alone and often isolated locations.

While the ELA survey provides some interesting points concerning European logistics cost data, it must be stressed that these assertions are based on a general market survey of which the retailing sector is only a part.

3.5.7 The Role of the Contractor

Academics have shown that the UK is fairly unique compared to other countries with regard to the role of the third party contractor in that distribution specialists provide a dedicated distribution service to retailers, i.e. the management of RDC's and transport for one client as opposed to a consolidation service for a number of customers (Penman, 1991; Cooper et al, 1991). Compared to their UK counterparts, generally speaking, European grocery retailers tend to operate warehouses on a smaller scale and in larger numbers which are predominantly operated on an "own account" basis. Contracting out is being slowly adopted on the continent of Europe, a phenomenon which was prevalent in the UK during the 1980s.

Fernie (1992) lists the following factors which explain the absence of contracting out in retailing in these countries:

(i) Less sophisticated logistical support is necessary which is a function of the structure of individual markets. Low specification needs do not require the same level of sophistication as is prevalent in the UK.

(ii) Tariffs and permits applied on an individual country basis has created national "protected industries" which is in marked contrast to the liberalised transport market which has been in existence in the UK since deregulation in 1968. Furthermore, due to the high profile of professional distribution companies in the UK retailers are more comfortable about entrusting their distribution operations to contractors than is the case in the rest of Europe.

(iii) UK retailers can achieve a greater return on capital from their core business as opposed to their distribution operations. Throughout Europe, however, retailers are not as profitable as in the UK (Parienté, 1994).

(iv) The final factor is for accounting reasons, i.e. the ability to finance "off balance sheet" financing. Although dedicated to them by the distribution company, UK companies do not own the assets by contracting out, which ultimately results in overall capital employed. On the other hand, German companies seek large balance sheets with owned assets because of the nature of their financial structure (Bedeman, 1990).

The growth area in terms of retail distribution in these countries is the common user service which was prominent in the UK during the 1970s and general haulage services. This concept was superseded in the UK by dedicated contracts.

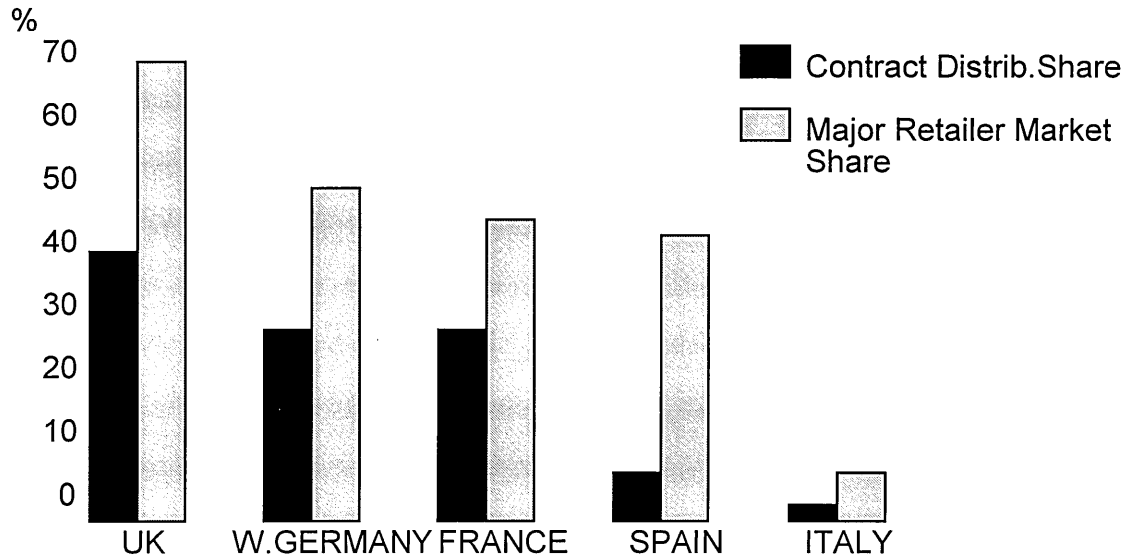
The use of professional third-party distributors for the provision of a dedicated distribution service to retailers (both the integrated management of depots and transport to stores), is a characteristic unique to the UK grocery market compared to the situation on the continent of Europe where a more fragmented approach prevails with warehousing carries out "in-house" and transport generally the domain of local,

independent haulage contractors (Penman, 1991; Cooper et al, 1991). This is illustrated in the latter's observation:

"A switch to third-party logistics can enable a manufacturer or a retailer to concentrate on their core business, and while contracting out the entire logistics function is largely a UK phenomenon, this can be expected to spread as deregulation develops" (p.202).

The differences between countries and their individual approaches to contracting out are largely related to the level of sophistication of their markets (Ferne and Penman, 1994) and it has been shown that there is a strong relationship between the concentration of retailing, the level of own branding and the degree of control of the supply chain in individual country markets (Ferne, 1992). In a study of five grocery markets NFC (1989) found a strong relationship between concentration of grocery markets by multiple retailers and the degree of third party penetration as the following, Figure 3.7 illustrates:

Figure 3.7: Third Party (Contract) Distribution Share as Compared with Major Retailer Market Share



Source: NFC Contract Distribution Report, (1989).

3.5.8 The Development of Information Technology (IT)

According to Fernie (1994), the key factor inhibiting or accelerating collaboration in the supply chain is the adoption and implementation of IT. Those technologies which facilitate the implementation of QR initiatives have been in place for some time he claims, but it is their adoption which has been slow. The importance of information technology as an underlying concept to the development of ECR can not be stressed enough, GEA (1994) state that *"information technology (IT) is one of the most important levers for the development of Supplier-Retailer Collaboration"*. Thus, the author believes it is relevant to discuss the subject in more detail.

Many have identified the main facilitating technology for successful formation of QR partnerships as Electronic Data Interchange of EDI as it is commonly referred to in the grocery industry (Jaffe, 1991; Whiteoak, 1993; Machell, 1993; Magrath and Hardy, 1994; Hobson, 1993, O'Callaghan et al 1992, to name but a few). Bamfield (1994), however, stresses that EDI should be regarded as an enabler for firms wishing adopt relationships and not as a condition of supply chain partnerships. The implementation of an EDI communication system between different organisations can bring an almost paperless flow in the order, delivery, invoice and payment cycle by electronically

exchanging purchase orders, advance shipping notices, transport documents and payment advice, to name but a few documents.

EDI is not a new phenomenon, for 25 years it has apparently been the subject of development within the transport industry specifically to find a common method for the coding of various freight documents (Menkus, 1990). Consequently, in this sector it has evolved into a sharing of information with the aim of completely eliminating the movement of transport document.

Despite its first forms being evident in the late 1960s, Bamfield (1994) looks on EDI as a young technology and through his extensive research into EDI and its adoption, he has traced its uptake with UK retailers as being slow from the early 1980s, although it has unexpectedly accelerated into the following decade. Although technically and commercially feasible in the mid-1970s, legislative restrictions did not permit the electronic transmission of VAT invoices. The Finance Act of 1980, however, amended this constraint.

The exchange of invoices and orders on paper and magnetic tape had been occurring between a number of larger retailers since the mid-1970s. It was found that from as early as 1972, Boots was receiving 15% of its invoices from one supplier. By 1979, orders and invoices were being exchanged with as many as 15 suppliers (Bamfield, 1994). EDI and the benefits of its adoption were borne out of retailers interest in developing Electronic Point of Sale (EPOS) systems, according to Bamfield (1994). Trials of the new technology were preceded by the development of common bar coding and the overhauling of company systems on product files, a system which was previously incomplete and inconsistent.

3.5.8.1 IT Implementation and Associated Benefits

The use of information technology (IT) in many British retailing companies can be attributable to their unfounded success, especially in the grocery sector (Dawson, 1994).

For example, Tesco is quoted widely in the field of IT developments in the grocery sector, especially where electronic trading with suppliers is concerned.

IT plays a crucial role in improving efficiency by primarily shortening lead times, the time it takes from placing the order to its receipt, by providing details of customer demand more accurately, speeding up the ordering process and optimising delivery networks thus ensuring goods arrive at the stores for sale as quickly as possible.

3.5.8.2 Barriers to Adoption of EDI

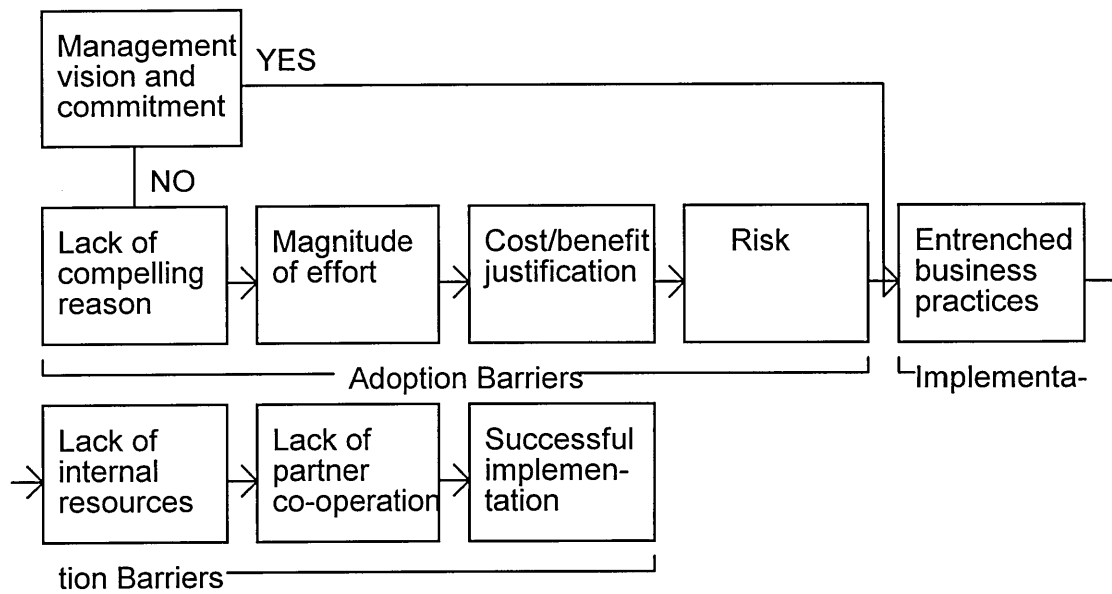
From this it could be argued that EDI is a relatively simple form of technology with no real problems being presented conceptually, only a number of obstacles to overcome in the implementation stage as GEA (1994) found from their research, which are as follows. Firstly, there is, what they refer to as "*an insufficient critical mass*" (p.51). That is to say many companies are faced with the problem of the lack of a significant volume of partners with whom to link up. On the one hand, large suppliers possessing a solid competitive stance are reluctant to begin collaboration of this nature in that they feel that the effort they expend in doing so will be an advantage to a number of companies in addition to themselves. Whereas, as far as smaller suppliers are concerned, whilst they would have the most to gain from such a system as their competitive position would ultimately be enhanced, perhaps they would not have the capacity to mobilise a significant number of counterparts.

Secondly, GEA point out that while the technical architecture which supports EDI is relatively well known and developed, a standard of reference for the sector as a whole needs to be consolidated as many larger retail organisations are currently using different value-added networks (VANS) to carry their EDI transactions. They point out that in countries who are supposedly pioneers in this field, for example, the UK, Germany, and Austria, France and Belgium, domestic EDI standards are still in place, whereas the EDI standard EDIFACT is beginning to gain ground in those countries who have only started using EDI. GEA state that although current use of the UN/EDIFACT standard is

limited in use, as a result of its recognised international standing and the consequent economy of use it provides, it will spread at the expense of those other domestic or national standards which are presently in place. The last obstacle with regard to the adoption of EDI is integration of the concept with existing systems and applications and their subsequent adaptation to meet new requirements. The GEA research shows that, despite a notable effort to renew systems, substantial scope still remains for further development as the general age of applications amongst retailers and suppliers alike is generally quite substantial.

Machell (1993) claims that US retailers are more advanced than their European counterparts with regard to their adoption of quick response technologies. However, research carried out by the Horizon Scan Project tends to indicate that similar barriers to adoption to EDI exist in the US in addition to the USA and are summarised in the following Figure 3.8:

Figure 3.8: Barriers to Technology Adoption



Source: Uniform Code Council, (1993).

Four types of factors are identified by Walker (1994) which are said to influence the use of EDI in the UK, France, Germany and France specifically. These factors are categorised into pre-requisites (essential for EDI to occur), shapers (organisations which influence EDI development, inhibitors and accelerators (factors such as both industry and management commitment. Applied to these four countries the presence of these factors can be summarised as follows in Table 3.1:

Table 3.1: The Relative Prospects for EDI in Specific Countries

Relative Prospects for EDI				
Factor	UK	France	Germany	Italy
Pre-requisites	Excellent	Poor	Poor	Poor
Shapers	Excellent	Moderate	Poor	Poor
Inhibitors	Low	High	Moderate	High
Accelerators	High	Low	Moderate	Moderate

Source: Walker, M., (1994)

As is apparent from this table, according to Walker, the UK stands out as the clear leader in terms of EDI usage. In Italy, in marked contrast, all the factors would appear to work against the adoption of EDI, specifically, an insufficient critical mass of participants with whom to forge EDI links, a lack of management commitment, the cost of telecommunications and the problem of availability of common standards. Most of these issues were previously highlighted by GEA as major obstacles to adoption of EDI. Problems of this nature place Italy right at the beginning of the adoptive curve.

3.5.8.3 EDI - European Leaders and Followers

The retailing sector as a whole, including suppliers, is one of the most advanced users of EDI. The research carried out by GEA in 1994 on behalf of the Coca-Cola Retailing Research Council discussed earlier, found that over 70% of the respondents in their survey had EDI technology in place, a figure which they project to almost 100% by 1996 for the whole of the sector.

Thus from the line of discussion developed in the previous section, it is clear that grocery retailers in the UK specifically that are apparently at the forefront of linking electronically with suppliers and benefiting from the resultant efficiency in stock replenishment that implementation of such systems brings. In terms of EPOS development, a prerequisite for the implementation of EDI, by September 1992, Tesco scanned 96% of turnover, making them the largest food scanning operation in the UK. As far as electronic trading with suppliers is concerned, Tesco has 1200 of its 2500 suppliers linked in to trade electronically. Other grocers are quoted as having similar links, Sainsbury with 700 of its suppliers and Asda with 595 of its suppliers (EAN, 1993).

In terms of actual EDI usage, GEA (1994) have found that the UK stands out from all other European countries, providing a benchmark for them to aspire to. France follows as a close second, with much less usage exhibited in Germany, Italy and Spain. Additionally, when electronic trading is carried out in these other countries it is limited

to the largest suppliers only, with the exception of the UK. Ody and Newman (1991) confirm this finding by quoting an example of one of Tesco's suppliers, a Welsh goat farmer who is ready to deliver the required amounts of goats cheese, milk, and yoghurt within a matter of hours.

Trying to obtain data on the penetration of EDI in the European grocery sector in a published form for comparative purposes, similar to those previously quoted for the UK, is an extremely difficult task. The European Article Numbering Association's report of EDI in the EAN community in 1992 attempts to break down by sector and retailer the number of suppliers with whom they have EDI links. However, they fail to disclose out of how many suppliers this is representative to establish whether penetration is extensive or not. This data collection exercise and its associated problems will be further developed in Chapter 4. However, from personal communication with a number of IT consultancies and third party network providers in an attempt to obtain hard data on the penetration of EDI in the grocery sector in Europe, the author found that the UK was generally ranked as the leader in the field, followed by France and possibly the Netherlands and Germany following on from there.

Various other findings, of a more qualitative nature confirm GEA's latest findings. At an IGD conference in 1991, an executive from Procter and Gamble quotes the following figures concerning the awareness of EDI in Europe as Table 3.2 illustrates:

Table 3.2: Awareness of EDI in Selected European Countries

Country	Awareness of EDI
UK	70%
France	40%
Netherlands	30%
Italy	25%

Source: Helleman (1991)

In terms of actual applications, the UK is the most advanced country in terms of EDI usage, although the figure is a mere 25% of respondents reporting actual applications (Helleman, 1991). This point is reinforced by Fernie (1994) who quotes an example of Sir John Harvey-Jones' criticism of the slow adoption of EDI by British industry at a recent conference despite the fact that the UK is the leader in Europe in terms of its implementation.

3.6 QUICK RESPONSE -REVOLUTION OR EVOLUTION?

GEA (1994) and their associates found that collaboration was already underway in some European countries and is a trend which will continue to permeate the grocery sector throughout the rest of Europe. The benefits will be split 60% and 40% between retailers and suppliers respectively. Various levels of efficiency in terms of the benefits recognised from SRC across the European countries studied has been observed, with the UK and France most advanced in the reduction of costs, thus demonstrating less potential for improvement than their counterparts in Italy, Germany and Spain where the opposite is true.

The starting conditions necessary to allow these improvements to take place are quite different in each country, with collaboration assuming a different priority in each. For example, companies in the UK and France are more concerned with projects related to increasing gross margins, with those in Germany, Italy and Spain who, at least at the outset, will be more concerned with the reduction of costs.

Considerable debate among industry practitioners concerning the implementation and stages of development of QR in different markets currently exists. Machell (1993) argues that QR is well advanced and developed in the USA, whereas in Europe it is restricted to a few of their large customers in the UK, France and Germany. In the UK, however, some would argue that recommendations proposed for the adoption of QR in the US grocery sector have already been implemented (Fernie, 1994). Smith (1993) also

acknowledges that it is the British grocers who lead the world in terms of QR in the fast moving consumer goods sector.

To eliminate as much stock from the supply chain as a whole is the overall objective of QR partnerships, as has been the subject of discussion throughout this part of the chapter. In an ideal scenario, no inventories would be maintained, product would only be moved to a different location as it is required. This would lead perfectly to the idea of a retailers using a cross-dock to eliminate stock from his part of the supply chain. However, one must consider the stock of the manufacturer and the implications for it under such a regime. As an alternative to pushing unwanted stock from his part of the supply chain, the retailer should ideally assist in the elimination of manufacturers stock, which would in the long run benefit in terms of reducing manufacturers costs, which would then be potentially transferred to retailers and end consumers in the form of lower prices.

In order to help manufacturers eliminate stock from their side of the supply chain, retailers could provide manufacturers with valuable information in the form of sales and likely demand thus allowing the manufacturer to schedule his production cycles accordingly (for an account of this ideal from a manufacturer's perspective, see Whiteoak, 1993). Research undertaken both in the US and the UK would tend to indicate that, while most of the aforementioned barriers to adoption of EDI should be gradually overcome in the future, the main obstacle to a regime of Quick Response as a replenishment strategy may well lie in the area of sharing EPOS data (Bamfield, 1993; Mercer Management Consulting, 1993).

3.7 CONCLUSION

This chapter has demonstrated that the logistical environment differs markedly between countries. For example, it was shown that the level of stock held in the grocery supply chain in the USA stands at around 104 days (see Figure 3.3) which is in marked contrast to the UK as the GEA research found stock levels in the UK to average at around 28

days. Furthermore, the remaining European countries included in the GEA study were found to possess the following stock levels: 42 days in Italy and Spain respectively; 43 days in France and 50 days in Germany, levels which are clearly lower than the ideal level which would be typically realised by an ECR dry grocery chain, 61 days.

That the USA and other continental European countries hold more stock in the supply chain is indicative of a number of factors, for example, conflict rather than collaborative relationships between retailers and their suppliers, the existence of forward buying practices and holding promotional stock, in addition to a generally slower uptake of quick response technologies, particularly EDI.

Thus, it has been shown that countries throughout continental Europe are at very different stages of development with regard to current supply chain management techniques with the UK perhaps further down the learning curve, having reaped the rewards of supply chain efficiency since the turn of the decade. However, it must be borne in mind that those approaches to distribution and logistics practised in individual country markets is dependent on a range of factors. For example, Cooper et al (1991) pointed out that variations in the type of retailing format in a country affects the type of retail innovation, such as the development of a centralised distribution function, which is applicable.

Thus, the aim of the following chapter is to establish to what extent grocery retail markets differ across continental Europe and the level of development of distribution and logistics practices which arise therein.

CHAPTER 3 - REFERENCES

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CHAPTER 4

EUROPEAN GROCERY RETAIL STRUCTURES - RESEARCH OBJECTIVES AND METHODOLOGY

4.1 INTRODUCTION

Fernie (1992) stated that the evolution of distribution networks in Europe is a function of the balance of power in the marketing channel between manufacturer and retailer and that relationships between such channel participants vary in time and space throughout the continent of Europe according to a variety of factors. The current research investigation is based on a piece of exploratory research conducted by Fernie (1992) on retailers' distribution strategies which examined grocery retail market structures, manufacturer-retailer relations and the degree of sophistication of professional distribution providers, concluding that the greater the retail concentration in countries, the higher the level of retail branding and quality of distribution service support will be present. Retailers will subsequently centralise their stock in fewer, larger regional distribution centres which will be managed by the retailer or contractor working on behalf of the retailer.

It was concluded from Fernie's (1992) paper that the UK had moved furthest down this route to retailer-controlled distribution and is perhaps unique compared to other countries on the continent of Europe where distribution remains much more fragmented and more manufacturer driven. In a later article, Fernie (1994) identified specifically eight key variables believed to be responsible for the variations that exist in distribution networks across the continent of Europe. The claims which were made in this exploratory research will be tested through an assessment of the key variables identified by Fernie (1994), supplemented by other variables thought to be important by the author which explain grocery retail structures in Europe with particular reference to the impact of changing supply chain relationships on distribution and logistics practices.

The data collection phase of a research investigation draws on two main sources of information, distinguished as being of a primary or secondary nature. Secondary sources consist of existing or published data and the search through them should be the first step in any marketing research project. The results of such a search can be gathered quickly and inexpensively compared to primary data.

In the first stage of this research, therefore, secondary data were collected for 18 variables relevant to explaining supply chain relations in a logistical context from a number of published sources and were applied to 10 European countries to identify if homogeneous groups of countries exist. Some of these variables which were thought to be important in determining, for example, the structure of the market, were sub-divided into three main groups, namely market structure, trading format and socio-economic variables. The other variables, however, have not been discarded as they help to explain the way in which various countries have been grouped together in terms of having similar characteristics. This, however, is discussed in greater detail in the next chapter. Thus the variables under investigation are as follows:

*** Area**

*** Comparison of road transport infrastructures, to include-**

a. Length of all roads

b. Road density

*** Standard of living**

*** Population density**

*** Food outlet density**

*** Dominant trading format-**

a. Supermarket density

b. Hypermarket density

c. Discounters share of domestic food retailing

*** Own label penetration**

*** Food sales by form of organisation, i.e. share of the market accounted for by the following types of retailer-**

a. Multiples

b. Co-operatives

c. Independents

*** Market share of the top five grocery retailers**

*** Development of information technology**

*** Degree of foreign involvement**

*** Degree of involvement in vertical channels, assessed by the-**

a. Percentage of turnover derived from wholesaling activities

b. Percentage of turnover derived from manufacturing activities

Based on the results of a statistical analysis of the secondary data collected for these particular variables, which generates a meaningful taxonomy of grocery retail market structures, the second stage of the investigation involves undertaking follow-up primary research with the main supply chain participants in order to determine how logistical support to retailers varies in time and space throughout Europe and the changing nature of supply chain relationships at a pan-European level. Both the methodology employed for this piece of primary research and the results obtained are discussed in Chapter 6.

Prior to giving an account of the variables used to generate the taxonomy of grocery retail market structures, the author highlights some of the problems encountered when collecting data for a number of different countries for purposes of cross-comparison.

4.2 PROBLEMS ASSOCIATED WITH THE COLLECTION OF SECONDARY DATA

Research into secondary sources of data is a sensible preliminary to any primary, or field research. Not only is it possible that the required information is already in a form which requires retabulation, but research is also essential to indicate the nature of the data to be obtained by survey or experimentation. Further, secondary sources are usually more accessible and offer savings in both cost and time.

Cateora (1990), however, identifies three major shortcomings of collecting secondary data on foreign markets when undertaking international marketing research, namely availability, reliability and comparability of data.

4.2.1 Availability of Data

Much of the secondary data a researcher is familiar with accessing in developed markets may simply not be available for many countries. The availability of data tends to be a function of the country's involvement in international business, i.e. as a country becomes more involved in the international business arena, a greater interest in sound data and subsequent collection methods exists. Kahler, (1983), however, states that although considerable data are available on developed/developing nations, they may be less detailed and sometimes less reliable.

Both availability and accuracy of secondary data tends to increase as the level of economic development increases (Cateora, 1990). An exception to this rule of thumb, for example, is India which has more accurate and developed government collected data than many Latin-American countries despite being at a lower level of economic development. In the specific context of this research, it was found that for the most affluent member state in the EC in terms of per capita GDP, Luxembourg, there is a general shortfall in the reporting of detailed retail statistics.

4.2.2 Reliability of Data

Although available, data may not have the level of reliability or accuracy necessary for decision making purposes for the following reasons:

(i) Rather than reflecting reality, official statistics are sometimes too optimistic and tend to reflect national pride, of which employment statistics in the UK are a pertinent example. This factor is particularly evident in underdeveloped countries who have poorly defined marketing infrastructures when reporting economic data. Countries in southern Europe often carry out censuses on the retail trade which are sometimes less

reliable as they are not carried out with such accuracy and frequency as, for example, in the UK. For example, in Portugal information on the retail trade is scarce and not always exhaustive as the current state of registers means that the number of local retail outlets cannot be known with an acceptable degree of accuracy, similarly in the absence of official data on retail turnover, estimates must be relied on providing rough indicators of the turnover of individual retail sectors that comprise the overall trade (Eurostat, 1993). In the UK, in marked contrast, the intermediate retail inquiries which update the full retail census (last undertaken in 1971) on an annual basis, publishes the results of a sample of retail businesses, covering a wide range of variables such as stocks, capital expenditure, total turnover, retail turnover, retail sales by special forms of trading, purchases, outlets and persons engaged, thus generating a broad range of trends in the retail sector.

(ii) Cateora (1990) identifies differing policies in the EC as another factor affecting data accuracy. For example, foreign trade statistics may be slightly inflated to allow countries to take advantage of EC grants in the form of export subsidies.

A factor which Tull and Hawkins (1990) identify as affecting reliability and accuracy is the timeliness of the data. Research problems usually require information that is current, however, most secondary data have been in existence for a number of years. Using the example of the Retail Inquiry in the UK which is conducted annually, the most recent edition available is from 1992 as it takes approximately two years to publish and process the results which renders the data relatively out-of-date. On the other hand, the equivalent in Portugal, the annual survey of enterprises (INE), did not begin until 1987 and the most recent information refers to the 1988 financial year, illustrating where discrepancies exist with reference to the timeliness of data.

4.2.3 Comparability of Data

The final problem Cateora (1990) highlights involves the comparability of data.

Albaum et al (1989) identify the issue of comparability as being an important one that

can impede data collection and the subsequent conducting of research into international markets.

In developed economies like the UK, current sources of reliable and valid estimates of, for example, socio-economic data and business indicators, are readily available. In some countries, however, especially those which are less developed, data may be out of date in addition to having been collected at irregular intervals. Despite these countries beginning to collect more reliable data, there is none of a historical nature with which to compare the most recent information, as the above example regarding the annual survey of Portuguese enterprises illustrates.

The factor of timeliness was an issue for some of the variables in this research investigation with data more recent in some countries compared to others as a result of differences in the timing of censuses, for example. Thus data from different years are included as it was the most comparable set of data available in order to permit the author to obtain a cross-section of a selection of European countries in the generation of a meaningful taxonomy of similar countries.

Related to this problem is the collection and reporting of data, especially the fact that the definitions used may not be the same. Keegan (1989) illustrates this point by stating that in Germany, for example, the purchase of a television set is classified as an expenditure for "recreation and entertainment", whereas the same expenditure falls into the classification "furniture, furnishings and household equipment" in the USA. In the context of this research the definition of a "supermarket" differs markedly between countries, an important point which will be discussed at a later stage in this chapter.

Lack of comparability often arises when collecting data from a number of different countries and has been a problem for researchers and decision makers in the distributive trades for a long time. Tordjman (1986), however, provides the only academic study which addresses the methodological problems associated with collecting data for a

number for countries for cross-comparison when he considers the difficulties encountered when comparing various European distribution systems. He states that *"in spite of the efforts of most European countries to provide statistical data on their distributive systems, we still have problems when it comes to analysing the data. The problems encountered when studying a single country are obviously multiplied upon expanding one's field of study beyond national borders"* (p.15).

Despite the difficulties encountered in his cross-country comparison, one example being that the basic definitions of various trade forms are not always comparable, Tordjman (1986) reached a certain level of comparability between six European countries (Germany, France, the UK, Italy, the Netherlands and Switzerland) and illustrated that while the general trends of all these countries are comparable, there remains some specificities in the development of trade forms from country to country. From this study he concluded *" that while basic trade trends seem to be homogeneous, there are varying results for the different retail trade forms from country to country. Yet, the lack of stability in the available sources of data and the inherent dangers of comparing national statistics from different countries, should make us proceed with great caution when undertaking international comparative studies. It is essential that we begin the all-important task of harmonising and clarifying trade statistics, in order to move towards a fuller knowledge of international trade"* (p.29).

This problem, however, was not identified at a European level for over five years after the publication of this study with the emergence of a compendium of statistics pertaining to the retail trade in EU countries (Eurostat, 1993). This particular publication, which attempts to achieve the level of statistical harmonisation which Tordjman (1986) originally proposed, was initiated by the Council of Ministers who stressed in a resolution in 1989 the significance of distributive trade statistics in the EU member states.

As a result, Eurostat embarked on an action programme with the aim of collecting and disseminating information available in member states from both public and private sources, developing a common methodology which ensured the comparability and reliability of the available statistics, by carrying out pilot surveys to test the rules governing the classification of enterprises and local units and collecting harmonised information concerning distribution and trends on a regular basis. The publication is comprehensive and is one of the first to have evolved through this initiative devised by the Commission of the European Communities.

The publication of *European Retail Statistics* in 1993 by the Corporate Intelligence Group (CIG), a leading publisher of retail statistics, updates and expands the statistical evidence they collected for their 15 volume series *Retailing in Europe* in 1991 reporting change and developments in retailing in 17 European countries. This new publication post-dates the Eurostat publication, from which it draws heavily, and although the importance of their report is highlighted in its own right, they feel it complements the earlier Eurostat publication.

As with the Eurostat publication, the Corporate Intelligence Group report draws on data from national statistical offices or government equivalents in each country as the prime source of information. Government statistics have been supplemented, where necessary, by information prepared by national research institutions, e.g. the Institute of Grocery Distribution (IGD) in the UK and by private research companies and management consultancies. The retail trade press in some countries is also invaluable in enhancing and interpreting official statistics. Corporate Intelligence Group, however, incorporate considerable extra categories of information by deriving estimates of sales at both national and sectoral levels using volume and value indices and take into account those countries of Western Europe who are not members of the EU. Nonetheless, this report also contributes greatly to the understanding of European retailing, whilst acknowledging that the lack of common methods for collecting, monitoring and

presenting information on the retail trades is a potentially inhibiting factor when researching European retailing.

4.2.4 Validation of Secondary Data Sources

The three major shortcomings of secondary data collection detailed above should be taken into account when using sources of secondary information. Secondary data from any source must be checked and interpreted carefully despite the fact that many countries have the same exacting standards of collecting and preparing. Cateora (1990), therefore, suggests that the following questions should be asked by the researcher when considering the reliability of sources of data:

- (i) Who collected the data? Would there be any gain from a misrepresentation of the facts?
- (ii) What purpose was the data collected for?
- (iii) Through which method were the data collected?
- (iv) Are the data internally consistent and logical in the light of known data sources/market forces?

By drawing heavily on the Eurostat report for the purpose of this research, the above conditions were satisfied as the publication was derived from national statistics which Eurostat justify at the end of each country chapter. However, where comparable data were not available in such a published form for some of the variables, in particular the company specific information, data were collected from a number of alternative secondary sources, for example, company reports, management consultants reports, the trade press and information from trade associations such as the Institute of Grocery Distribution (IGD) in the UK and their equivalent body in Belgium, Comité Belge de la Distribution (CBD). These data, however, were cross-referenced among their different sources to check their validity as far as sources would permit. Tordjman (1986) highlights the importance of such a cross-checking exercise in the following quote, "*on a national level alone, the various organisations publishing such information*

(statistical data on their distribution systems) *present us with divergent results, thus necessitating a good amount of cross-checking and verification in order to explain those differences"* (p.15).

Despite the difficulties encountered with gathering the secondary data for subsequent analysis, every effort was made to find comparable secondary data for all the variables in each of the countries, although there are inevitably some missing values.

4.3 COUNTRIES UNDER INVESTIGATION

Prior to the appearance of these publications, the gathering of secondary data for this study had already commenced. In the first instance it was decided that all countries in Western Europe should be included, that is to say, the 12 member states of the EU and non-EU nations such as Switzerland and Austria and the former EFTA countries. However, further investigation revealed that not all the relevant data were available for these countries from current sources of secondary data.

With the publication of *Retailing in the Single European Market* by Eurostat which provided comparable data for all member states of the EU, it was decided to examine EU countries only, generating a complete data set for 12 countries rather than an incomplete set of data possessing a number of missing values for 17 countries. Eurostat provide structural data only for the former EFTA countries in terms of population, area, density, living standard. However, it is hoped that more retail specific data will be collected in the future for these countries in line with the common methodology they developed for the EU countries.

Even with the publication of the Corporate Intelligence Report in 1993 which included more retail specific data for the former EFTA countries, the data required for this study was still not readily available for some of the variables. It was decided, therefore, to limit the study to the following countries:

Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the UK.

As far as Germany is concerned, Eurostat bring our attention to the fact that official statistics in Germany up to 1991 refer to the FRG (West Germany), but they do acknowledge the new "Länder" include the data where available. At this point, however, it is worthy of comment that two countries were excluded from this study as the absence of data for a number of the variables meant that too many values would have to be estimated in any subsequent analysis. Although the most affluent country in Europe in terms of standard of living, retail specific information was not available for a number of the variables in Luxembourg, thus excluding this particular country from the study.

Furthermore, Ireland was also excluded as a direct result of a lack of data for a number of the variables, a factor which tends to be a function of the underdevelopment of the retail trade. It could be argued that a number of countries in southern Europe, for example Greece and Portugal, also have a relatively underdeveloped retail trade, however, data for these countries was more abundant than for Ireland and justified their inclusion in the study. The Irish grocery market is an unusual one as it is still relatively underdeveloped compared to the UK and the rest of northern Europe. For example, in some rural areas, especially in the West of the country, the nearest shop can often be between nine and twelve miles away from consumers. The population is also very scattered, making them difficult to reach as consumers and the small size of regional towns outside Dublin is also instrumental in preventing the development of a national network of shops in the grocery sector. Thus, both the fragmented and underdeveloped nature of the market makes it difficult to calculate statistics on turnover, outlets and employment and for these reasons, Ireland was also excluded from the study.

4.4 VARIABLES UNDER INVESTIGATION

In order to analyse the different grocery market structures in Europe, specific variables were chosen which are relevant to understanding changing supply chain relationships in a logistical context. For example, the number of food outlets per hundred thousand inhabitants, the market shares of the top grocery retailers and the degree of own label penetration are all indicators of a concentrated or fragmented market.

The variables previously listed in section 4.1 will now be discussed in turn with a definition of each variable, why they are thought to be important in the context of this research investigation and the data collection process and problems encountered for each in terms of, for example, comparability.

4.4.1 Area

This variable is concerned with the size of countries measured in square kilometres. Geographic and demographic trends present both opportunities and constraints for distribution operations. For example, the size area of the UK, 244,000 square kilometres, is far exceeded by the size of Spain at 505,000 square kilometres. Thus, for a country the size of the UK grocery retailers are in a better position to benefit from shorter lead times and reduced stockholding at stores as the extensive motorway network and strategically located regional distribution centres (RDC's) facilitates the delivery of stock from a manufacturer's plant in a matter of hours to any part of the country. Similarly, stock can reach the shelves in stores from RDC's in a matter of hours.

The situation in Spain is perhaps more complicated as the vast size of the country and the poor national road network may result in longer lead times and more space devoted to storage purposes at store level which could otherwise be converted into more profitable selling space.

These data were derived from a comparable table of geographic and socio-economic indicators in the Eurostat publication for the year 1990, measuring size area in terms of square kilometres and are as follows:

Table 4.1: Area of European Countries

Country	Area in square kilometres
Belgium	30,500
Denmark	43,100
Germany	356,960
Greece	132,000
Spain	504,800
France	549,100
Italy	301,300
Netherlands	41,790
Portugal	92,300
UK	244,100

Source: Eurostat, "Demographic Statistics", ESA.

Areas of countries vary markedly across Europe as the above table illustrates. For example, Belgium exhibits the smallest area, 30,500 sq. km, which is in marked contrast to France which is almost twenty times larger with an area of 549,100 sq. km, by far the largest country in this study in terms of area. When considering the size areas of countries it must be borne in mind that the spatial distribution of the population and economic activity are important concepts. However, in the context of this study these notions would have been difficult to quantify in terms of the collection of a comparable and meaningful set of data for all countries under investigation.

4.4.2 Comparison of Road Transport Infrastructures

This variable is only of any value when considered in relation to the size area of the country and was included to compare the road network densities in European countries and measures the total length of roads compared to their densities (all roads per square kilometre). The important factor, in the context of this study, is the density of the road network per square kilometre. In relation to its size, Belgium has the most developed network with 128,000 kilometres of roads and a density of 4.2 km per square kilometre. Spain, on the other hand has a network of 153,000 km and a density of a mere 0.3 km per square kilometre demonstrating a very different road infrastructure as was mentioned when discussing the previous variable.

This has implications for both delivery from manufacturer and from retail warehouses to stores. In smaller countries such as the UK and Belgium, where the road transport infrastructure is more developed and road transport dominates the distribution of consumer goods to retail outlets, it is hardly surprising that retailers in these countries are able to practise just-in-time delivery and the fast replenishment of stock at stores from distribution centres. Whereas in countries with a less dense road transport infrastructure, lead times will be longer as vehicles have much longer distances to drive.

The data for this variable were derived from a Key Note Market Review (1992) *UK Distribution*, the prime source being the United Nations Economic Council for Europe. A comparable data set were available for all the countries under investigation in Europe in addition to Japan, the USA and the USSR.

Table 4.2: Comparison of Road Transport Infrastructures in EC Countries

Country	All Roads('000 km)	All roads per'000 square km (density)
Belgium	128	4,205
Denmark	71	1,643
Germany	500	2,010
Greece	116	878
Spain	153	303
France	806	1,481
Italy *	303	1,006
Netherlands	102	2,478
Portugal *	19	208
UK	380	1,553

* Excludes urban roads.

Source: United Nations Economic Council for Europe, 1989.

From this table it can be concluded that the countries in northern Europe generally have the most developed road networks. For example, Belgium has 128,000 km of roads and the highest density of 4.2 km per square kilometre, similarly the Netherlands has 102,000 km of roads and a density of 2.5 km per square kilometre. In contrast, the markets of southern Europe demonstrate less dense networks with Spain having roads with a total of 153,000 km in length and a density of a mere 0.3 km per square kilometre and Greece with a road network of 116,000 and a density of 0.8 km per square kilometre.

Worthy of comment is the fact that the inclusion of a variable indicating the density of motorway/autoroute networks might have been more appropriate in the context of this study. However, the issue of lack of comparability of data between the countries under investigation did not allow the collection of such data within the limits of the author's time scale. Furthermore, even if such a data set were found, there is no reason to suggest that it would significantly alter the results obtained from the subsequent analysis of the secondary data.

4.4.3 Standard of Living

The standard of living of the population is measured by per capita GDP for the EU member states (Eurostat, 1993). The retail system of countries is influenced primarily by living standards as countries with a higher standard of living, as is characteristic of northern Europe, tend to have more developed and sophisticated retail systems than their southern European counterparts.

For example, Pellew (1991) states that very high living standards and a high demand for domestically produced products have led to increased strength in food retailing in Germany. This can perhaps be accounted for by the role of the independents and specialists in the market who play an important part in satisfying the high demand for specialist produce such as fresh meat, fruit and vegetables. Bakeries are also an important facet of German culture with strong demand for fresh bread and patisserie products. All the aforementioned products are generally priced at a premium as opposed to those cut price limited lines sold by discount stores and as the population are more affluent than, for example, a number of southern European countries, German consumers are perhaps in a better position to afford what may be perceived as "luxuries" in other countries as it is by far the most affluent market in Europe in terms of standard of living in this study.

The huge size of the German retail market is partly explained by the fact that German consumers spend a relatively high proportion (45.5 %) of their disposable income in

shops, in contrast to the UK where only one third is so directed (Corporate Intelligence Group, 1993).

Information concerning standards of living, as measured by per capita GDP, was derived from a comparable data set presented by Eurostat in their compendium of statistics.

Table 4.3: Standard of Living in European Countries

Country	Standard of Living (GDP in ECU's)
Belgium	19,091
Denmark	19,814
Germany *	21,131
Greece	9,850
Spain	14,556
France	20,207
Italy	19,187
Netherlands	19,147
Portugal	10,369
UK	19,726

* GDP per capita for W.Germany only

Source: Eurostat, "Demographic Statistics", ESA.

From this table it is evident that there is a definite north/south divide in terms of standard of living in Europe. Those countries which typically comprise northern Europe, e.g. Belgium, Denmark, Germany, France, and the Netherlands, all have GDP of in excess of 19,000 ECU's. Whereas, the countries of southern Europe, e.g. Greece, Spain and Portugal all have GDP far lower than their counterparts in northern Europe at 9,850, 14,556 and 10,369 ECU's respectively. Italy, generally classed as a southern

European country, is the exception with GDP of 19,187, a figure marginally higher than that for the Netherlands, typically classed as a market of northern Europe.

The importance of the four most populous nations, Germany, Italy, the UK and France, is apparent in the fact that they account for two thirds (66.7%) of total population and 69.4% of total GDP of all 17 countries of Western Europe (Corporate Intelligence Group, 1993).

4.4.4 Population Density

This variable measures the number of inhabitants per square kilometre in a given country. Population density is a decisive factor in the development of the retail trade as retailers will tend to locate near centres of population. Preferred sites for large-scale outlets and shopping centres, including cities and conurbations, are more developed in northern Europe where, for example, in the UK 34% of the population live in eight major conurbations, with a further 54 cities outside these having in excess of 100,000 inhabitants (Corporate Intelligence Group, 1993). Similarly, in Belgium, physically the smallest country in Europe, with the exception of its neighbour Luxembourg, 35% of the population live in five main cities.

Population density figures are generally lower in southern Europe than in the north (Eurostat, 1993). For example, Greece has only 76 inhabitants per square kilometre compared to the Netherlands with 356 inhabitants in 1990, one of the most densely populated countries in the world. A population which is less dispersed would indicate that they are easier to reach as consumers for retailers. These data were derived from the comparable set of data presented by Eurostat for the year 1990.

Table 4.4: Population Densities

Country	Inhabitants per square km
Belgium	326
Denmark	119
Germany	222
Greece	76
Spain	77
France	103
Italy	191
Netherlands	356
Portugal	107
UK	235

Source: Eurostat.

This table illustrates that countries such as Greece and Spain have very low population densities compared to densely populated countries such as Belgium and the Netherlands. The population densities for these southern European countries may well be very low, 76 and 77 inhabitants per square kilometre respectively, but it must be borne in mind that urban structures vary markedly between countries. For example, in Spain distinct clusters of the population can be found around large cities such as Barcelona and Madrid. In Spain the population is very unevenly spread, much of the interior being very sparsely populated. The largest region in terms of inhabitants (seven million) and area (87,300 sq. km) is Andalucia, which covers most of southern Spain, accounts for 18% of the population and main cities are Malaga, Seville, Cordoba and Granada, Costa del Sol). Over 61% of Spain's population is concentrated into five main regions, Cataluna, Madrid, Andalucia, Valenciana and the Basque country. (Corporate Intelligence Group, 1993).

However, issues of this nature were difficult to quantify for the purpose of the study currently being undertaken and thus general population density figures illustrated in Table 4.4 were utilised.

4.4.5 Food Outlet Density

This variable measures the number of food outlets per 100,000 inhabitants and is an indication of whether a market has a dense network of shops or not. This variable is used to illustrate fragmentation or concentration within a market, as fragmented markets tend to be characterised by a large number of shops, which tend to be small in size, as opposed to concentrated markets where a smaller number of generally larger stores prevail. A greater density of food outlets tends to be a characteristic of southern European markets compared to the less dense markets of the countries of northern Europe. This is demonstrated when comparing the numbers of food outlets per 100,000 inhabitants in Portugal, the country with the most dense network of food stores at 935 compared to the UK with only 173. Those countries with the most dense networks of shops tend to be those where retailing is at an early stage of development and modernisation, e.g. Portugal, Greece, Italy and Spain, where manufacturers will tend to have more control over the supply chain, or those which are physically small, e.g. Belgium and Netherlands.

This information was derived from the Eurostat source and was calculated by taking the comparable figures representing the number of food outlets in each country, and dividing them by the comparable population figure provided by Eurostat to give an approximate food outlet density figure per country. A global figure for all food shops was used in this case as the author tried to sub-divide this figure into its different constituent categories, i.e. general food and specialist food shops, but experienced difficulty obtaining a comparative set of figures for all countries.

There are variations in the years for the number of outlets given in the table below which can be accounted for by the fact that such data are collected by a national census,

for example, in Greece statistics on the distributive trades from the National Statistical Service for Greece (NSSG) are derived from pluri-annual surveys on the manufacturing, handicraft and distribution sectors which were conducted in 1978, 1984 and 1988, which accounts for this data being more out-of-date than, for example, the Netherlands, whereby the Central Bureau of Statistics (CBS) produces statistics for a number of major retail specific variables including sales, sales area, gross profits based on annual interviews and the latest which Eurostat cite is from 1991 to giving data for 1990. These examples are illustrated in the table below.

Table 4.5: Food Outlet Densities

Country	Year	Number (per 100,000 inhabs)	Density
Belgium	1989	14,300	144
Denmark	1990	15,000	292
Germany *	1987	145,500	184
Greece	1988	54,550	542
Spain	1988	200,330	515
France	1986	156,057	277
Italy	1990	337,200	586
Netherlands	1990	31,700	213
Portugal **	1988	92,400	935
UK **	1990	98,950	173

* West Germany

** Eurostat estimates.

Source: Eurostat based on national official statistics.

The markets of southern Europe, namely Greece, Spain, Italy and Portugal, all demonstrate the highest densities of food outlets as the above table illustrates. This is a

function of the fragmented nature of food retailing in these markets where small-scale family run shops are a dominant force. The food retail markets in northern Europe, on the other hand, are much more concentrated which is reflected in lower food outlet densities for countries such as Belgium where the lowest food outlet density exists, 144 outlets per 100,000 inhabitants of all the countries in this study.

4.4.6 Dominant Trading Format

This variable was divided into three sub-variables as published comparable sets of data were available for these three main formats only; supermarket density, hypermarket density and discounters' share of domestic food retailing. This variable attempts to measure the penetration of these different retail formats in different markets in order to assess the type of distribution support which will be most applicable to a particular trading format.

4.4.6.1 Hypermarket and Supermarket Densities

Concentration in food retailing is driven mainly by large scale food outlets, for example superstores in the UK and hypermarkets in France, and Verbrauchermärkte in Germany. In Germany there were 1,000 of these outlets, 850 in France and 730 in the UK, based on a lower limit of 2,500 square metres in early 1991 for stores in Germany and France and 2,320 (25,000 sq.ft) in the UK. Whereas in the less concentrated markets of southern Europe such as Italy and Spain, there were between 100 and 120 of these outlets respectively.

Thus, the evolution of distribution networks required to service stores in any given retail chain is primarily driven by the dominant trading format present in a country. In the UK, for example, existing networks run by the major grocery multiples have largely arisen from the need to supply large stores from RDC's.

It must be borne in mind, however, that there are differences in definitions with regard to these stores. Supermarkets are generally defined as retail self-service shops selling

predominantly food having floorspace of between 400 and 2,500 square metres in Belgium, Denmark, France, Italy and Spain. In Germany, however, the upper limit falls to 1,000 square metres. The UK operates on a floorspace of between 460 and 2,320 square metres, the Netherlands operate an average of 300 square metres and Greece and Portugal even smaller at 200 square metres. In Greece, therefore, the number of supermarkets reported is somewhat inflated as most other countries set the lower limit of 400 square metres when defining the floorspace of a supermarket.

Hypermarket definitions also vary by country; in Belgium, Denmark, France, Greece, Italy, the Netherlands, Portugal and Spain they are defined as self-service retail establishments offering a broad range of food and non-food products, with car parking facilities and a floorspace of 2,500 square metres or more. In Germany, however, large stores which are the equivalent of hypermarkets are defined as having floorspace of between 1,500 and 4,999 square metres and are referred to as *Verbrauchermarkt*, with formats in excess of 5,000 square metres known as *SB-Warenhaus*.

In the UK, sizes of shops are generally measured in square feet, with superstores, which are the type of large scale format which drives grocery retailing in the UK, similar to the way the large scale hypermarket drives French grocery retailing (that is to say a store with floorspace in excess of 2500 m² offering a broad range of food and non-food products). Superstores, however, typically possess a significantly reduced non-food section compared to the concept of the Continental hypermarket and are generally smaller in terms of their surface area with floorspace in excess of 2320 m² (25,000 sq. ft), measuring slightly less than their European counterparts.

Data concerning numbers and types of outlets are notoriously difficult to collect on a pan-European level due to differences in definitions as to what constitutes, for example, a supermarket in terms of floorspace. As current official statistics and other published sources do not provide information on the market shares accounted for by different retail formats, Eurostat calculated a hypermarket density figure which represented the number

of hypermarkets per 100,000 inhabitants. Therefore, using the supermarket figures they presented in conjunction with their population figures, a supermarket density figure was calculated by the author to illustrate the number of supermarkets per 100,000 inhabitants in line with the figures Eurostat presented for hypermarkets.

Table 4.6: Densities of Supermarkets and Hypermarkets

Country	No. of Supermkt's (a)	Supermarket Density (Various years)	No. of Hypermkt's (b)	Hypermarket Density (g) (1991)
Belgium	1,919	19	-	1.0
Denmark	944	18	-	0.9
Germany	8,000(c)	10	1,004	1.3
Greece	5,362(d)	53	25(c)	0.2
Spain	2,500	6	116	0.3
France	7,050	12	849	1.5
Italy	3,370	6	103	0.2
Netherlands	2,050	14	-	0.3
Portugal	605	6	20	0.2
UK	1,950(e)	3	733(f)	1.3

Note:

- a. Supermarkets: 400-2499 square metres
- b. Hypermarkets: 2500 square metres and over
- c. Estimates
- d. More than 200 square metres
- e. 460 to 2320 square metres
- f. More than 2500 square feet (2320 square metres)
- g. Number of hypermarkets per 100,000 inhabitants

Source: Estimates by the Institute for Retail Studies (IRS) and Eurostat.

From this table, it is evident that there is a tendency towards large scale retailing in Germany, France and the UK as the "hypermarket" density figure is considerably greater than that of supermarkets in each of these countries. The Netherlands, however, is

driven predominantly by smaller scale retailing, i.e. supermarkets, as is Greece. The remaining countries all demonstrate a more even balance of both types of format, for example, in Belgium as less space became available for hypermarket development, as a result of both saturation and planning legislation restricting growth, smaller formats emerged.

4.4.6.2 Discounters' Share of Domestic Food Retailing

This format, is defined by Eurostat (1993) as "*a retailing establishment selling a large range of rapid turnover, cut-price goods with virtually no floor service at all*". This variable is included for two reasons essentially. Firstly, as discount and many traditional retailers will continue to focus on the purchase of promotional goods in an effort to compete on price, such a practice will largely render operational and strategic ties to manufacturers less viable as forward buying of this nature goes against the maxims of a system of efficient consumer response, as was discussed in the previous chapter. However, increasingly aggressive competition in the grocery industry is forcing all supply chain participants to reduce costs, and collaboration between suppliers and retailers provides an opportunity to do exactly this. Discount retailers are one of the main examples of this and in fact 65% of the participants in the GEA (1994) research confirms that the growth of discounters will encourage suppliers and retailers to collaborate more closely.

Secondly, these smaller formats usually occupy high street locations, as such may not warrant a large centralised distribution centre to service the stores.

These data were obtained from the Eurostat publication from an original source based on IGD estimates for the year 1990. The figure is a percentage as opposed to a ratio for the previous two formats as this was the format in which this only set of comparable data for the discounting variable was presented.

Table 4.7: Discounters' Share of Domestic Food Retailing

Country	Share of domestic food retailing-%
Belgium	16.0
Denmark	12.0
Germany	22.0
Spain	8.0
France	2.0
Italy	2.0
Netherlands	6.7
UK	10.0

Source: Eurostat based on estimates by the Institute of Grocery Distribution (IGD).

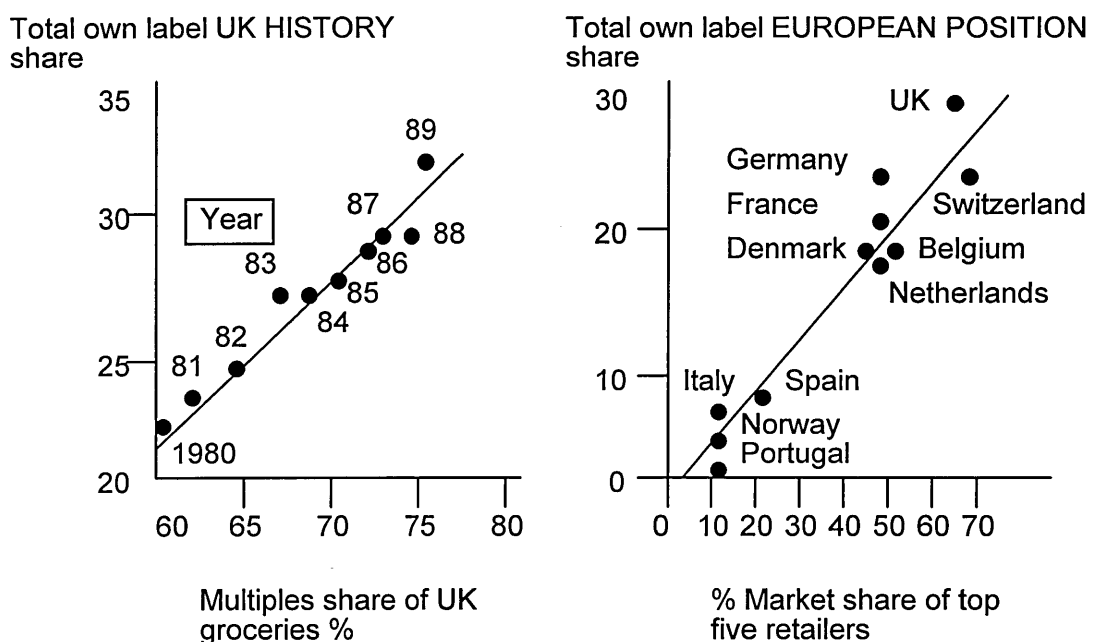
From this table it is evident that the discounting concept is more developed in the north of Europe as it accounts for a greater percentage of food sales in these markets, Germany having the highest penetration of discount retailers in their domestic food market. The concept is less developed in the markets of southern Europe where, for example, discounters account for as little as a 2% share of domestic food retailing in Italy.

4.4.7 Own Label Penetration

This variable measures the penetration of own label products as a percentage of the total grocery market. A high degree of own label penetration in a country, i.e. brands which usually carry the store name marketed as a substitute to manufacturers brands (a notable exception is the St. Michael brand of Marks and Spencer), as quality, premium competitors, usually indicates greater control of the supply chain as retailers take responsibility for product development, packaging, marketing and distribution of their products.

Some consultants have shown a strong relationship between own label share of grocery markets and retail concentration, stating that concentration is a pre-requisite before own label development can proceed (Wileman, 1992, Boston Consulting Group, 1992). Strong own label development by the major grocery retailers in the UK has developed as a direct result of their power position and ability to compete on quality with leading brands. The commitment to own label development is a particularly British phenomenon reflecting the power of these retailers which is generally greater in the UK than in most other European countries. The growth of own label in the UK has been closely linked to increasing concentration in food retailing among the top multiples and is generally strongest in countries with the most powerful multiple retailers as the following figure illustrates:

Figure 4.1: Own Label and Retail Concentration



Source: Boston Consulting Group, 1992.

Much academic interest has been attracted and controversy generated concerning the concept of a retailers' own brand (see for example Davies, 1992; Laaksonen, 1994). Comparability of this concept between countries is a consequence of a number of definitional differences. Davies (1992), therefore, provides four attributes of these

brands; the brand can be differentiated; it can have a separate existence, i.e. an existence outside the store where it carries a brand label; it can command a premium price and it offers the consumer some psychic value.

According to Fernie and Penman (1994), while a higher degree of own label penetration can be found in the countries of northern Europe, as the above figure illustrates, many retailers in these countries would fail the "Davies test" of retail branding. For example, in the German grocery market where the limited line discounter Aldi is a dominant player, the vast majority of this particular retailer's stock does not carry the store name which consumers in Britain normally recognise to be characteristic of own label products. Many of their obscure brands (which are actually secondary and tertiary manufacturers brands, e.g. Diplomat tea bags, Saxon toilet tissue and Country Flavour beans to name a few examples, however, are not available elsewhere and could thus be perceived as "own labels". Pellew (1991) agrees with this perception as he quotes own brands as accounting for 75% of the range carried in Aldi stores.

The importance of Aldi and the "own label" lines they carry is reiterated in the following two estimates of own label figures for the German grocery market. In 1992, Piper (1992) stated that own label accounted for some 20% of the market, a figure which then deflates to 5% with the exclusion of Aldi's "own labels". Similarly, Martenson (1992) states that retail brands have an extremely low market share, 4%, if Aldi is excluded and a figure higher than that quoted by Piper, 25%, when they are taken into account.

German consumers, it has been found, have no sustainable loyalty to particular stores as they seek the cheapest promotional offers (Bedeman, 1990). In the UK, on the other hand, retailers' brands do comply with the definition provided by Davies, where value-added products compete with manufacturers' brands on quality and as such the UK can be considered as unique in the positioning of its brands in grocery markets (Fernie and Penman, 1994).

The following source of data was used for this variable, which included Aldi in the own label figure accounting for the inflated figure in the German grocery market, and is as follows:

Table 4.8: Penetration of Own Label in the Grocery Sector

Country	Own Label-% of total grocery value (1991)
Belgium	18
Denmark	18
Germany	23
Greece	na
Spain	7
France	20
Italy	7
Netherlands	18
Portugal	1
UK	30

Source: Glemet, F., and Mira, R., (1993).

This table illustrates that own label is more developed in the markets of northern Europe, where retailers are more concentrated and retail systems are more sophisticated, the UK demonstrating the highest penetration of own label of all the countries in the study. The concept of own label is present in the markets of southern Europe but shares are relatively low as manufacturers brands still tend to be dominant in countries such as Spain, Italy and Portugal where own label penetration is 7%, 7% and 1% respectively. Thus, in those countries where manufacturers' brands are still important, in terms of their relationships with retailers, the balance of power will lie clearly in their favour.

4.4.8 Food Sales by Form of Organisation

This variable is concerned with organisation structure, sub-divided into the percentage of food sales accounted for by co-operatives, multiples and independent retailers, and is based on the premise that retailers who are more closely integrated, i.e. multiples, will tend to have the ability to exert more power over the manufacturers who supply them in obtaining more favourable terms. It must be borne in mind, however, that the situation in France, for example, is an unusual one as the two leading grocery retailers are buying groups which behave in a fragmented fashion in terms of the vast number of outlets which are affiliated to them, whilst exercising power similar to that of multiple retailers in order to obtain the most favourable terms from suppliers through their central buying function. This issue is discussed in the context of Chapter 5 (section 5.5.1).

This is witnessed in the case of own labels where the European average for these brands is relatively low in those market where wholesalers, voluntary groups and independents continue to maintain a strong presence, e.g. Italy, Spain and Portugal. Whereas in the concentrated markets of northern Europe, where large and closely integrated retailers have control over the supply chain, own label penetration tends to be significantly higher. In less well organised markets, retailers do not have the same control necessary to develop and sustain own label penetration as wholesalers still tend to be a dominant force. In those countries where retailers are either members of a voluntary group or are totally independent, e.g. Portugal and Spain, retail groups are relatively loose knit organisations and retailing is essentially more of a traditional nature with retailers generally lacking both the integration and buying power needed to exert greater control over their suppliers.

Additionally, Cooper et al (1991) state that multiple retailers have the best prospects of eliminating storage space at store level and holding stock in centralised warehouses as a result. Where both affiliations and independent retailers are prevalent in retail markets, it is usually the case that retailers have little option but to keep stock in reserve at store level, unless suppliers who are often wholesalers and cash and carries, can be

guaranteed to offer a reliable and timeous delivery service (Cooper et al, 1991).

Affiliated independents, however, have a greater likelihood of eliminating stock from stores, as the voluntary group may be prepared to innovate in terms of logistics practices and provide more frequent deliveries as a result.

The major difficulty encountered in the collection of data for this variable was finding a source which included figures for all countries in the study. One such source was found initially, produced by a leading UK business and marketing information company, which after detailed examination was found to be flawed. This conclusion was arrived at on consideration of the following figures for the UK grocery market:

Table 4.9: Food Sales by Form of Organisation in the UK

Country	Year	Co-ops	Multiples	Independents	Other
UK	1987	12	58	0	30

Source: Euromonitor, (1994).

From this table it is evident that more up-to-date data could have been derived from subsequent Retail Inquiries which have been carried out since 1987. However, a greater anomaly came to light in that although the share of this particular market by independent retailers has been steadily eroded over the years, their presence is still very much in evidence. The author concluded that perhaps the independents' share had been included in the column "other" and thus confirmed with Euromonitor the type of retailer typically included under this heading. It was discovered, however, that the figure in the "other" column was correct but it was found to include non-food multiples, large mixed retailers and mail order. This would include department store food halls in addition to companies such as Marks and Spencer whose main business is not food. Thus, this particular source was rejected on the basis that it failed to acknowledge the share of the UK grocery market accounted for by independent retailers.

The most consistent source, however, was provided by IGD/Europanel (1992) in their publication, *Manufacturers, Retailers and Consumers in Europe. Prospects for After 1993*. This source, however, did not provide figures for Denmark, Portugal or Greece, therefore, the comparable set of Euromonitor figures were checked with academics and consultants in the field who were of the opinion that the figures for Denmark and Portugal were accurate enough for the purpose of this study. The figures for Greece were further verified by Bennison and Boutsaki (1995), academics who have carried out extensive research in this market.

Table 4.10: Share of the Food Sales by Organisation Form, 1990

Country	Multiples	Co-ops	Independents
Belgium	32.7	1.0	66.3
Denmark *	37.0	21.0	42.0
Germany (West)	41.0	4.0	55.0
Greece **	45.0	0.0	55.0
Spain	35.0	1.8	63.2
France	68.0	0.0	32.0
Italy	10.0	17.0	73.0
Netherlands	69.0	1.3	29.7
Portugal *	10.0	1.0	89.0
UK	74.7	10.8	14.5

Note:

* From Euromonitor representing 1987. All other figures represent 1990.

** From personal communication.

This table illustrates that multiple retailers are a strong force in the northern European markets of France, the Netherlands and the UK and as such retailers in these countries are more likely to exert more power and control over their suppliers.

4.4.9 Market Shares of the Top Five Grocery Retailers

If a grocery retail market is concentrated, that is to say, few retailers controlling a considerable share of the market, more control will be exercised by retailers over their suppliers and greater responsibility for managing the supply chain operations in order to eliminate both excess costs and stock from the chain will consequently be assumed.

However, there is some doubt as to the reliability of published market share figures which are usually produced by management consultancies who often do not divulge how they calculated the figures they present. Additionally, comparable market share figures are often difficult to find (Burt and Sparks, 1994). The following are examples of a variety of different estimations of the market shares of European grocery retailers illustrating these problems:

Table 4.11: Food Retailing - Concentration in Europe

Country	Top 6-Share of local market (%)
Netherlands	64.3
Germany	57.9
France	56.7
UK	56.0
Belgium	51.3

Source: Phillips & Drew (1992).

Table 4.12: Food Stores - Share of Turnover

Share of turnover (%)-1988	Top 5
90+	Finland
80+	Sweden, Switzerland
70+	Austria, Germany
60+	Denmark
50+	Belgium, UK, Netherlands
40+	France, Ireland
30+	
20+	Italy
10+	Greece, Norway, Portugal

Source: Nielsen (1990).

Table 4.13: Concentration in Retailing - Market Share of the 5 Largest Retailers

Country	Market Share Top 5 (1991)
Sweden	96%
Great Britain	45%
The Netherlands	44%
Belgium	43%
Germany	41%
France	40%
Italy	20%
Spain	12%

Source: Martenson (1992)

Table 4.14: Concentration of Distribution in Europe - 5 Leaders Share of Total Grocery Market

Country	Market Share
Belgium	42.9%
Britain	45.0%
Germany	40.8%
France	37.8%
Italy	20.5%
Netherlands	43.5%
Spain	11.9%

Source: IGD/Europanel (1992).

For a number of years, different research houses have produced market shares for the leading food retailing companies. These estimates, however, have varied considerably due to the wide variation in definitions generally used. For example when calculating market share some utilise the "food" market which comprises all food stores both general grocery and specialist (see Table 4.11), while others utilise the "grocery" market (see Table 4.14). Taking the food market as the basis for calculating individual market share will inflate the overall shares gained as retailers are assuming an overall share of a larger market compared to the more conservative figures which are obtained when considering the grocery market only. This is particularly evident when examining Tables 4.11 and 4.14 where, for example, in the former the top retailers in the Netherlands account for 64.3% of the local food market and in the latter they account for 43.5% of the total grocery market, a difference of around 20 percentage points.

Thus, the previous examples of market share figures illustrate the differences that exist between published market share figures from consultants and other secondary sources. Therefore, it was decided to calculate from the secondary sources of information available, a comparable set of market share figures due to the lack of comparability and reliability among these published sources of market shares.

This was achieved by taking the size of the food, drink and tobacco market from the Eurostat publication for each of the countries, derived from official statistical sources and the domestic turnover of the top five retailers in each country which was identified from company reports and the Management Horizons (1992) publication *Europe's Leading Retailers*, a publication of key financial and trading information for comparative purposes which profiles Europe's leading retailers. Where such information was not readily available, individual company reports were consulted, where accessible. However, as a number of the European grocers are of private ownership, notably the French and German chains, and as such are under no obligation to divulge financial and other information to the public, estimates are sometimes given from published secondary sources as they are the only source of information available regarding company turnover, for example, and must be relied upon.

Another issue, again relating specifically to grocery retailers in the aforementioned countries, is the fact that they have a number of foreign interests. If the group turnover is taken reflecting domestic and foreign sales in some cases, then it follows that the market share figure computed may be inflated. Therefore a disaggregation of the group turnover into overseas and domestic sales is required to obtain a more representative version of domestic market share. This is often not possible, however, if the only figures available are estimates of group turnover, as is often the case in France.

The food, drink and tobacco market was selected as it was difficult to dissect this global figure into its constituent parts to obtain a comparable set of grocery market figures. Furthermore, the retailing of food includes companies which offer for sale fresh, packaged and prepared foods and a variety of both alcoholic and non-alcoholic beverages for consumption in the home. Additionally, many retailers sell non-food grocery items, e.g. detergents, cleaning preparations, health and beauty products and in some cases, general merchandise and fresh service counters such as in-store bakeries and delicatessens.

Over the years retailers have been devoting increasing shelf-space to product ranges sold by specialist retailers, e.g. confectionery, newspapers and magazines, (products typically sold by CTN's) and toiletries and personal care products (typically offered for sale by chemists). As a result, in the UK, the IGD (1992) took the initiative to compute market size and company market shares in agreement with many of the leading retailers in the industry, embarking on a programme to provide an accurate measure of the size of the market in which the major grocers operated and their individual market shares. In their new definition of the market, the following kinds of retail businesses are now included:

- * **Food retailers (grocery retailers, dairymen, butchers, fishmongers, greengrocers, bakers)**
- * **Confectioners, tobacconists and newsagents**
- * **Chemists**
- * **Off-licences**

This new definition provided further justification for calculating market shares from the food, drink and tobacco market as opposed to the grocery market. Bearing in mind the problems discussed, the following approximate market share figures have been calculated for all countries in this study and are represented in the following table:

Table 4.15: Share of the Food, Drink and Tobacco Market by the Top Five Retail Groups

Country	Year	Market Share-%	Retailers
Belgium	1989	40.0	GIB, Delhaize "Le Lion", Louis Delhaize, Aldi, Colruyt.
Denmark	1990	29.6	FDB Co-op, Dansk Supermarked *
Germany	1992	67.5	Metro, Rewe, Aldi, Edeka, Tengelmann.
Greece	1991	26.0	Prisunic, Sklaventis, Hellaspar, Alfa-Beta.
Spain	1988	36.2	Pryca, Continente, Alcampo, Mercadona, Hipercor.
France	1991	46.7	Carrefour, Leclerc, ITM, Promodès, Auchan.
Italy	1990	22.1	Crai, Conad, Co-op Italia, Vege, La Rinascente.
Netherlands	1990	36.4	Ahold, Vendex, Aldi, De Boer, Hermans.
Portugal	1988	14.4	Sonae, Pingo Doce, Pao de Acucar, Ino.
UK	1992	38.6	Sainsbury, Tesco, Argyll, Asda, Isosceles (Gateway).

Source: Author

* Data available for top two retailers only.

Although calculated in a manner as accurately as possible with the data available, the above market share figures are not strictly comparable and should be treated with a degree of caution for the following reasons. Figures tend to be dated in some countries,

as is specifically the case in some of the southern European markets as they represent the latest year for which data is available for the size of the market and individual retailers' turnover. For example, in Spain there has never been any regular reporting of actual retail sales on an official basis, thus 1988 is the latest year for which figures are available for the size of the food, drink and tobacco market. Similarly, an absence of official figures on the value of the size of the Greek market meant that an estimate of market share figures from a consultant's report were relied on rather than having a missing value for this particular variable (County Natwest, 1991).

The issue of ownership of companies also affects the figures, that is to say companies which are privately or publicly owned have different policies on reporting information. This issue was particularly pertinent when calculating the French market share figures as estimates were used for a number of retailers as the private nature of their ownership places them under no obligation to disclose financial information to outside parties.

The distinction between food and non-food sales and foreign involvement was often difficult to make, a problem which was particularly applicable to the leading German retailers who have substantial non-food and foreign interests, thus making domestic food sales more difficult to calculate.

Many European retailers are vertically integrated, that is to say, they have interests in manufacturing and wholesaling in addition to retailing. Thus, disaggregating turnover figures into their constituent parts is often difficult as was the case for Denmark.

The treatment of VAT with regard to turnover was found to be the final factor affecting the calculation of market share figures. For example, in the UK VAT is excluded from the turnover of individual companies whereas in France it tends to be included.

4.4.10 Development of Information Technology

Retailers are discovering an ever increasing range of benefits associated with information technology applications, particularly scanning systems. In addition to increased efficiency at the checkout, electronic point of sale (EPOS) systems improve, *inter alia* the ordering of products and stock control, issues which were considered in a logistical context in the previous chapter.

Furthermore, Jourdan and Irving (1992) believe that the penetration of scanning equipment is an indicator of the level of retail sophistication in a country. An indication of the level of development of information technology, specifically EPOS, in the countries under investigation was derived from the percentage of turnover rather than the number of stores equipped with scanners as the latter would render countries such as Italy, for example, more advanced in terms of technological developments than the UK where it is a fact that grocery retailers, as was discussed in the previous chapter, are more advanced than any other country in the continent of Europe in this respect.

However, when comparing the number of stores equipped with scanners, figures which have been included for reference purposes, one must bear in mind the total number of food stores present in a country (see Table 4.5). From this one sees that although Italy has more scanning stores than the UK, 4,000 compared to 2,695, this southern European country has more than three times the number of food stores than the UK.

The comparable set of data use for this variable, that is to say percentage of turnover scanned by food stores, would tend to contradict the claim made in Chapter 3 that the UK is unique in terms of supply chain management and leads the way in terms of development of information technology, as in Denmark food stores scan a greater percentage of turnover than in the UK, thus rendering the latter in second place as the following table illustrates:

Table 4.16: European Comparisons - Food Stores Equipped with Scanners

Country	Number of stores equipped with scanners	Percentage of turnover scanned (%)
Belgium	1,286	53
Denmark	1,490	71
Germany	4,020	24
Greece	-	-
Spain *	1,610	22
France	4,100	62
Italy	4,000	37
Netherlands	1,167	40
Portugal	45	29
UK	2,695	66

* 1991 figures, from Nielsen (1991).

Source: Nielsen, 1992.

As was mentioned previously, food stores in Denmark scan the greatest percentage of turnover of all countries in this study at 71% with the UK following closely in second place at 66%. With the remaining countries, there is a definite north/south divide as Belgium, France and the Netherlands all demonstrate a high percentage of turnover scanned. Germany, however, is the exception of all the northern European countries with as little as 24% of turnover scanned. In the countries of southern Europe, Spain, Italy and Portugal, percentage of turnover scanned by food stores is significantly lower than their northern European counterparts, with the exception of Germany.

4.4.10.1 Penetration of EDI

This variable would have been more informative, however, if it had considered the penetration of EDI in the grocery sector as it would have been more indicative of closer links in the supply chain and collaborative relationships. GEA (1994) stated that the

UK stands out from most other European countries in terms of EDI development, representing a benchmark for all other countries, followed closely by France, while there is significantly much less development in Germany, Italy and Spain. Similarly, Helleman (1993) also confirmed this when discussing the awareness of EDI, i.e. the UK is at the forefront of such developments, with France following in second place (these issues were discussed in Chapter 3).

Such observations, however, for the purpose of this research, would require further quantification to justify their inclusion in this study. Therefore, the author consulted a number of relevant bodies, for example the European Article Numbering Association in Belgium and the Article Numbering Association in the UK, in order to quantify the penetration of EDI in each of the markets being studied.

Of all the organisations and individuals contacted, no detailed published information on specific EDI links between retailers and suppliers was available. Although it would have been desirable to include a variable of this nature in the analysis, the lack of quantifiable data made this task unviable.

4.4.11 Degree of Foreign Involvement

The number of countries a retailer is present in has implications for the distribution of stock, as Cooper et al (1991) point out that no retailer can contemplate the internationalisation of its retailing operations without giving serious thought to logistics, particularly pertinent is the lengthening of supply lines. Take the following example, the German discounter Aldi has a number of stores in Belgium, due to the proximity of the country Aldi may decide to serve the stores from Germany as opposed to locating a distribution depot in Belgium. It may not be necessary, due to the location and the small size of stores, to set up an elaborate distribution network in a country.

Due to saturation in the home market and various planning and legislative restrictions, retail groups in France, the Benelux countries and Germany have looked to foreign

markets to expand their formats. This could be viewed as a characteristic of a more developed market, i.e. retailers have successfully serviced their own markets and thus look to expand their expertise further afield to sustain growth and profitability. The Belgian retailer Delhaize "Le Lion" is the most internationally oriented player within European grocery retailing with 60% of their sales generated from overseas markets due to restrictions at home, e.g. the Loi Cadenas or Padlock Law. Whereas, countries in southern Europe tend to be the recipients of their formats, most notable is Spain and the development of the French hypermarket concept there. This north/south divide is clearly illustrated by the figures computed.

This variable was calculated by taking the group turnover, which formed the basis of the market share calculations, and disaggregating it into domestic and foreign sales components, if appropriate. A weighted average was then calculated to obtain an overall figure for each country which are as follows:

Table 4.17: Country Averages of Turnover Generated from Foreign Markets
(Calculated from Various Years)

Country	Average percentage of turnover generated from foreign markets
Belgium (2:4)	29
Denmark (1:2)	1
Germany (2:5)	19
Greece	0
Spain	0
France (4:5)	14
Italy	0
Netherlands (2:4)	40
Portugal	0
UK (1:5)	3

Source: Author.

Note: Figures in parentheses represent the number of retailers with foreign interests compared to the total used in the computation of the figure in the column facing.

From this table it is evident that those retailers with extensive foreign interests are from; the Netherlands, Belgium, Germany, France and to a lesser extent Denmark and the UK. The figures for these two countries, however, may have been somewhat different for the following reasons; Dansk Supermarked, the second leading retailer in Denmark do not quote turnover figures to represent the penetration of their Netto discount format in both the UK and Germany, only outlets which was given as 31 and 37 stores respectively for 1992. Similarly, the UK figure only represents the foreign activities of the leading grocery retailer J.Sainsbury who owns a chain of supermarkets Shaw's in the USA, it does not acknowledge the second leading retailer's involvement in the French market, namely the Tesco acquisition of the regional chain Catteau in 1991 as no figures exist to account for the contribution this operation makes to group turnover.

Where zeros appear in the table, this indicates that grocery retailers in these countries have no direct foreign involvement, however, there may be affiliations in the form of joint ventures with retailers in other countries. For example, in Portugal, Sonae has close links with the French retailer Promodès, 75:25 in Sonae's favour for the development of Continent hypermarkets. Similar associations exist between retailers in other southern European markets, e.g. Greece, Spain and Italy, and those from northern European markets.

4.4.12 Degree of Involvement in Vertical Channels

This variable suggests that if a retailer controls successive stages of production, i.e. wholesaling and manufacturing operations, then it follows that the distribution operation will tend to be more fragmented than if the firm concentrated solely on the core business of retailing. The most common type of vertical involvement is where retailers absorb parts of the traditional wholesale and production functions of the channel. A number of European retailers have developed their own production facilities, in particular the consumer co-operatives.

Additionally, the degree of integration between wholesale and retail functions is thought to have a strong impact on own-label development; those multiples who have a strong presence in the market and no wholesale operations to serve potential independent/affiliated retailers are more likely to be in a dominant position to persuade manufactures to produce own-labels for them.

This variable is measured by obtaining an approximation of the percentage of turnover of the top five retailers generated from these operations on a weighted average basis, represented in the following table:

Table 4.18: Country Averages of Turnover Generated from Wholesaling Activities, (Calculated From Various Years)

Country	Average percentage of turnover generated from wholesaling activities
Belgium	0
Denmark (1:2)	23
Germany (3:5)	33
Greece	0
Spain	0
France (1:5)	2
Italy (2:5)	4
Netherlands (1:5)	2
Portugal	0
UK (1:5)	4

Source: Author

Note: Figures in parentheses represent the number of retailers with interests in wholesaling activities compared to the total used in the computation of the figure in the column facing.

Table 4.19: Country Averages of Turnover Generated from Food Manufacturing Activities, (Calculated From Various Years)

Country	Average percentage of turnover generated from food manufacturing activities
Belgium	0
Denmark	0
Germany (1:5)	3
Greece	0
Spain	0
France (2:5)	2
Italy	0
Netherlands (1:4)	2
Portugal	0
UK	0

Source: Author

Note: Figures in parentheses represent the number of retailers with interests in food manufacturing activities compared to the total used in the computation of the figure in the column facing.

From these tables above it is evident that those countries with greater wholesaling interests are : Germany, Denmark, France, Italy and the Netherlands and it is no coincidence that these countries tend to exhibit either a strong presence of co-operative retailers, e.g. Italy and Denmark, or a presence of independent retailers affiliated to buying groups, e.g. Germany and France. The Netherlands, however, is the exception which could be accounted for by the fact that their leading multiple grocer Ahold has a stake in the wholesaler Schuitema.

Countries with significant manufacturing interests are : Germany, France and the Netherlands. Other countries, however, also have similar interests, e.g. in the UK the leading multiple grocer J.Sainsbury has a meat processing plant called Haverhill Meat Products, similarly FBD Co-op, the Danish co-operative retailer as noted as having food

manufacturing activities. However, no breakdown of the turnover generated from these activities is given in their annual reports and other secondary data sources which explains why countries such as the UK and Denmark score a zero in the table as there was insufficient data to include them.

4.5 CONCLUSION

This chapter has discussed the problems associated with the collection of statistics for the distributive trades for the purpose of cross-comparison which is an important consideration when considering the data collection process for the initial stage of the current research investigation. For the purpose of this study, which builds on exploratory work by Fernie (1992; 1994), a series of data were collected across 10 members states of the EU for 18 variables thought to be important in explaining the differences in distribution and supply chain relationships across the continent of Europe.

These data now form the basis of an analysis employing a variety of multivariate statistical techniques to determine if homogeneous groups of countries exist on the basis of having similar characteristics. This analysis is now discussed in the following chapter.

CHAPTER 4 - REFERENCES

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CHAPTER 5

A TAXONOMY OF EUROPEAN GROCERY RETAIL STRUCTURES

5.1 INTRODUCTION

A number of publications give an account of the grocery trade and its salient features in countries of the EU and beyond including tables of secondary data illustrating both structure and underlying characteristics as was discussed in the previous chapter (see for example Corporate Intelligence Group, 1990, 1991, 1993; Institute of Grocery Distribution, 1993). None, however, provide a grouping of countries based on having similar characteristics. This chapter takes the data collected for the variables discussed in the previous chapter and attempts to generate from them a meaningful taxonomy of grocery retail structures in Europe which will form the basis of further follow-up research with grocery manufacturers and third party distribution specialists.

Data were collected from these published secondary sources for 18 variables thought to be relevant to understanding changing supply-chain relations in a logistical context in the grocery sector across 10 European countries, as was discussed at length in the previous chapter. This chapter, however, summarises the data collected for these variables which contribute to an understanding grocery retail markets in Europe and their inherent distribution systems and cultures. The data are analysed using appropriate statistical techniques to determine if countries could be grouped into homogeneous classes on the basis of their similarities. Everitt (1993) provides us with the following observation concerning the grouping of objects with similar characteristics:

"Describing patterns of similarity and differences among the objects under investigation (by means of their class labels) provide a very convenient summary of the data" (p.2).

It was suspected that not all the variables collected would be important in determining groupings of countries as in Chapter 3 Fernie (1994) identified eight major factors which appear to be responsible for the differences in distribution networks across the continent of Europe. Therefore, those variables identified by the author as being important in the previous chapter were examined and found to have 3 particular sub-sets, in line with Fernie's (1994) observations. Those important variables were selected and placed into particular sub-sets as Tables 5.1 to 5.3 below illustrate:

Table 5.1: Market Structure Sub-Set

Important Variables
Food Outlet Density
Food Sales by Organisation Form - Multiples, Independents, Co-operatives
Own Label Penetration
Market Share of the Top Five Retailers

Table 5.2: Trading Format Sub-Set

Important Variables
Supermarket Density
Hypermarket Density
Discounters' Share of Domestic Food Retailing

Table 5.3: Physical and Socio-Economic Sub-Set

Important Variables
Area
Road Density
Standard of Living
Population Density

The aim of this stage of the research investigation, therefore, is to identify clusters of countries based on having similar characteristics for each of these individual sub-sets of data. The application of statistical techniques to the secondary data collected for the above variables will be described in detail for the market structure data only and will then be applied to the remaining sets of data in order to avoid repetition. Each sub-set of variables and their subsequent analysis will now be discussed in turn beginning with **market structure**. The variables chosen, summarised in Table 5.4 were thought to be appropriate indicators of both the degree of fragmentation or concentration in a market and whether control of the supply chain in these markets subsequently rests with retailers or manufacturers.

5.2 MARKET STRUCTURE DATA

As was discussed in Chapter 4, data were collected for the following variables for this particular sub-set:

Table 5.4: Market Structure Sub-Set

Important Variables
Food Outlet Density
Food Sales by Organisation Form - Multiples, Independents, Co-operatives
Own Label Penetration
Market Share of the Top Five Retailers

The relevance of including these variables in any subsequent analysis was described in Chapter 4 and the secondary data collected for each are displayed in Tables 4.5, 4.10, 4.8 and 4.15 respectively.

5.2.1 The Generation of Groups of Similar Countries

After the collection of the data and its division into particular sub-sets had taken place, the most appropriate technique which attempts to produce homogeneous groups of countries based on similarities was chosen from a selection of **multivariate statistical**

techniques, the first of which applied is **cluster analysis** which is defined as "*the formal study of algorithms and methods for grouping or classifying objects*" (Jain and Dubes, 1988). It is an important technique in a rapidly growing field known as exploratory data analysis which is being applied in a variety of disciplines such as psychology, medicine, engineering and marketing, intended largely for the generation of hypotheses rather than testing them.

Thus, cluster analysis is used to classify previously unclassified material, that is to say, at the start of the investigation the number and composition of these classes is unknown. Furthermore, it organises data to establish if it groups according to preconceived ideas. It is factors such as these which differentiates clustering as a technique for the analysis of multivariate data (the variables under investigation may be of different types) from methods of discrimination and assignment where groups are known *a priori* (Everitt, 1993). Clustering is essentially used as a method to discover structure in data that is not obvious from visual inspection.

A further justification of the application of this particular technique is provided by Jain & Dubes (1988) who state that "*the organisation of data into sensible groupings is one of the most fundamental modes of learning. Cluster analysis and its inherent formal study of algorithms and methods facilitates such grouping and classification of objects*". (p.5)

The basic data for cluster analysis is a matrix giving the variable values for each of the objects/individuals under investigation. Such a matrix for the market structure data showing variable values for the countries under investigation is as follows:

Table 5.5: Matrix of Variable Values for Market Structure Data

	Food Outlet Density-n/100	Multiples % of food market	Coops % of food market	Indep % of food market	Own Label %	Market Share %
Belgium B	144 <i>-0.955</i>	32.7 <i>-0.417</i>	1.0 <i>-0.621</i>	66.3 <i>0.665</i>	18 <i>0.334</i>	40.0 <i>0.290</i>
Denmark DK	292 <i>-0.371</i>	37.0 <i>-0.229</i>	21.0 <i>1.974</i>	42.0 <i>-0.439</i>	18 <i>0.334</i>	29.6 <i>-0.419</i>
Germany D	184 <i>-0.797</i>	41.0 <i>-0.054</i>	4.0 <i>-0.232</i>	55.0 <i>0.151</i>	23 <i>0.897</i>	67.5 <i>2.168</i>
Greece GR	542 <i>0.615</i>	45.0 <i>0.120</i>	0.0 <i>-0.751</i>	55.0 <i>0.151</i>	na <i>-0.763</i>	26.0 <i>-0.665</i>
Spain E	515 <i>0.508</i>	35.0 <i>-0.317</i>	1.8 <i>-0.517</i>	63.2 <i>0.524</i>	7 <i>-0.902</i>	36.2 <i>0.030</i>
France F	277 <i>-0.430</i>	68.0 <i>1.128</i>	0.0 <i>-0.751</i>	32.0 <i>-0.894</i>	20 <i>0.559</i>	46.7 <i>0.747</i>
Italy I	586 <i>0.788</i>	10.0 <i>-1.411</i>	17.0 <i>1.454</i>	73.0 <i>0.970</i>	7 <i>-0.902</i>	22.1 <i>-0.932</i>
N'Lands NL	213 <i>-0.683</i>	69.0 <i>1.171</i>	1.3 <i>-0.582</i>	29.7 <i>-0.999</i>	18 <i>0.334</i>	36.4 <i>0.044</i>
Portugal P	935 <i>2.166</i>	10.0 <i>-1.411</i>	1.0 <i>-0.621</i>	89.0 <i>1.562</i>	1 <i>-1.578</i>	14.4 <i>-1.458</i>
UK	173 <i>-0.841</i>	74.7 <i>1.421</i>	10.8 <i>0.650</i>	14.5 <i>-1.691</i>	30 <i>1.685</i>	38.6 <i>0.194</i>

Note: Figures not in italics represent original secondary data collected in Chapter 4 (see Tables 4.5, 4.10, 4.8 and 4.15).

5.2.1.1 The Calculation of Missing Variable Values

Common to the collection of multivariate data as illustrated in the above table, is the problem of missing values which can occur for a number of reasons, for example, recording errors and the reluctance of subjects to provide information. In this investigation, missing values arose as a result of unavailability of information, a difficulty discussed in the previous chapter. These values may be dealt with in one of two ways. Firstly, the simplest being to consider only those individuals who have a complete set of variable values. Ireland and Luxembourg had very few known values for the variables under investigation, as was highlighted previously, and were omitted from the analysis for this reason.

Where a missing value exists, for example in this particular sub-set of data there was no own label figure for Greece, the value must be estimated given that there are a set of

unknown values for some variables for these countries and a set of known predictor values for the remaining variables from which we want to determine the best (most important/valid) subset of the known variable values and the corresponding best-fitting regression model for describing the relationship between both sets of values. A basic technique to select variables in this manner, i.e. those found to be important predictor of the unknown values, is **forward selection**. This technique starts with the most important variable and continues to add variables step by step, in order of importance, whilst controlling those variables already selected. In order to measure whether variables are important a correlation coefficient is applied to determine those which are highly correlated with others, and as such are important. When testing whether adding a variable to the regression model is worthwhile, given that there are already other variables in the model, a partial F test is used which is exactly equivalent to a test of significance for the corresponding correlation coefficient.

Stepwise regression is a modified version of forward selection technique that allows, at every step, re-examination of the variables incorporated in the model in previous steps which Kleinbaum et al (1988) comprehensively summarise as follows. *"A variable entered at an early stage may become redundant at a later stage because of its relationship with other variables now included in the model. To check for this a partial F test for each variable is carried out as though it were the most recent variable entered into the model. The variable with the smallest non-significant partial F statistic is removed and the model is refitted with the remaining variables, the partial F's are obtained and similarly examined, and so on as before. The whole process continues until no more variables can be entered or removed"* (p.326). At this point the final model for predicting the missing values is arrived at.

The following example illustrates the procedure. The general problem is that a dependent variable y , x_{18} , for example, is thought to be influenced by a number of independent variables x_1, x_2, \dots, x_{17} . In this context y is the variable with the missing value and x_1, \dots, x_{17} are the other important variables and we proceed as follows:

(a) **Step 1** - Select as the first variable to enter the model that variable, from x_1 to x_{17} , found to be most highly correlated with the dependent variable. To determine if a variable is good enough to be included in the model the F statistic has to be greater than 4 to be significant ($F_{\text{enter}} > 4$), a general rule of thumb. If the F statistic is not significant we stop and conclude that no independent variables are important predictors. In this example, say x_7 is the variable with the highest correlation, we would include this variable in the model and proceed to step 2.

(b) **Step 2** - Calculate the partial F statistic associated with each remaining variable based on a regression equation containing that variable and the variable initially selected. That is to say, include x_7 in the model and try to find the best other variables from x_1 - x_6 , x_8 - x_{17} to predict y given x_7 is included at the end of step 2.

(c) **Step 3**- Focus on the variable with the largest partial F statistic, in the case of this example x_3 , for instance, is found to be the most important on examination of the rest of the variables.

(d) **Step 4**- Test for the significance of the partial F statistic associated with the variable selected in step 3. If the test is significant, add the new variable to the regression equation ($F_{\text{enter}} > 4$). If the test is not significant, use in the model only the variable added at steps 1 and 2.

(e) **Step 5** - At each subsequent step, determine the partial F statistics for those variables not yet included in the model and then add to the model that variable which has the largest partial F value if it is statistically significant. In this example, say x_{15} is found to have the highest correlation with the dependent variable and is thus included in the model if its partial F value is statistically significant. In this example no more variables were found to be statistically significant and all variables were needed to predict the missing value. At any step, if the largest partial F is not significant, no more variables

are included in the model and the process is terminated. In this example, therefore the model to predict the missing value y_7 contains x_3 , x_7 and x_{15} .

Given that no own label share was available for Greece, a value had to be estimated in this manner for this one missing variable value.

5.2.1.2 Standardisation of the Original Variable Values

It is evident from Table 5.5 (section 5.2.1) that the variables describing the objects to be clustered are not measured in the same units as, with the exception of those for food outlet density, the remaining values are expressed as percentages. It would not be appropriate, therefore, to treat these different values in an equivalent manner in this analysis.

New values have been calculated transforming the X values (original data) in Table 5.5 into Z (standardised) values thus making each variable equally important. The original variables were standardised by applying the following formula:

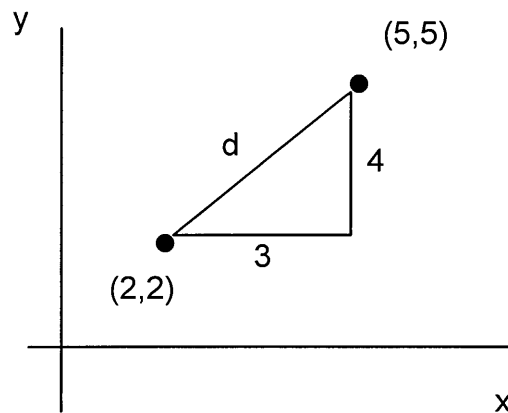
$$Z_i = \frac{X_i - Mean_i}{SD_i}$$

All the new variables have a mean of 0 and standard deviation (SD) 1. A large positive number signifies that the original number was very large relative to the rest and a large negative number signifies that the original number was very small relative to the rest. The original data do not lose their meaning; we are simply eliminating different means and spreads. Both the original and standardised (Z) values are expressed in Table 5.5, with the new standardised values appearing in italics.

5.2.1.3 Measures of Dissimilarity Applied to Establish Distances Between Countries

Once all missing values have been calculated and the data has been standardised, the **squared Euclidean distance** is then found from the standardised (Z) values for all pairs of countries. Conceptually, this technique is explained in the following example when calculating the distance between the following pairs of points:

Figure 5.1: Different Measures of Distance



Source: Author.

In the above figure, for example, if one wants to find the distance between the pair of points with co-ordinates (2,2) and (5,5), the most direct distance from these co-ordinates is the straight-line or Euclidean distance, which according to the Pythagorean theorem, is calculated as:

$$d(2,2)(5,5) = \sqrt{3^2 + 4^2}, \text{ which is equal } 5, \text{ thus the squared distance is } 25.$$

Although squared Euclidean distance is the most common and widely used measure in a clustering context, other distance measures have been used which may produce different results, e.g. Mahalanobis, Cityblock (Manhattan) and Minkowski (Everitt, 1993). In the context of the above example the Cityblock distance is calculated by adding the distances 3 and 4 to produce a distance between the pairs of co-ordinates of 7, which is very different from that generated by the squared Euclidean distance.

In the context of the present study, for example, the distance between Belgium and Denmark (8.84) is computed as follows:

$$\begin{aligned} &((-0.955) - (-0.371))^2 + ((-0.417) - (-0.229))^2 + ((-0.621) - (1.974))^2 + \\ &((0.665) - (-0.439))^2 + ((0.334) - (0.334))^2 + ((0.290) - (-0.419))^2 = 8.84 \end{aligned}$$

{(Food outlet density) + (Multiples share of food market) + (Co-ops share of food market) + (Independents share of food market) + (Own label) + (Market share)}.

The squared distance for this and all other pairs is shown in the table below:

Table 5.6: Squared Euclidean Distance Matrix - Market Structure Data

	1	2	3	4	5	6	7	8	9
DK 2	8.84								
D 3	4.41	12.44							
GR 4	5.15	10.14	13.08						
E 5	3.78	9.65	9.80	0.90					
F 6	5.37	10.89	5.02	6.95	7.69				
IT 7	11.46	6.79	20.73	8.00	6.29	21.25			
NL 8	5.43	9.12	7.79	5.85	7.49	0.65	19.36		
P 9	18.25	23.32	32.04	8.05	7.70	28.68	7.29	27.27	
UK 10	12.40	8.46	10.87	15.90	17.84	4.42	26.38	3.93	42.65
	B	DK	D	GR	E	F	I	NL	P

Reading from left to right, countries with small squared distances such as the Netherlands and France (squared distance of **0.65**) are regarded as being similar and hence would be expected to be within the same grouping of like countries. On the other hand, those pairs of countries with high squared distances, for example, the UK and Portugal (squared distance of **42.65**), would not be expected to be grouped together.

5.2.1.4 Application of a Clustering Algorithm to Establish Similar Countries

A **clustering algorithm** is applied to the data from the distance matrix which clusters pairs of points with small distances, France and the Netherlands, for example. The algorithm applied in this case was the **average link method** although other methods can be used including, single-link, complete link, furthest neighbour and group average (Jain and Dubes, 1988).

The final grouping can be represented in the form of a two dimensional diagram known as a **dendrogram**. Once the groups are represented diagrammatically the researcher must then determine where the "tree" should be "cut" to find the optimal number of clusters. At the most basic level the tree is "cut" by subjective inspection as *"there is no optimal strategy for either applying clustering or evaluating results"* (Everitt, 1993, p.142). Interpretation of the clusters is dominated by the insight and intuition of the researcher. It is often said that if the clusters can be made sense of by the investigator, then the analysis is deemed a success. The average link clustering method is then applied to produce the dendrogram illustrated by Figure 5.2, generating 4 distinct sets of clusters which are as follows:

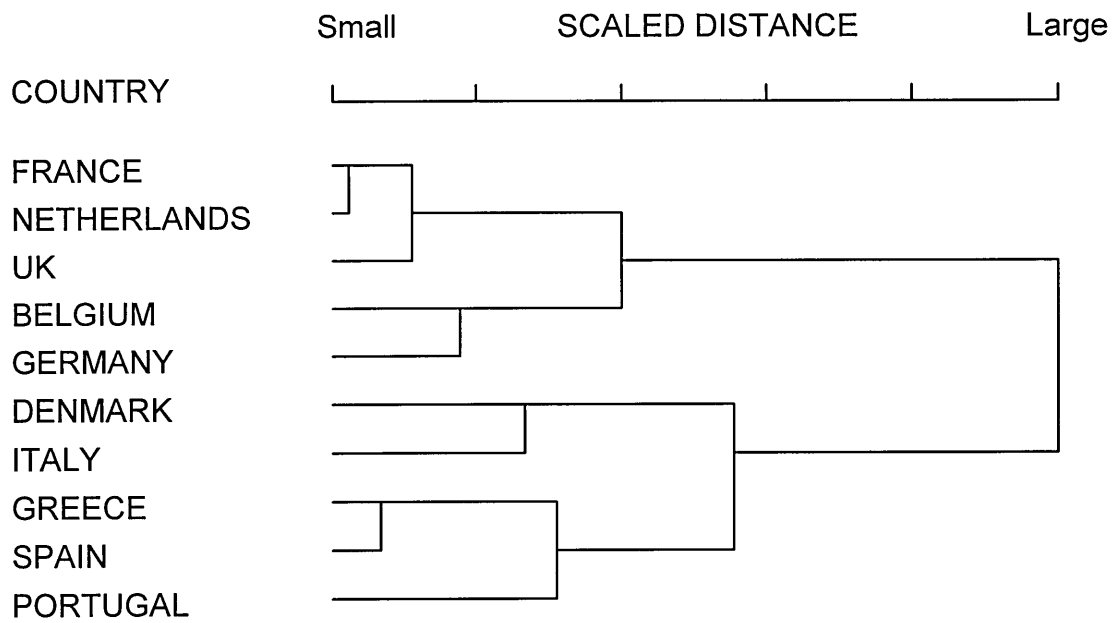
Cluster 1 - Belgium, Germany.

Cluster 2 - Denmark, Italy.

Cluster 3 - Greece, Spain, Portugal.

Cluster 4 - France, Netherlands, UK.

Figure 5.2: Dendrogram for Market Structure Data



This dendrogram shows that France and the Netherlands are in the same group as they have a small squared distance (**0.65**) compared to the UK and Portugal who are so far apart in terms of distance (**42.65**) they join together last.

5.2.2 Identifying Discriminating Variables

Once a pattern of clusters is established, it is then necessary to find the important variables which discriminate among the groupings of countries in the manner illustrated in the dendrogram Figure 5.2. **Discriminant analysis** is a multivariate statistical technique concerned to produce a rule which can be used to classify new individuals whose group membership is unknown. **Linear Discrimination** was used to produce the following sequence of important discriminatory variables for the **market structure data**:

Table 5.7: Important Discriminatory Variables for Market Structure Data

	Number of countries predicted correctly based on extra variables included
Co-operatives share of the food market	5/10
(plus) Own label penetration	7/10
(plus) Market Share of the Top Five Retailers	9/10
(plus) Food Outlet Density	10/10

The right hand column illustrates that if the only values available were those for the co-operative share of the food market variable, then 5 of the 10 countries are placed into their correct cluster. With the co-operative score and the score for own label available, 7 countries would be correct, becoming 9 with the inclusion of market share. Finally, all 10 would be correct based on the 4 variables above taken together.

The co-operatives share of the food market as an important discriminatory variable was surprising as a result of the association made by other academics about the relationship between market share and own label as was discussed in Chapter 4. Furthermore, it was also suggested in the previous chapter that it is multiple retailers who tend to demonstrate a commitment to own label development. However, the emergence of this particular variable can perhaps be accounted for by the fact that Denmark and Italy are markets in which the co-operative movement is very strong, thereby segregating these markets from the rest, in the first instance. Evidence to support this assumption can be found in Table 5.8 below illustrating the means of variables for the assignment of characteristics to the clusters in a later section (5.2.7), whereby the means for this particular variable are significantly different compared to the rest, for example they range from 0.933 (Greece, Spain, Portugal) to 19.000 (Denmark, Italy). Similarly, a significant variation in means also exists for own label penetration, market share of the top five retailers and food outlet density.

Although multiples and independents share of the food market were thought to be important when analysing market structures, as was discussed earlier, these variables

were not found to be important in determining the clusters, that is to say when the values are available for co-operatives share of the market, own label penetration, market share of the top five retailers and food outlet density, all 10 countries can be placed into their correct clusters. The variables which were not needed for this purpose, however, were not discarded as they are important in assigning important characteristics to clusters, the next stage of the analysis, to help further clarify why the clusters have been grouped together as they appear in Figure 5.2.

5.2.2.1 Assigning Cluster Characteristics

The last technique to be applied to the data is known as **Univariate** (or one way) **Analysis of Variance (Anova)**. **Anova** is a statistical tool used to determine whether there are significant differences among means of distinct groups of subjects on some particular variable. In the context of this study the means are taken for all variables for each set of clusters and variations are reflected in the scores obtained. All variables are included to assign characteristics to the clusters to help explain why the countries have grouped together in a certain manner.

If significant differences among means are found **Scheffé's Analysis of Contrasts** is applied to explain the differences. This technique *"is generally recommended when comparisons other than simple pairwise comparisons between two means are of interest, these general types of comparisons referred to as contrasts"* (Kleinbaum et al, 1988, p.368). The following table shows the mean scores for all 18 variables for each cluster:

Table 5.8 : Means of Variables used in Determination of Cluster Characteristics - Market Structure Data

Clus	Co-op Share*	Own Label*	Mkt Share	Food Den*	Multip Share	Indep Share	Roads/area*	Stand of Liv*	Disc Share*
B,D	2.500	20.500	53.750	164.00	36.850	60.650	3107.5	20111	19.000
DK,I	19.000	12.500	25.850	439.00	23.500	57.500	1324.5	19501	7.000
GR, E, P	0.933	5.413	25.533	664.00	30.000	68.067	463.0	11592	5.667
F,NL, UK	4.033	22.667	40.567	221.00	70.567	25.400	1837.3	19693	6.233
ALL	5.790	15.024	35.750	386.10	42.240	51.670	1576.5	17308	8.770

Table 5.8: continued

Clus	Smkt Den	Hypm Den	Area	Roads	Pop Den	Turno Scan	For'n involve	Whol involve	Manuf involve
B,D	14.500	1.1500	19370	314.00	274.00	38.500	24.000	16.500	1.500
DK,IT	12.000	0.5500	172200	187.00	155.00	54.000	0.500	13.500	0.000
GR,E, P	21.667	0.2333	243033	96.00	86.67	20.333	0.000	0.000	0.000
FR,NL ,UK	9.667	1.0333	278330	429.33	231.33	56.000	19.000	2.667	1.3333
ALL	14.700	0.7200	229595	257.80	181.20	41.400	10.600	6.800	0.7000

Note: * Denotes those variables with significantly different means for assignment of cluster characteristics

All variables are examined to see if significantly different means exist ($p < 0.05$) to assign important characteristics to the clusters. From the data in this table above, for example, it would appear that for the food outlet density variable (**food den**) the mean for the cluster of Belgium and Germany is definitely lower than the means of the other three clusters for this particular variable, thus assigning low food outlet density to these countries as an important characteristic. In contrast, the mean for Greece, Spain and Portugal for this variable is very high compared to those for the other clusters, thus assigning high food outlet density to these countries as an important characteristic.

Those variables with significantly different means are highlighted in the table above and important characteristics for each cluster were found to be as follows:

Table 5.9: Important Characteristics - Belgium, Germany

Low food outlet density
High discounters share of the domestic food market
High road density
High own label penetration

Table 5.10: Important Characteristics - Denmark, Italy

High co-operatives share of the food market
Low multiples share of the food market

Table 5.11: Important Characteristics - Greece, Spain, Portugal

High food outlet density
Low own label penetration
Low road density
Low standard of living

Table 5.12: Important Characteristics - France, Netherlands, UK

Low food outlet density
High own label penetration
High multiples share of the food market

The analysis undertaken for the market structure sub-set of data will now be applied to the trading format data, although not in such detail in order to avoid unnecessary repetition.

5.3 TRADING FORMAT DATA

The trading format sub-set of data included the following important variables:

Table 5.13: Trading Format Sub-Set

Important Variables
Supermarket Density
Hypermarket Density
Discounters' Share of Domestic Food Retailing

These variables were included in this particular sub-set for analysis as Fernie (1994) states that different types of trading format will influence the distribution network and culture present in different markets. A detailed explanation of the relevance of including these variables in any subsequent analysis is given in Chapter 4 and the secondary data collected for each are illustrated in Tables 4.6 (supermarket and hypermarket densities) and 4.7 (discounters share of domestic food retailing) respectively.

5.3.1 The Generation of Groups of Similar Countries

After data collection has taken place, the most appropriate technique is chosen which attempts to produce homogeneous groups of countries based on their similarities. As with the market structure data the technique selected is cluster analysis. The basic data for the cluster analysis is a matrix giving the variable values for each of the countries under investigation. Such a matrix for the trading format data is as follows:

Table 5.14: Matrix of Variable Values for Trading Format Data

	Supmkt Density	Hypmkt Density	Discount Share
Belgium B	19 <i>0.296</i>	1.0 <i>0.525</i>	16 <i>1.121</i>
Denmark DK	18 <i>0.227</i>	0.9 <i>0.337</i>	12 <i>0.501</i>
Germany D	10 <i>-0.324</i>	1.3 <i>1.088</i>	22 <i>2.052</i>
Greece GR	53 <i>2.642</i>	0.2 <i>-0.975</i>	na <i>-0.522</i>
Spain E	6 <i>-0.600</i>	0.3 <i>-0.788</i>	8 <i>-0.119</i>
France F	12 <i>-0.186</i>	1.5 <i>1.463</i>	2 <i>-1.050</i>
Italy I	6 <i>-0.600</i>	0.2 <i>-0.975</i>	2 <i>-1.050</i>
N'Lands NL	14 <i>-0.048</i>	0.3 <i>-0.788</i>	6.7 <i>-0.321</i>
Portugal P	6 <i>-0.600</i>	0.2 <i>-0.975</i>	na <i>-0.802</i>
UK	3 <i>-0.807</i>	1.3 <i>1.088</i>	10 <i>0.190</i>

Note: Figures not in italics represent original secondary data collected in Chapter 4 (see Tables 4.6 and 4.7).

5.3.1.1 The Calculation of Missing Variable Values

The missing values in this particular data set were the discounters' share of domestic food retailing in Portugal and Greece which had to be calculated in order to have a complete set of variable values. This value was estimated using the techniques forward selection and stepwise regression which were described in section 5.2.2.1.

5.3.1.2 Standardisation of the Original Variable Values

It is evident from Table 5.14 above that the variables describing the objects to be clustered are not measured in the same units. Therefore, new values have to be calculated transforming the original (X) values into standardised (Z) values, thus making them equally important. The formula applied is given in section 5.2.1.2. In Table 5.14 above figures not in parentheses represent the original data (X values) and those figures in parentheses represent standardised (Z) values.

5.3.1.3 Measures of Dissimilarity Applied to Establish Distances Between Countries

The squared Euclidean distance is then found from the standardised (*Z*) values for all pairs of countries. For example, in the context of the trading format data, the distance between Belgium and Denmark (0.42) is computed as follows:

$$((.296) - (.227))^2 + ((.525) - (.337))^2 + ((1.121) - (.501))^2 = 0.42$$

{(Supermarket density) + (Hypermarket density) + (Discounters' share of domestic food retailing)}.

The squared distance for this and all other pairs is shown in the table below:

Table 5.15: Squared Euclidean Distance Matrix - Trading Format Data

	1	2	3	4	5	6	7	8	9
DK 2	0.42								
D 3	1.56	3.27							
GR 4	10.46	8.60	19.69						
E 5	4.07	2.33	8.31	10.71					
F 6	5.83	3.84	9.78	14.23	6.10				
I 7	7.77	4.81	13.96	10.79	0.90	6.12			
NL 8	3.92	2.02	9.23	7.31	0.34	5.62	0.87		
P 9	6.75	4.10	12.48	10.59	0.50	6.18	0.06	0.57	
UK 10	2.40	1.73	3.69	16.67	3.66	2.06	5.84	4.35	5.28
	B	DK	D	GR	E	F	I	NL	P

This distance matrix forms the input to a clustering algorithm which clusters pairs of points with small distances, an example of which would be Portugal and Spain with a distance of **0.50**, thus assigning them to the same grouping of countries. On the other hand, Greece and Germany would not be expected to group together as this pair has a high squared distance (**19.69**). The average link clustering algorithm is then applied to

the data to produce the dendrogram illustrated by Figure 5.3, generating 4 distinct sets of clusters which are as follows:

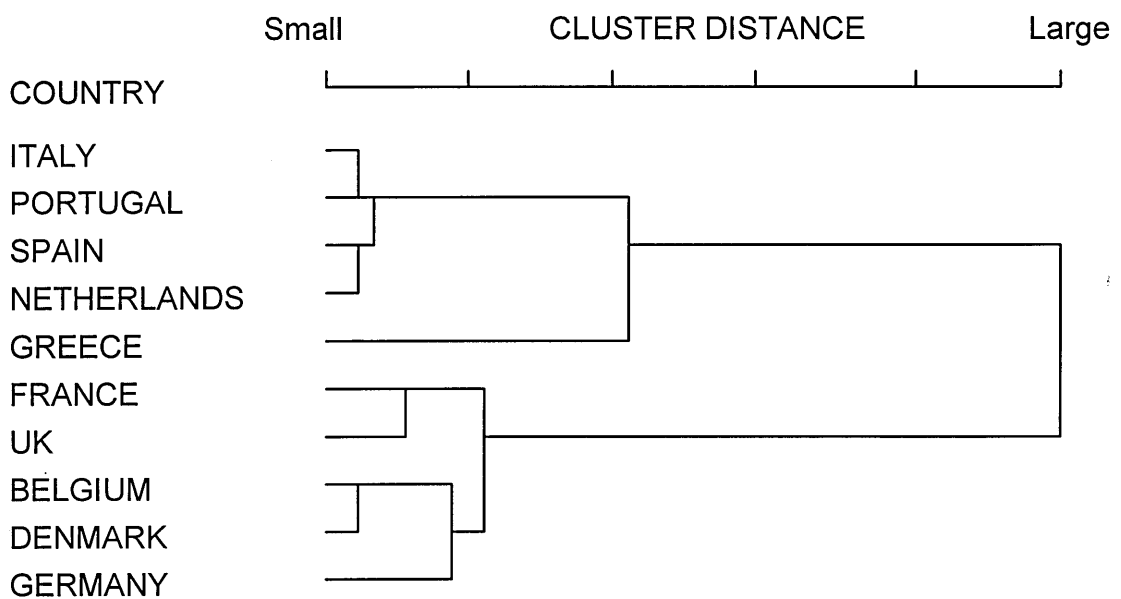
Cluster 1 - Belgium, Germany, Denmark

Cluster 2 - Greece

Cluster 3 - Italy, Portugal, Spain, Netherlands

Cluster 4 - France, UK

Figure 5.3: Dendrogram for Trading Format Data



This dendrogram shows that Portugal and Spain are in the same group as they have a small squared distance compared to Germany and Greece who are so far apart in terms of distance that they join together last.

5.3.2 Identifying Discriminatory Variables

Once a pattern of clusters is established, it is then desirable to find the important variables which discriminate among the different groupings of countries in the manner illustrated in the dendrogram, Figure 5.3. Discriminant analysis, more specifically

linear discrimination, is used to produce the following sequence of discriminatory variables for the trading format data. This technique is essentially concerned with producing a rule which can be used to classify new individuals whose group membership is unknown.

Important discriminatory variables in determining these clusters are as follows (excluding the singleton cluster Greece):

Table 5.16: Important Discriminatory Variables for Trading Format Data

	Number of countries predicted correctly based on extra variables included
Hypermarket Density	8/9
(plus) Supermarket Density	8/9
(plus) Discounters' Share of Domestic Food Retailing	9/9

The right hand column illustrates that if the only values available were those for hypermarket and supermarket densities, the 8 from 9 countries would be placed into their correct cluster with the addition of the discounter variable to place all 9 countries into their relevant clusters. Hypermarket density and supermarket density divide the countries into categories whereby one is driven predominantly by smaller scale retailing and the other predominantly by large scale retailing. The addition of the discounter variable further segregates the countries to account for the fact that not all countries are dominated by the previous two formats.

5.3.2.1 Assigning Cluster Characteristics

The final technique to be applied to this sub-set of data, one way analysis of variance (Anova), is used to determine whether there are significant differences among means of distinct groups of subjects on some particular variable. In this analysis all means are taken for all variables for each set of clusters to assign characteristics to the clusters to explain why countries have grouped together in a certain manner. The following table

illustrates the differences among means to be used in the determination of cluster characteristics for the trading format data:

Table 5.17: Means of Variables used in Determination of Cluster Characteristics - Trading Format Data

Clus	Smk Den*	Hypm Den*	Disc Share*	Stand of Liv	Pop Den	Food Den	Area	Roads	Roads/ Area
B,D, DK	15.667	1.0667	16.667	20012	222.33	206.67	14350	233.00	2619.3
GR	53.000	0.2000	5.400	9850	76.00	542.00	132000	116.00	878.0
I,P,E, NL	8.000	0.2500	5.075	15815	182.75	562.25	235047	144.25	998.7
F,UK	7.500	1.4000	6.000	19967	169.00	225.00	396600	593.00	1517.0
ALL	14.700	0.7200	8.770	17308	181.20	386.10	229595	257.80	1576.5

Table 5.17: continued

Clus	Own Label	Multip	Co-op	Indep	Mkt Share	Turn Scan	For'n Involv	Whol Involv	Manuf Involv
B,D, DK	19.667	36.900	8.667	54.433	45.700	49.333	16.333	18.667	1.0000
GR	5.400	45.000	0.000	55.000	26.000	10.000	0.000	0.000	0.0000
I,P,E, NL	5.075	31.000	5.275	62.975	27.275	32.000	10.000	1.500	0.5000
F,UK	6.000	71.350	5.400	23.250	42.650	64.000	8.500	3.000	1.0000
ALL	8.700	42.240	5.790	51.670	35.750	41.400	10.600	6.800	0.7000

Note: *Denotes those variables with significantly different means.

All three variables are then examined to determine if significantly different means exist in order to assign important characteristics to the clusters. From the data above it would appear that Greece has a significantly higher mean for supermarket density compared to the rest of the clusters, 53.0, and is thus assigned high supermarket density as an important characteristic. The mean for hypermarket density is significantly lower in the clusters for Greece, 0.20, and Italy, Portugal, Spain and the Netherlands, 0.25, than the

other two clusters thus assigning low hypermarket density as an important to these clusters. Finally, Belgium, Germany and Denmark have a significantly higher mean for discounters' share of domestic food retailing than all other clusters and are thus characterised by having a high share of this format.

Important characteristics for these clusters were found to be as follows and are summarised in the tables below:

Table 5.18: Important Characteristics - Belgium, Germany, Denmark

High hypermarket density
High discounters share of domestic food retailing

Table 5.19: Important Characteristics - Greece

High supermarket density
Low hypermarket density

Table 5.20: Important Characteristics - Italy, Portugal, Spain, Netherlands

Low hypermarket density

Table 5.21: Important Characteristics-France, UK

High hypermarket density

5.4 PHYSICAL AND SOCIO-ECONOMIC DATA

The final set of variables to be analysed fall under the heading of **physical and socio-economic data** and include the following important variables:

Table 5.22: Physical and Socio-Economic Sub-Set

Important Variables
Area
Road Density
Standard of Living
Population Density

These variables were chosen as they help to explain the retail structures within countries, e.g. the retail system in a country is influenced primarily by the standard of living of its population measured by per capita GDP (Eurostat, 1993). A detailed explanation of the relevance of including these variables in any subsequent analysis is given in Chapter 4 and the secondary data collected for each are illustrated in Tables 4.1, 4.2, 4.3 and 4.4 respectively.

5.4.1 The Generation of Groups of Similar Countries

After data collection has taken place, the most appropriate technique is chosen which attempts to produce homogeneous clusters of countries based on their similarities. As with the previous sub-sets of data, the technique selected is cluster analysis. The basic data for the cluster analysis is a matrix giving the variable values for each of the countries under investigation. Such a matrix for this sub-set of data is as follows:

Table 5.23: Matrix of Variable Values for Physical and Socio-Economic Data

	Area	Road Density	Standard of Living	Popn Density
Belgium	30500	4205	19019	326
B	<i>-1.028</i>	<i>2.254</i>	<i>0.427</i>	<i>1.419</i>
Denmark	43100	1643	19814	119
DK	<i>-0.963</i>	<i>0.057</i>	<i>0.600</i>	<i>-0.609</i>
Germany	356960	2010	21131	222
D	<i>0.657</i>	<i>0.371</i>	<i>0.916</i>	<i>0.400</i>
Greece	132000	878	9850	76
GR	<i>-0.504</i>	<i>-0.599</i>	<i>-1.787</i>	<i>-1.031</i>
Spain	504800	303	14556	77
E	<i>1.421</i>	<i>-1.092</i>	<i>-0.659</i>	<i>-1.021</i>
France	549100	1481	20207	103
F	<i>1.650</i>	<i>-0.081</i>	<i>0.695</i>	<i>-0.766</i>
Italy	301300	1006	19187	191
I	<i>0.370</i>	<i>-0.489</i>	<i>0.450</i>	<i>0.096</i>
N'Lands	41790	2478	19147	356
NL	<i>-0.969</i>	<i>0.773</i>	<i>0.440</i>	<i>1.714</i>
Portugal	92300	208	10369	107
P	<i>-0.709</i>	<i>-1.173</i>	<i>-1.663</i>	<i>-0.727</i>
UK	244100	1553	19726	235
	<i>0.074</i>	<i>-0.020</i>	<i>0.579</i>	<i>0.527</i>

Note: Figures not in italics represent the original secondary data collected in Chapter 4 (see Tables 4.1, 4.2, 4.3 and 4.4).

5.4.1.1 The Calculation of Missing Variable Values

There were no missing values in this particular sub-set of data, therefore no calculation of such values was necessary using the techniques described in section 5.2.2.1.

5.4.1.2 Standardisation of the Original Variable Values

It is evident from Table 5.23 that the variables describing the objects to be clustered are not measured in the same units. Therefore, new values have to be calculated transforming the original (X) values into standardised (Z) values, thus making them equally important. The formula applied is given in section 5.2.1.2. In table 5.23 figures not in parentheses represent the original data (X values) and those figures in parentheses represent standardised (Z) values.

5.4.1.3 Measures of Dissimilarity Applied to Establish Distances Between Countries

The squared Euclidean distance is then found from the standardised (Z) values for all pairs of countries. For example, in the context of the physical and socio-economic data set, the distance between Belgium and Denmark (9.03) is computed as follows:

$$\begin{aligned} &((-1.028) - (-.963))^2 + ((2.254) - (.057))^2 + ((.427) - (.600))^2 + ((1.419) - (-.609))^2 = 9.03 \\ &\{(Area) + (Road Density) + (Standard of Living) + (Population Density)\} \end{aligned}$$

The distances for this and all pairs of countries are calculated using the squared Euclidean measure of distance and are displayed in the following matrix which will then form the input to the cluster analysis:

Table 5.24: Squared Euclidean Distance Matrix - Physical and Socio-Economic Data

	1	2	3	4	5	6	7	8	9
DK 2	9.03								
D 3	9.97	6.91							
GR 4	19.34	6.55	14.11						
E 5	24.35	8.87	9.23	5.24					
F 6	25.14	15.88	4.16	19.07	10.07				
I 7	11.74	3.49	1.78	7.64	4.32	6.82			
NL 8	2.29	5.95	7.40	14.61	17.93	22.07	6.68		
P 9	21.03	6.76	16.04	0.63	5.93	22.63	8.12	14.36	
UK 10	8.26	3.96	0.86	9.86	7.75	7.19	0.60	4.43	10.72
	B	DK	D	GR	E	F	I	NL	P

This distance matrix forms the input to a clustering algorithm which clusters pairs of points with small distances, an example of which is the UK and Germany with a distance of **0.86**, thus assigning them to the same grouping of countries. On the other hand, Spain and Belgium would not be expected to group together as they have a high squared distance (**24.35**). The average link clustering algorithm is then applied to the

data produce the following dendrogram illustrated by Figure 5.4, generating 4 distinct sets of clusters which are as follows:

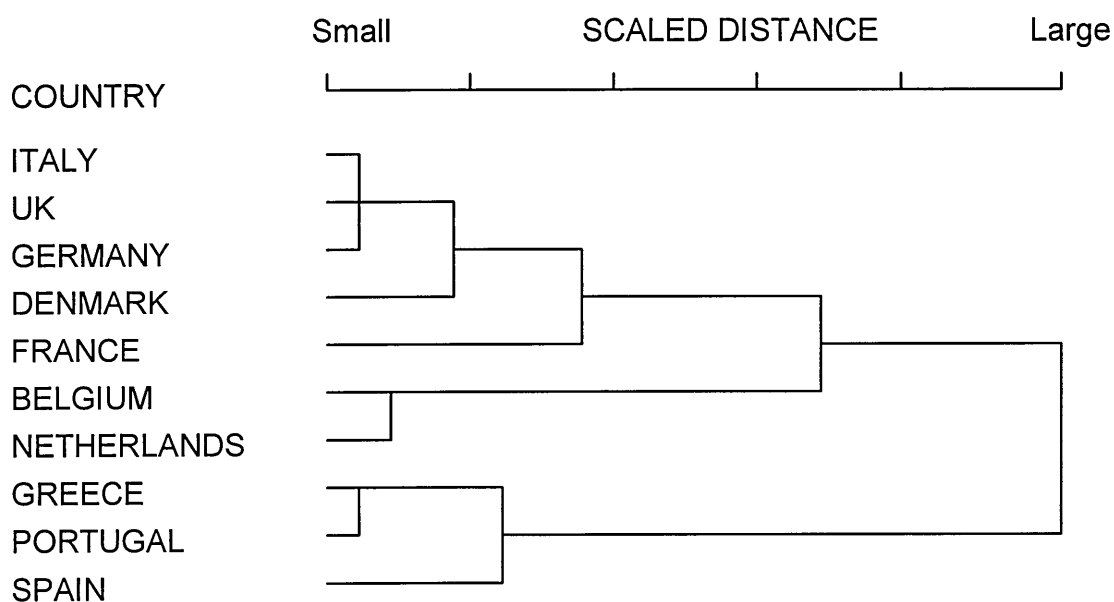
Cluster 1 - Belgium, Netherlands

Cluster 2 - Denmark, Italy, UK, Germany

Cluster 3 - Greece, Spain, Portugal

Cluster 4 - France

Figure 5.4: Dendrogram for Physical and Socio-Economic Data



5.4.2 Identifying Discriminatory Variables

Once a pattern of clusters is established, it is then desirable to find the important variables which discriminate among the different groupings of countries in the manner illustrated in the dendrogram, Figure 5.4. Discriminant analysis, more specifically linear discrimination, is used to produce the following sequence of discriminatory variables for the physical and socio-economic data set. The technique is essentially

concerned with producing a rule which can be used to classify new individuals whose group membership is unknown. Important discriminatory variables in determining the clusters for this set of data are as follows (excluding the singleton France):

Table 5.25: Important Discriminatory Variables for Physical and Socio-Economic Data

	Number of countries correctly predicted based on extra variables included
Population Density	8/9
(plus) Road Density	8/9
(plus) Standard of Living	9/9

The right hand column illustrates that if the only values available were for population and road density, 8 from 9 countries would be placed into their correct clusters with the addition of standard of living to place all 9 countries into their relevant clusters. The evidence to support these as important variables can be found in the table below illustrating the means of variables for the assignment of characteristics to the clusters, where the means for these variables range from 463.0 (Greece, Spain, Portugal) to 3341.5 (Belgium, Netherlands) and 86.67 (Greece, Spain, Portugal) to 341.0 (Belgium, Netherlands) for both road density and population density respectively. Although area was originally thought to be important, as was discussed earlier, it was found to be unimportant in determining the clusters, that is to say, when values are available for population density, road density and standard of living, all 9 countries can be placed into their correct clusters. The variable which was not needed for this purpose was not discarded as it is later important in assigning cluster characteristics to further clarify why the countries have been grouped together as they appear in the previous dendrogram.

5.4.2.1 Assigning Cluster Characteristics

The final technique to be applied to this sub-set of data, one way analysis of variance (Anova), is used to determine whether there are significant differences among means of distinct groups of subjects on some particular variable. In this analysis, all means are taken for all variables for each set of clusters to assign characteristics to the clusters to explain why countries have grouped together in a certain manner. The following table illustrates the differences among means which will be used to determine important characteristics for each of the clusters:

Table 5.26: Means of Variables used in Determination of Cluster Characteristics - Physical and Socio-Economic Data

Clus	Roads/ Area*	Pop Den*	Stand of Liv*	Area*	For'n Involv	Food Den	Smk Den	Hyp Den	Disc Share
B,NL	3341.5	341.00	19119	36145	34.500	178.50	16.500	0.6500	11.350
DK,I, UK,D	1553.0	191.75	19964	236145	5.750	308.75	9.250	0.9250	11.500
GR,E, P	463.0	86.67	11592	243033	0.000	664.00	21.667	0.2333	5.567
FR	1481.0	103.00	20207	549100	14.000	277.00	12.000	1.5000	2.000
ALL	1576.5	181.20	17308	229595	10.600	386.10	14.700	0.7200	8.770

Table 5.26: continued

Clus	Own Label	Multip	Co-op	Indep	Mkt Share	Roads	Turn Scan	Whol Involv	Manuf Involv
B,NL	18.00	50.85	1.150	48.000	38.200	115.00	46.500	1.000	1.000
DK,I, UK,D	19.500	40.675	13.200	46.125	39.450	313.50	49.500	16.000	0.7500
GR,E, P	5.413	30.000	0.933	68.067	25.533	96.00	20.333	0.000	0.0000
F	20.000	68.000	0.000	32.000	46.700	806.00	62.000	2.000	2.0000
ALL	15.024	42.240	5.790	51.670	35.750	257.80	41.400	6.800	0.7000

Note: *Denotes important variables with significantly different means

Important characteristics for these clusters were found to be as follows and are summarised in the tables below:

Table 5.27: Important Characteristics - Belgium, Netherlands

High road density
High population density
High foreign involvement

Table 5.28: Important Characteristics - Denmark, Italy, UK, Germany

No important characteristics found

Table 5.29: Important Characteristics - Greece, Spain, Portugal

Low standard of living
Low road density
Low population density
Low foreign involvement

Table 5.30: Important Characteristics - France

Low population density
High area

5.5 SUMMARY OF RESULTS

The statistical analysis undertaken in this chapter broadly confirms the north/south divide, as it is often referred to, which is evident in the retail trade on the continent of Europe (see for example Eurostat, 1993). In the north of Europe, there appears to be a core area of countries such as the UK and France, with the Netherlands exhibiting similar characteristics to these two countries on occasion. In southern Europe, countries such as Greece, Spain and Portugal demonstrate a number of similar characteristics, thus there is a tendency for grouping together in this analysis. In between these extreme positions lie countries such as Belgium, Germany and Denmark, typically classed as northern European, which join different clusters as a result of certain characteristics. Furthermore, Italy also joins different clusters depending on different variables. These essentially geographical differences will form the basis of the following discussion of results for each sub-set of data.

5.5.1 Market Structure Data

The clusters and their inherent characteristics generated from the previous analysis are summarised in the following table for ease of discussion:

Table 5.31: Clusters and Characteristics for Market Structure Data

Cluster	Characteristics
Belgium, Germany	Low food outlet density, high discounters' share of food retailing, high own label.
Denmark, Italy	High co-ops and low multiples share of the food market.
Greece, Spain, Portugal	High food outlet density, low own label, low road density, low standard of living.
France, Netherlands, UK	Low food outlet density, high own label, high multiples share of the food market.

In this particular sub-set of data the northern European markets of France, the Netherlands and the UK are clustered together demonstrating the following characteristics: low food outlet density, high own label penetration and a high share of the food market accounted for by multiple retailers. In these markets, therefore, it can be concluded that grocery retailing is concentrated and dominated by a small number of multiple retailers, who in an attempt to assume more control of the supply chain, have been committed to developing their own label products. This confirms the view taken by academics referred to in Chapter 4 who state that there is a strong correlation between the power of multiple retailers (as measured by market share) and the development of own label products by these retailers.

As far as France is concerned, however, it must be borne in mind that there is a great number of affiliated independent traders using the same trade mark, supported by a central buying organisation and as such are not strictly multiple retailers. Two such organisations in France are Leclerc and Intermarche (ITM). Leclerc consists of a group of independent traders owning their own stores, retaining some degree of autonomy while holding an equal share in the buying group, Groupement d'achats Galec. At a national level, Galec selects suppliers and negotiates purchasing terms from them. Most purchases are made directly by the members who undertake to adhere to a pricing policy that fixes both the average and minimum margins for each product. Therefore, members are free to buy from alternative suppliers, but must conform to the centralised pricing policy fixed by the central buying group (Eurostat, 1993).

This type of organisation form, that is to say Leclerc, is an unusual one in that the structure is very fragmented allowing autonomous decisions regarding stock to be made by their store managers or "franchisees". However, there is also evidence of centralisation in terms of the purchasing function and pricing policies carried out at a higher level in the organisation structure, i.e. by the buying group itself. The set of secondary data used for this variable, it would seem, has made the assumption that these groups have strength in terms of obtaining more favourable terms from suppliers and thus classified them as multiple retailers, i.e. chains having ten or more outlets. It is still

worth bearing in mind, however, that the independent sector is still a significant one in the French grocery market.

Remaining with the markets of northern Europe, while Belgium and Germany are typically referred to as being northern European and share two common characteristics with the cluster containing France, the Netherlands and the UK namely low food outlet density and high own label, they are grouped together in a cluster in their own right. The fact that Belgium and Germany have been grouped together can be explained by the very strong presence of the discount grocery sector in these markets. If the mean scores used to generate cluster characteristics are examined, see Table 5.8, Belgium and Germany exhibit a significantly higher mean score for the discounting variable (19.00) compared to, for example, the cluster Greece, Spain and Portugal which has a significantly low mean score of 5.667. Furthermore, their high mean score is significantly higher than that for the cluster with whom they share other common characteristics at 6.233 (France, UK and the Netherlands).

Typically considered as a market of northern Europe, Denmark groups with Italy, typically a market of southern Europe, to be characterised by a high share of the food market by co-operative retailers and a low multiples share of the food market which is reflected in the significantly different means for these variables. For example, this cluster has a significantly higher mean score for the co-operatives variable (19.00) compared to the rest of the clusters which can be seen in Table 5.8. Similarly, the mean score for multiples is significantly lower for Denmark and Italy (23.500) compared to, for example, France, the Netherlands and France who are characterised as having a high share of the market accounted for by multiple retailers with a mean score of 70.567.

At the other end of the spectrum from these northern European markets, with the exception of Italy, are those markets of southern Europe, namely Greece, Spain and Portugal, who in terms of market structure are characterised by high food outlet densities, reflecting the fragmented nature of grocery retailing in these markets which is typically dominated by independent family run businesses. This is illustrated by the

significantly higher mean score of 664.0 in Table 5.8 with regard to this variable. Low own label penetration is also assigned to this cluster as a characteristic with a significantly lower mean score than the rest of the clusters at 5.413, highlighting that retailers in this cluster have assumed less control of the supply chain than their northern European counterparts. Additional characteristics assigned to this cluster are low road density and low standard of living. These characteristics, however, will be discussed in the context of the physical and socio-economic data.

5.5.2 Trading Format Data

The following table summarises the clusters generated by the previous analysis and their important characteristics:

Table 5.32: Clusters and Characteristics for Trading Format Data

CLUSTER	CHARACTERISTICS
Belgium, Germany, Denmark	High hypermarket density, high discounters' share of food retailing
Greece	High supermarket density, low hypermarket density
Italy, Portugal, Spain, Netherlands	Low hypermarket density
France, UK	High hypermarket density

As with the market structure data, when examining the clusters generated from the trading format data set, a definite north/south divide between the clusters is evident. In the north are two distinct groups of countries: France and the UK and Belgium, Germany and Denmark, and in the south two distinct groups are also present: Greece and Italy, Portugal, Spain and the Netherlands. The inclusion of the Netherlands with this group of distinctly southern European countries is surprising as one might have expected this country to be grouped with the UK and France as with the market structure data. This reason for this grouping, however, will become apparent as the discussion progresses.

It would seem that France and the UK have been grouped together as the grocery sector in these respective markets is driven essentially by large scale retailing, thus accounting for the characteristic "high hypermarket density" exhibited by this cluster. Definitional differences, however, should be borne in mind at this stage as the equivalent of the typical French hypermarket in the UK, that is to say a store with floorspace in excess of 2500 m² offering a broad range of food and non-food products, is referred to as a superstore and has a very reduced non-food section compared to the concept of the Continental hypermarket, in addition to being slightly smaller with floorspace in excess of 2320 m² (25,000 sq. ft). These definitional differences were discussed in more detail in the previous chapter (see section 4.5.6). Distribution requirements in these markets where deliveries are driven by one main format essentially will be different from countries where retailers have a number of different store sizes to be serviced in their portfolios. Although many of the French retailers operate a number of different sizes of stores, from small superettes at one end of the scale to large hypermarkets at the other, generally speaking the hypermarket is the dominant format in this market.

The cluster containing the remaining markets of northern Europe: Belgium, Germany, Denmark, with the exception of the Netherlands, is characterised by both a high hypermarket density and a high share of food retailing accounted for by discount retailers (for means used in the determination of these characteristics see Table 5.17). The large hypermarket at one end of the scale and the smaller discount store at the other is fairly typical of these markets as retailers operate a number of fascias covering a number of different store sizes to overcome restrictions such as difficult planning legislation in their domestic markets. When considering the mean scores used to assign cluster characteristics for the trading format data (see Table 5.17) the cluster for Belgium, Germany and Denmark exhibits a significantly higher mean score for the discounting variable compared to the rest of the clusters. If one considers the original data collected for the discounting variable, further evidence of the importance of this concept in these markets is provided, a characteristic which differentiates these from other northern European markets, as all three countries have the highest market share of

the domestic food market by discount retailers (see Table 5.14). One retailer which takes the highest share of the market in Belgium and Germany is the limited line German discounter Aldi, with market share of 8% and 12.7% in both markets respectively (Eurostat,1993). In Denmark, however, Aldi is close behind the domestic operator Dansk Supermarked's discount chain which accounts for 5.4% of the domestic food market with a market share of 4.4%.

Distribution requirements and networks will be more complex in these markets, than say for example in the UK and France where one format essentially is being serviced. While smaller delivery sizes are typically required to service discount stores, their location, predominantly in town centres, will also affect the distribution of goods as trucks and lorries are required to deliver in largely restricted pedestrian areas.

The markets of southern Europe appear to be predominantly driven by small-scale retailing and as such one would have expected the markets of southern Europe to be grouped together. On this occasion, however, Greece stands out in a cluster in its own right with high supermarket density and low hypermarket density as important characteristics as a significantly higher mean score was found for supermarket density, 53.0, and conversely a significantly lower mean score for hypermarket density, 0.20, was found (see Table 5.17).

This can perhaps be explained by the secondary source of information used to collect data for this variable which shows Greece as having a very high number of supermarkets in relation to other countries (see Table 5.14 for original data to illustrate this point). This can be accounted for as a result of definitional differences as in Greece supermarkets are defined as having floorspace of greater than 200m² rather than 400m² as is used in most other countries (see Chapter 4 for a detailed discussion of store definitions).

Italy, Portugal, Spain and the Netherlands cluster together as they are typically characterised by small shop retailing, such stores in Italy are often referred to as "mamas and papas", reflecting the traditional family influence which still has a stronghold in

such markets . The trend towards small scale retailing is reflected in the mean score for hypermarket density which, in addition to that for Greece, is significantly lower than the remaining two clusters, illustrated in Table 5.17. Although the Netherlands shows a number of characteristics in common with the UK and France, specifically the strength of the multiple retailer, high own label penetration and low food outlet density, the factor which does make them different is that the leading grocery retailer Ahold operates an extensive network of smaller shops, supermarkets which had an average floorspace of 1002m² in 1991 (IGD, 1993), whereas in aforementioned markets, grocery retailing is essentially driven by larger scale formats.

Italy, Portugal and Spain are all characterised by low hypermarket densities, a characteristic which is surprising in light of the introduction and continued development of the concept most notably in Spain by the French grocery retailers. However, more up-to-date data might show a different pattern, perhaps with an increased emphasis on large scale retailing.

As was highlighted in the previous paragraph, the Netherlands is no longer included in the same cluster as France and the UK, but instead with the southern European countries of Italy, Portugal and Spain. In these markets low hypermarket density is an important characteristic unlike France and the UK where a high hypermarket density is evident, this illustrated in Table 5.17 whereby the mean score for hypermarket density is significantly lower in Italy, Portugal and Spain, 0.25, compared to a significantly higher score for France and the UK, 1.4.

5.5.3 Physical and Socio-Economic Data

The following table summarises the clusters generated from the previous analysis and their important characteristics:

Table 5.33: Clusters and Characteristics for Physical and Socio-Economic Data

Cluster	Characteristics
Belgium, Netherlands	High road and population densities, high foreign involvement
Denmark, Italy, UK, Germany	No important characteristics found
Greece, Spain, Portugal	Low standard of living, low road and population densities, low foreign involvement
France	Low population density, high area

The north/south divide between the grocery retail markets of Europe is further confirmed on examination of the clusters generated from the analysis of the physical and socio-economic data set. As was often the case with the other sub-sets of data, however, differences do exist depending on the individual characteristics assigned to clusters.

In the north of Europe, Belgium and the Netherlands are grouped together to form a cluster characterised by high road and population densities and a high degree of overseas involvement exhibited by their respective grocery retailers (see Table 5.26 for means used in determining these characteristics). Both countries are densely populated making the population easier to reach as consumers and a dense road network makes fast flow replenishment to stores more viable due to the shorter distances that have to be travelled than in Spain, for example. Additionally, retailers in these markets have developed foreign operations as a means of sustaining growth in their increasingly saturated and restrictive domestic markets.

No significantly different means were found for the second cluster of northern European countries, Denmark, Italy, the UK and Germany, for this particular set of data, thus assigning it no important characteristics. However, if one considers the original data (see Table 5.23) these countries represent some of the most wealthy markets in Europe in terms of GDP, which could account for this particular grouping. Similarly their road and population densities are relatively high. France is excluded from this group of countries, surprisingly, forming a cluster in its own right and was found to have a

significantly higher mean score for area than all other clusters, 549100 compared to 236145 for Denmark, Italy, UK and Germany and a significantly lower population density than Belgium and the Netherlands, thus assigning these are important cluster characteristics (see Table 5.26). The sheer size of this country and the dispersal of the population again has significant implications for distribution requirements in France. The RDC concept is allowed limited application due to the predominance of the hypermarket concept and their geographical location, isolated in a lot of cases, the vast size of the country often makes it difficult to guarantee next day delivery, therefore a greater amount of stock is held in the hypermarket.

Furthermore, a strong bias towards regional tastes in France largely results in a more decentralised buying function, with the store manager exercising greater control over the number of lines ordered (Cullis, 1992b). Consequently, as the number of local suppliers increases, a greater proportion of deliveries will take place at store level. Practices such as this assist in further explaining why the majority of hypermarkets have to be able to accommodate high levels of inventory in terms of possessing significant warehousing capacity. France stands out from the rest with significantly lower mean scores for population densities than the rest of the clusters, for example the score for France is 103.0 compared to the highest score of 341.0 for Belgium and the Netherlands (see Table 5.26).

Finally, the markets of southern Europe, namely Greece, Spain and Portugal are grouped together exhibiting a low standard of living, low road and population densities and low foreign involvement. The lesser standard of living than their northern European counterparts is reflected in the significantly lower mean score for this variable compared to the rest of the cluster (see Table 5.26). Additionally, these countries are all characterised as having lower road and population densities (see Table 5.26) as road transport infrastructures are less dense and the population is more scattered making them more difficult to reach as consumers. Furthermore, retailers in these markets tend not to be active outside the domestic market, compared to their northern European counterparts, as they have not yet established a developed retail system in the domestic

market to justify "exporting" it to other markets in Europe or overseas which manifests itself in low foreign involvement being assigned as an important characteristic on the basis of its significantly low mean score (see Table 5.26).

5.6 CONCLUSION

From this discussion of the results of the statistical analysis for all three sub-sets of data, it can be concluded that there is a definite north/south divide between the grocery retail markets in Europe. Countries do join different clusters depending on the individual characteristics assigned to them, although generally they tend to fall into two broad categories; the UK, France, the Netherlands, Belgium, Germany and Denmark comprising northern Europe and Greece, Spain, Portugal and Italy comprising the south.

In terms of the implications of these results in the context of the current research investigation, it is in the markets of northern Europe that the balance of power in supply chain relationships will be in favour of grocery retailers, although at different rates, with subsequent control of distribution and logistics operations remaining in the domain of retailers. In the markets of northern Europe, a number of key variables were thought to be influential in explaining grocery retail structures in Europe and particularly their inherent relationships between manufacturers and retailers in a logistical context. Such variables, in addition to other important factors, have been tested through this statistical analysis in the generation of a meaningful taxonomy of grocery retail market structures.

Thus, the second stage of the research investigation will explore further the initial work which suggested that the less concentrated a market is, the greater the fragmentation of the supply chain with greater control of the supply chain exerted by suppliers. In these markets, suppliers will undertake direct store deliveries as opposed to those markets with a higher degree of retail concentration in which retailers are more powerful, channelling deliveries through their own distribution networks for forward delivery to stores in the retail chain. To further substantiate this view, primary work will be undertaken with the main participants in the logistical chain, manufacturers and third

party distribution specialists acting as agents on behalf of both manufacturers and retailers, which is now discussed in the following chapter.

CHAPTER 5 - REFERENCES

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CHAPTER 6

PAN-EUROPEAN SUPPLY CHAIN CONFIGURATIONS - EMPIRICAL EVIDENCE

6.1 INTRODUCTION

The aim of this next stage of the research programme, which is essentially of an exploratory nature, is to provide a follow-up analysis to supplement and further explore some of the important issues which arose both in Chapter 3 and from the analysis of secondary data described in the previous chapter.

This is achieved by undertaking a series of semi-structured interviews with two important groups of supply chain participants, namely grocery manufacturers and third party distribution specialists with a pan-European presence, in order to determine how distribution networks differ in time and space across continental Europe and the impact of supply chain relationships on such networks.

At the outset of the research programme, it was intended that the focus of any subsequent collection of primary data should be on the main participants in the logistical chain: retailers, grocery manufacturers and third party distribution specialists. However, as the investigation progressed, it was decided that retailers would be excluded from the sample on the strength of the following.

During 1992, the Institute of Grocery Distribution (IGD) embarked on their European Retailer Distribution survey in order to illustrate the development of retail distribution structures in major European countries. The survey involved distributing 100 questionnaires to a selection of Europe's leading grocer retailers, from which a response rate of 14% was obtained.

Such a response rate can perhaps be attributed to the issue of ownership of companies, that is to say, companies which are either privately or publicly owned have differing policies on reporting information. For example, the majority of retailers on the continent of Europe, particularly those in France and Germany, are privately owned, placing them under no obligation to disclose, for example, financial information. Thus, it is feasible to assume that an unwillingness to disclose information regarding their financial situation would perhaps extend to other aspects of their operations, namely the distribution and logistics function.

Thus, in view of the lack of co-operation with surveys of this nature, rendering the collection of primary data from retailers a notoriously difficult task, the focus of the primary research is on those parties who supply the grocery retail sector, namely manufacturers and third party distribution specialists.

Furthermore, as there is a limited amount of secondary data on the logistical operations of European retailers for those reasons discussed an insight into the operations and attitudes of the aforementioned parties presented one approach to gaining a partial understanding of supply chain relationships in Europe and their impact on channels of physical distribution in this particular programme of research.

6.2 RESEARCH METHODOLOGY AND OBJECTIVES

6.2.1 Generating a Sample of Respondents from the Manufacturing Sector

From a review of in excess of 100,000 grocery brands across Europe, which Nielsen in association with *Checkout* magazine compiled in late 1993 to provide a listing of the *Top 100 European Brands*, detailed lists of companies were made from this published source which included major multinationals such as Unilever, Mars and Procter and Gamble, in addition to a large number of family owned and independent companies such as Barilla, Parmalat and Ritter. Companies of this nature, while their brands have a certain degree of European penetration, tend to be stronger on a national basis. Thus,

companies were selected on the basis of having an extensive pan-European presence with regard to their brand penetration.

The leading companies in their respective product categories were selected as potential respondents to participate in the research investigation. A lack of co-operation on the part of the following manufacturers, however, led to the exclusion of these companies from the sample: The Coca Cola Company, Nestlé, Procter and Gamble, BSN, Ferrero, Kraft Jacobs Suchard and CPC. Those manufacturers willing to co-operate, however, are among the brand leaders in their respective product categories and are as such representative of the major product groups stocked in supermarkets and are detailed in Table 6.1. Furthermore, those manufacturers listed are not only European, but global in terms of their brand presence.

Table 6.1: Major Product Categories Selected and Their Leading Manufacturers

Detergents/ Soap	Health and Beauty	Cereals	Dry Grocery	Alcoholic Beverages
Unilever	Gillette Colgate	Kellogg	Mars/Pedigree Petfoods	United Distillers

The companies identified above were all easily accessible as the relevant personnel were either based in the UK or UK nationals based overseas responsible for directing pan-European distribution, which overcame potential language barriers.

6.2.2 Generating a Sample of Third Party Distribution Specialists

A sample of suitable third party distribution specialists was drawn from a compilation of the 1994 Contract Distribution Profiles produced by the Institute of Logistics Management (ILM), published in *Distribution Business*. From these profiles of the top 34 distribution companies, only those which had a presence in the European grocery market were selected. All companies were based in the UK for ease of access, a

decision also influenced by both monetary and time constraints. On this basis, the following distribution companies were selected:

Table 6.2: Third Party Distribution Specialists with a Pan-European Grocery Presence

Company	Countries(Grocery presence only)
BOC	Belgium, France, Netherlands
Christian Salvesen	Belgium, France, Germany, Italy, Netherlands, Portugal, Spain
Exel Logistics	Belgium, France, Germany, Netherlands, Spain
Hays	France, Germany
McGregor Cory	Spain
Tibbett and Britten	na
Transport Development Group-Harris	France, Germany
Wincanton	na

Source: Distribution Business, March 1994.

6.2.3 Selecting Respondents from Manufacturing Companies

Once both samples of companies had been selected, the appropriate personnel had to be identified within these companies who would have the ability to respond authoritatively on supply chain issues at a European level. In order to select the correct respondents in the manufacturing companies identified in Table 6.1, the author consulted the Director of the Centre for Pan-European Grocery Supply Chain Development at Silsoe College, who in his part-time position as Head of Professional Services at the Institute of Grocery Distribution has a number of established contacts with key personnel in the grocery manufacturing sector. On the basis of his advice a list of contacts was compiled, which comprised executives in the field of Logistics/Distribution, who would have both adequate experience and knowledge to answer questions regarding European supply chain issues in a detailed manner.

Letters were drafted explaining the purpose of the research and the requirements of the respondents should they be willing to participate. In the case of those executives based in the UK it was requested that the author could personally visit them and conduct an in-depth interview of approximately two hours in duration. For those executives based overseas, as was the case for those representing Unilever and Colgate-Palmolive, a similar letter was sent requesting permission to conduct a telephone interview instead. Follow-up telephone calls were then made approximately two weeks later in order to establish the number of respondents who would be willing to participate in the research programme.

Of the manufacturers contacted, six were willing to be interviewed, four of which would be conducted on a personal basis (Gillette, Kellogg, Mars/Pedigree Petfoods, and United Distillers) and the remaining two over the telephone as both respondents were based in Brussels (Colgate Palmolive and Unilever).

6.2.4 Selecting Respondents from Third Party Distribution Specialists

In order to establish appropriate respondents from the sample of third party distribution specialists who would have the ability to discuss their contract distribution operations on a European level, a series of telephone calls was initially made to those companies listed in Table 6.2 to identify suitable respondents as no established contacts were available, as was the case for potential respondents from the food manufacturing sector. Letters were then written asking these individuals if they would be willing to participate in the research programme. In this case respondents were again of executive status in their respective organisations.

Two distribution companies were discounted from the sample at this stage as correspondence was received from the Chairman of the Tibbett and Britten Group explaining that he did not feel the company would be suitable for this type of research as its grocery retail operations in Europe were relatively underdeveloped compared to those of Exel Logistics, Christian Salvesen and Hays, for example. Similarly, Wincanton was

also excluded as their European presence is still at the development stage. Thus, respondents from the following companies were willing to participate in the research programme: BOC, Christian Salvesen, Exel Logistics, Hays, McGregor Cory and Harris Distribution (the grocery division of Transport Development Group).

6.2.5 Information to be Collected from Manufacturers

A number of issues pertaining to supply chain relationships were identified as relevant topics for the series of manufacturer interviews and placed under six broad categories for ease of discussion. The first topic, **Supply Side Issues**, is concerned with the way in which manufacturers' production networks have been rationalised over time in response to changing market conditions. Branding is included in this section in order to determine how brands differ throughout Europe or if indeed they are harmonised throughout Europe in its entirety as a pan-European supply chain configuration is vital to support the existence of pan-European brands. This initial section will provide a general overview of the European operations of the manufacturers participating in the research and the challenges they face in the current grocery market prior to in-depth analysis of more specific supply chain issues.

The following two issues considered then draw on the results of the analysis of secondary data described in Chapter 5 with the presentation of clusters to respondents pertaining to specific questions. Thus, the topic **Market Information** draws on the market structure clusters as the most useful basis for discussion concerning the importance of different markets to manufacturers. Similarly, in the section **Supply Chain Management**, the trading format clusters are presented to manufacturers to establish how stock is currently moved in different European markets. Additionally, in this section, questions are asked pertaining to how manufacturers' networks of depots have changed over time and the factors responsible for such restructuring. The remaining topics, **Marketing Issues**, **Information Technology Issues** and **Attitudes to Relationships**, are more of an intangible nature which the previous cluster analysis can not quantify. Nonetheless, they are still important and worthy of further explanation as

they are illustrative of the way in which channels and relationships are developing, drawing on concepts developed in the applied literature in Chapter 3. These sections and the questions they comprise can be seen in Appendix 1.

6.2.6 Information to be Collected from Third Party Distribution Specialists

As with the survey of manufacturers, after the identification of suitable respondents had taken place, issues for discussion had to be considered. Thus, questions relating specifically to differences in the distribution function across different European markets were devised, drawing on the results of the analysis described in Chapter 5. Those issues for discussion with respondents from third party distribution specialists were placed under three broad headings for ease of discussion and are as follows.

Market Information is a topic which draws on the market structure clusters as the basis for discussion in the identification of those markets where distributors have a presence and the type of distribution service provided to grocery retailers in these European markets. The **Level of Centralisation and Composite Distribution** is the second topic for discussion, whereby clusters generated from the trading format data are presented to respondents in the determination of differences in both the levels of centralisation and composite warehouse development across Europe. Results from the discussion of these two topics will be integrated with those results obtained from the manufacturer survey when considering **Supply Chain Management** issues for purposes of cross-comparison. The final topic for consideration, **Attitudes to Relationships**, as with the manufacturer survey, is essentially of an intangible nature, and as such can not be discussed in the context of the previous cluster analysis. Nevertheless, questions relating to this issue provide further insight into current relationships in the supply chain. These sections and the questions they comprise are contained in Appendix 2.

6.2.7 Data Collection Methods - Manufacturers and Third Party Distributors

As a result of the overall small sample size, twelve respondents in total, and the broad spectrum of issues to be discussed, the interview was chosen as the most appropriate

method of data collection for this stage of the research investigation. Interviews can be conducted in a number of ways including personal face-to-face contact, which can be both time consuming and expensive, and non-personal methods which attempt to overcome the problems associated with face-to-face interviews and include postal research, diary panels, telephone research and observation research (Crouch, 1988). Postal research in the form of a mail questionnaire was discounted in the case of this research due to the small size of the sample and the fact that as the research is of an exploratory nature, depth of information rather than breadth is more important, an objective which could only be achieved by adopting a personal approach.

The main advantage of interviewing individuals in a face-to-face situation is the quality of the data received and the control the interviewer can exert in clarifying points which are unclear, on the other hand the expense incurred is often extensive. The issue of cost was very influential in this study as a number of respondents from the sample of manufacturers were based overseas. In these cases, the same interview was administered over the telephone as the research budget did not permit visits to, for example, Colgate-Palmolive, a company with European operations based in Brussels.

Personal interviews can be carried out in a number of ways including the **fully structured interview**, which as the name suggests, is governed by a structure in the form of a questionnaire whereby questions and notes are read out to the respondent as they appear in the questionnaire format. The rigorous administration of the questionnaire ensures that the responses from a number of respondents are given to exactly the same question. Despite the fact that this type of interview requires relatively less skill in its administration and subsequent processing of the responses compared to other interviewing techniques, additional useful information which is volunteered by the respondent is lost as the data collected can only be made possible by the questionnaire content.

Another type of interview which helps to overcome the obstacle of not capturing information outwith the boundary of the questionnaire is the **semi-structured interview**. In addition to the fully structured questions which govern the previous type of interview situation, open-ended questions are also asked. In this scenario, more onus is on the respondent to reply as he is now free to answer as he sees appropriate as no structure or direction is implicit in the question. An example of such a question from this study is:

6.2 Would you indicate any areas for improvement in distribution development/co-operation with regard to trade customers?

Such questions would then be followed by a blank space in which the interviewer then writes down precisely what the respondent has said. The use of probes allows the generation of both qualitative and quantitative data in the same survey. A greater level of expertise in both the analysis and interpretation of these types of question is required on the behalf of the interviewer.

This type of interview technique was used for the purpose of this research as it was felt that because such a wide range of issues were being covered, this particular technique would allow greater flexibility enabling respondents to answer freely and volunteer additional information which may be lost in a questionnaire, whilst not losing sight of the topics under discussion. For the sake of completeness, two other types of interview technique exist which are the **unstructured interview** which contains only a checklist of topics and questions which the interviewer wishes to cover where the respondent is encouraged to talk at length on particular topics. Finally, the **depth interview** probes the respondent's levels of thought and thus its roots lie in the field of psychoanalysis.

In the case of those respondents from the sample of manufacturers who were based in continental Europe, telephone research was utilised as a direct consequence of monetary constraints which would not permit the undertaking of personal interviews. This type of

interview allowed contact with those senior executives who were difficult to reach by personal interview and is often less demanding on their time. Previously confined to industrial research, this type of technique is now spreading to other areas of marketing research.

Face-to-face semi-structured interviews lasting about two hours were conducted with respondents from: Gillette, Kellogg, Pedigree Petfoods/Mars and United Distillers. In the case of Colgate Palmolive and Unilever, both respondents were based in Belgium, thus the interview was conducted over the telephone.

For the survey of respondents from third party distribution specialists it was decided to utilise telephone research as the interview could be undertaken with relative speed, its length being significantly less than that for the manufacturer research and the cost involved was not as great had the respondents been interviewed face-to-face.

Additionally, the telephone often makes it possible to speak to executives who would otherwise be too busy for a personal interview. As with the manufacturer research, the semi-structured technique of interviewing was chosen as it allowed the respondents to talk more freely than a structured questionnaire would allow. The semi-structured interview schedule for these particular telephone interviews can be seen in Appendix 2.

Telephone interviews following the structure in Appendix 2, lasting approximately 45 minutes, were undertaken with the following companies: BOC, Christian Salvesen, Exel Logistics, Hays, McGregor Cory and Harris Distribution.

6.3 DISCUSSION OF RESULTS

This discussion will combine the results of the surveys undertaken with both groups of respondents and will firstly consider those issues where the retail clusters can be applied; Supply Side Issues, Market Information and Supply Chain Management, and then those issues of a more intangible nature, namely Marketing Issues, Information Technology Issues and Attitudes to Relationships.

A case-study approach has been adopted to explore issues from the past and present as they affect those manufacturers and third party distributors identified in section 6.2.4. The case study was thought to be the most appropriate method of analysis for this piece of research as Janckowicz (1991) states its main advantage being that *"it involves analysing the full richness and variety of events and issues in the organisation(s) in question"*(p.164). This approach was also adopted on the basis of the small number of respondents which would make it difficult to make statistical inferences, additionally a greater depth of data was required to be generated. Mintzberg (1973) used a small sample of five in his research on managerial work and thus stated in a later work that small samples, especially in exploratory research should be encouraged as opposed to *"less valid data that were statistically significant"* (1979a). However, it must be borne in mind that his study of the work of five managers was of a significantly longer duration than the current study of supply chain participants.

The empirical evidence obtained from the semi-structured personal and telephone interviews will now be discussed, integrating the responses from both samples of individuals. As was stated in 6.2.6, this discussion of results will follow a distinct pattern, providing in the first instance a general overview of supply side issues in order to gain an understanding of the extent of these parties' presence and operations throughout Europe. Secondly, the clusters generated in the previous chapter were presented to both parties to gain a greater insight into patterns of physical distribution and patterns of stockholding. Finally, operational and behavioural aspects with a bearing on physical channels will be discussed, although not essentially quantifiable, but equally important and worthy of consideration.

At this stage the author would like to highlight a major obstacle encountered in the collection of primary data of this nature which was particularly pertinent in the case of executives from the grocery manufacturing sector, and consequently has a bearing on the results presented in the following discussion. While possessing the ability to comment at length about a "global" supply chain situation, in their typically senior

organisational roles, such individuals were less able to comment at length in issue-specific areas, a particular example of this problem is illustrated by the general inability on their part to volunteer information on the uptake of specific technologies important to the development of collaborative supply chain relations, such as EDI. Therefore, perhaps it would have been more advantageous to undertake a series of interviews with personnel in other operational areas and at different levels in the organisational hierarchy.

Thus, it must be borne in mind in the presentation and discussion of those results generated from the primary data research that the author is extracting as much information as possible based on the empirical evidence available.

6.3.1 Supply Side Issues

In order to strengthen positions in Europe in response to changing market conditions, manufacturers have been forced to reconsider their existing supply chain configurations and have co-ordinated facilities of production and distribution accordingly. This has involved both integration of manufacturing capabilities and rationalisation of the number and location of warehouses in their distribution networks, a trend which essentially mirrors the rationalisation of the distribution function undertaken by retailers who have centralised distribution into fewer, larger regional distribution centres in order to eliminate unwanted inventory from the supply chain (discussed in Chapter 3). The latter, however, will be discussed in a later section.

In addition to the internal drive to reconsider logistical configurations, external factors have had a direct impact on manufacturers' strategies rendering this transition easier. O'Laughlin et al (1993) highlight the current political and legislative environment which aims to create greater economic integration throughout Europe with initiatives to eliminate physical, fiscal and technical barriers facilitating the free movement of goods, services, capital and people within the EU as an important factor which is making integrated logistics a reality in Europe. For example, initiatives to harmonise product

standards throughout Europe enable the implementation of inventory centralisation as a viable logistics strategy.

This integration of production facilities has been the main focus of re-organisation by manufacturers in achieving a pan-European/global scale in manufacturing to gain the associated economies from pan-European brands (Cooper et al, 1991). In the current research programme all manufacturers in the sample, with the exception of Kellogg, have undertaken some degree of restructuring of their production facilities which generally occurred during the late 1980s. The following table summarises this general pattern of restructuring:

Table 6.3: Rationalisation of Production Facilities in Europe

Company	Pre-1990	Post-1990
Gillette	4 blade factories	2
Lever	13 toilet soap factories	3
Colgate-Palmolive	15 factories	10
Kellogg	N/A	N/A
Pedigree Petfoods/Mars	*	*
United Distillers	**	**

* Information not volunteered from respondent.

** Rationalisation has involved the closure of two whisky plants with production now concentrated in one factory.

Colgate-Palmolive embarked on a major restructuring programme of its European business in the late 1980s moving from a nationally based to a European customer supply process, with the number of plants being reduced from 15 at the beginning of 1990 to 10 at the start of 1993. As the number of plants was rationalised, so too was the mix of products with the 5 plants which previously made soap being reduced to 2. Those products which were previously made in national markets for their respective

needs, were transferred to "Europlants" where a third of products are made in one country and sold in another as technologies became more focused.

In the early 1980s Gillette had strong national and regional involvement in manufacturing in the shaving and toiletries business, its strongest core business, with five regions reporting to their European HQ in West London. This business was later re-organised as there were many similarities found between the north American market and Europe, in that factory configurations, technical operations and business management were very much alike in both regions. The North Atlantic Group, its largest single business unit, was thus formed by the marriage of these two geographical regions. In this new regional unit manufacturing takes place in two European locations and one in the USA. In the UK, all disposable razors are made for the region and in Berlin, all cartridges are manufactured, with the razors for these cartridges being manufactured in the USA. Like Colgate-Palmolive, technologies are also focused. In addition to the existing factories in Europe, factories were also operated in France and Spain, but were closed as a consequence of working under capacity.

Kellogg is unusual compared to other companies in that to date, they have never closed a factory and have recently opened one in Riga in Latvia in response to the freer markets of Eastern Europe. Seven factories are in operation in Europe in total, two of which are in the UK, located in Wrexham and Manchester. The latter is what it refers to as its "European" factory in that products made there are unique to that factory and tend to be of the health food variety specifically intended for the European market, whereas the former satisfies the domestic market. Large factories exist in Germany and Denmark, where product is made for both the domestic market and export. Small factories also exist in Italy and Spain which come under the jurisdiction of one of the four operating units of the Kellogg Company USA, namely Kellogg Europe. Over the past five years Kellogg has been considering connecting the logistics of the supply chain and location of factories, with the issue of "Europlants" still the subject of intense debate.

In 1990, Lever, the detergents business of Unilever set up a centralised organisation, Lever Europe in Brussels responsible for the manufacturing and marketing of detergents throughout Europe. Europe was previously arranged as a set of autonomous national detergents companies, treated as individual profit centres.

A programme of rationalisation was embarked upon by Pedigree Petfoods/Mars in 1987 in order to dispose of those plants dedicated to producing for a specific country. Consequently, central, focused factories were established in its three core lines of business. For example, in its snackfood division, M&M's plain are manufactured in Slough for the whole of Europe, whilst the peanut variety are manufactured in Strasbourg. In its main meal business, Uncle Ben's Rice is manufactured in Belgium, whereas the Stir Fry Sauces for this brand are manufactured in Rotterdam. Production of petfood is concentrated in Melton Mowbray. Again, technologies have been consolidated, in common with descriptions from other manufacturers.

United Distillers embarked on a programme of rationalisation in 1992, although to a lesser extent than some of its counterparts, with the closure of two distilleries in Scotland. All production of these "golden spirits" is concentrated in Scotland, with "white spirits", that is to say gin, being produced in Basildon. Two factories are operated on the continent of Europe, one in Frankfurt which produces "Asbach" brandy and one in Tilburg which produces a liqueur "Safari", some wine and "Terry's Chocolate Orange Liqueur", although the volumes of these products are quite insignificant compared to those of other spirits produced.

When asked what prompted restructuring of this nature described previously, both internal and external forces highlighted by Cooper et al (1991) were identified by all respondents. The external environment and its associated political and legislative pressures affected Gillette's manufacturing strategy directly in that prior to Spain joining the EC it was forced to operate a production plant in Spain manufacturing double-edged blades as high import tariffs made it more economical to produce there rather than to

import products. With the relaxation of EC regulations, products can now be made more economically in the UK and exported, which accounted for the closure of this factory during the programme of restructuring.

Similarly, Colgate-Palmolive explain that the high number of country plants producing for national markets was a direct result of the fact that prior to the rationalisation of its manufacturing network, cross-border shipments were limited. In the light of recent European legislation lifting restrictions as European integration becomes more of a reality, companies such as these are able to take advantage of the removal of trade barriers and produce a vast amount of product in one country, by concentrating technology and having focused factories manufacturing products for resale throughout the rest of Europe.

In addition to legislative and political stimuli to change, manufacturers were asked if increasing concentration and consolidation in the retail trade has affected their operations. Whilst acknowledging that retail pressure is something they are constantly aware of, none found that it had any direct impact on their operations. Internal factors have been primarily responsible for restructuring of manufacturing operations, it is generally agreed, the most important being internal economies of scale, that is to say, increased efficiency at a reduced cost which is essentially facilitated by the production of standardised brands.

Advantages which arise as a result of this type of restructuring are generally stated as improved productivity/capacity and profitability, lower costs and improved levels of service. With regard to productivity, when Lever moved from 13 to 3 toilet soap factories, the firm's productivity increased by over 100% (measured by output per employee). During the development of a European supply system, Colgate-Palmolive found that previously the subsidiary based business resulted in as many as 16 different versions of customer service. With the establishment of Europlants, however, provision

for exactly the same level of service to be given to every customer had to be made which has resulted in continually improved service levels.

Difficulties, however, are encountered in these increasingly integrated systems which manifest themselves in a stricter control of inventory and consequently a more complex management of the overall supply chain. Additionally, capacity constraints and time lags were also cited as disadvantages of this integrated approach to manufacturing. In order to ensure a stricter control of the supply chain Pedigree Petfoods/Mars set up Consolidated European Logistics Services (CELS), a European logistics function responsible for bringing together products from all product group categories to each and every market in Europe. Similarly, when Gillette formed the North Atlantic Region, the European HQ in West London then became responsible for all European materials management functions which are purchasing for factories in Europe, production and distribution planning and warehousing and distribution.

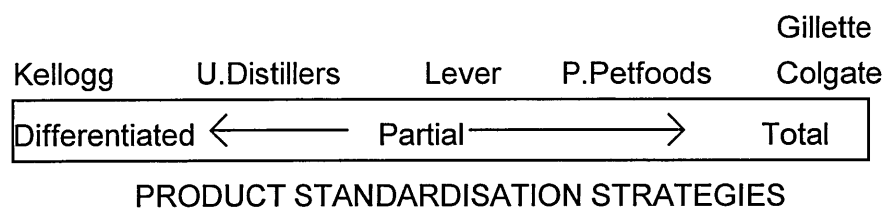
6.3.1.1 Branding

It is appropriate to discuss the issue of branding in the context of this topic as pan-European manufacturing configurations of the type that have been described by respondents are essential to support the existence and development of pan-European or standardised brands. The literature would tend to suggest that as retailers in other European markets are beginning to emulate the UK, becoming more aware of the competitive edge an efficient distribution network allows, food and drink manufacturers are strengthening their European positions with cross-border branding and packaging strategies becoming increasingly important in the realisation of the potential benefits to be gained from producing standardised European brands (see for example Mazur, 1993; O'Laughlin et al, 1993).

In the context of this study, surprisingly, not all manufacturers have adopted a pan-European branding strategy, as there exists for the manufacturers in question a number of different branding strategies ranging from standardised brands across Europe at one

extreme, to a mixture of European and local brands to the other extreme where purely local brands are produced. The following diagram, Figure 6.1, developed by the author aims to place the branding strategies of the manufacturers participating in this study along a continuum ranging from a low degree of brand standardisation, or differentiation, at one end of the spectrum, to a scenario whereby all brands in Europe are completely standardised at the other:

Figure 6.1: Degree of Standardisation Among Brands in Europe



Source: Author

The individual positions of these manufacturers along this proposed continuum of brand standardisation will now be discussed in more detail. Colgate-Palmolive and Gillette are the only manufacturers in this research who pursue a completely standardised branding strategy, with standardised brand names, formulation and packaging for their products. Where differences do exist they manifest themselves in the language on the packaging which is adapted according to individual country requirements. Additionally, both tend to utilise diagrams on packaging which ultimately minimises the amount of text needed.

Pedigree Petfoods/Mars has a number of pan-European brands which have arisen as a result of careful harmonisation of both name and packaging graphics over the last six or seven years. For example in confectionery, Marathon was changed to Snickers in the UK, in line with the rest of Europe (and the world) and in petfood there was a complete relaunch of Whiskas cat food, milk, snacks and accessories under a new purple livery in all countries. Differences do occur in the language that appears on some products in

that it has to be adopted to suit local market needs, but steps have been taken to produce multi-lingual packs, e.g. Whiskas. In its main meal business, however, recipes tend to vary from country to country. For example, the recipe for its Italian wet cooking sauce "Dolmio" has to be spicy enough to meet the tastes of the French market, but be sufficiently bland to be acceptable to the Germans. Such variance in consumer tastes is especially characteristic of food products. Thus, this manufacturer appears on the continuum as lying in a position somewhere between partial and total standardisation with respect to their brands.

Lever tends to demonstrate a mixture of standardised and localised products, or partial standardisation, and thus has been placed in an intermediate position on the continuum represented by Figure 6.1. Generally, as far as its branding strategy is concerned, there has been a continuation of historic brand names with limited harmonisation of sizes, formulation, packaging and graphics as some individuals at Lever are of the opinion that as long as core brand values can be harmonised, brand names are not particularly important. New products introductions, such as the Dove soap bar and Jif Micro Liquid cleaner are being harmonised, but it is unlikely that it will ever standardise marketing to the extent of Gillette which markets its "wet shave" products in the same way across the entire North Atlantic region.

The same brand name is retained by United Distillers for spirits brands but it has encountered a number of difficulties preventing the complete rationalisation of packaging and labelling strategies, thus placing this company in a position somewhere between differentiated and partial standardisation of brands on the proposed continuum. In terms of labelling, mandatory information often has to be included by law on product labels, for example, in Denmark ingredients have to be shown, whilst in Germany, the "grunpunkt" symbol for recycling must appear on the label. Similarly, different bottles exist for the same product between duty-paid sales and duty-free sales in order to prevent parallel imports, for example, in the UK Gordons Gin is sold in green bottles with white labels, whereas for the duty-free market the same product is sold in clear

glass bottles with a yellow labels. Additionally, the strength of the products also differs to reflect different consumer tastes, for example in the UK the strength of whisky is 40%, whereas in the Spanish market it has a greater strength at 43% .

Kellogg is the only manufacturer to currently have no pan-European brands in its product portfolio as product names are very often adapted to suit local markets, the packaging appears in the native language of the market and product formulations differ. For example, in Germany legislation does not permit iron to be added to the cereals, therefore the slogan "*fortified with vitamins and iron*" that usually appears on cereal packs can not be used in this particular market. Kellogg, therefore, pursues an essentially differentiated brand strategy.

In terms of the impact these brands have on supply chain operations, there is a general consensus among those interviewed that greater economies of scale in production are possible, whereby a reduced number of factories are utilised to greater efficiency. Lower inventories are also realised as stock can be shared around a number of different locations rather than holding a certain level of stock for individual markets which would be the case if packs did not share common languages etc.

Marketing economies of scale are also possible as there is one cost associated with producing a television advert, for example, which can then be dubbed with different languages depending on the country. For example, when Gillette launched its "Sensor" twin blade razor, identical "Coca-Cola style" television adverts were used with the slogan "*Gillette, the best a man can get*" whereby the copy was dubbed to suit individual market requirements.

Whilst Gillette pursue a standardised approach to advertising, United Distillers find it necessary to tailor advertising to local market conditions and culture, although it is marketing the same product in essence. For example, in Greece, the market for whisky to which they are appealing tends to be very image conscious and when drinking with

friends it is the norm for consumers to buy a bottle of whisky for consumption at their table in a pub or club. While Black Label whisky is usually a popular seller in this market the bottle is generally too dark in colour to be distinguished in a dark pub/club, as the brand name would suggest. Therefore, the luxury brand Dimple and its distinctive bottle shape is being aimed at this market as an alternative and advertising is tailored accordingly.

With regard to future product policy, all manufacturers see a role for both standardised and localised products, depending on market opportunities, but providing the marketability of products is not affected by pursuing either approach. Gillette, however, probably the most standardised of manufacturers who responded, foresees a move back towards localised products stimulated by consumer preferences as there are many different preferences in the market for toiletries, for example, whereby the same fragrance for a particular product can not be used throughout Europe. This explains why it has developed the personal care business in the UK only which concentrates on deodorants such as the Natrel and Right Guard ranges as different markets have their own preferences as to fragrance and a standardised approach would not be a successful strategy to pursue. Legislation is also seen as a factor in influencing future brand strategy, as the respondent from Gillette foresees a situation whereby local markets will again dictate legislative requirements such as package sizes and safety and quality standards of products in the future.

Those manufacturers who currently have no or limited pan-European brands, Kellogg and United Distillers respectively, would like to pursue a strategy of standardisation in the future in order to benefit from the associated economies being enjoyed by other manufacturers currently producing standardised brands.

6.3.2 Market Information

After obtaining a general overview of supply side considerations, it was then decided to examine in which markets of continental Europe these manufacturers' brands had a

presence. The following table gives an indication of the pan-European presence of the manufacturers participating in the survey and their a selection of their well-known brands:

Table 6.4: Pan-European Presence of Selected Manufacturers

Manufacturer	No. of Countries Present In (Europe)	Typical Brand Names	Sales from Top European Brands (US \$ Million)
Colgate Palmolive	16	Colgate, Palmolive, Ajax	305
Gillette	16	Gillette-Sensor, Sensor for Women	735
Kellogg	16	Kellogg's Cornflakes, Frosties, All Bran	535
Lever	17	Lux, Persil, Comfort, Jif	1.3 billion
Pedigree/Mars	20 +	Pedigree, Mars, Dolmio	2.5 billion
United Distillers	15	Bells, Gordons, Johnnie Walker	Not available

Of the markets they are present in, it was desirable to find the most important in terms or sales as it could be reasonably assumed that those countries with a more concentrated retail trade would be the most important in terms of a manufacturer's business. This assumption is based on a paper presented at an IGD conference where the European Director of Materials Management for Procter and Gamble provided the following contrasting examples when discussing the concentration of retail trade customers (Helleman, 1991). In the UK, a concentrated and highly organised market, six key accounts represented more than 50% of their total business, whereas in Italy, where the trade is very fragmented, their largest key customer does not represent more than 2% of their net sales. In terms of the wider implications for the supply chain of these issues it is generally agreed that in those markets where retailers are highly concentrated and demonstrate a high level of commitment to own label development that there is a greater

likelihood that distribution will be controlled by the retailer, with manufacturer deliveries undertaken in such a manner that corresponds with the retailers' requirements. Whereas, in those markets which are less concentrated, with a more fragmented retail trade, then it follows that distribution and control of the supply chain will usually remain in the manufacturers' domain.

The identification of important markets was achieved by drawing on the cluster analysis generated in the previous chapter with the clusters of countries derived from the market structure data being presented to the manufacturers for comment in order to determine which of these regions is most important in terms of their European business. For reference purposes these clusters and their important characteristics as identified in the previous chapter are as follows:

Table 6.5: Clusters and Important Characteristics for Market Structure Data

Cluster	Characteristics
1-Belgium, Germany	Low food outlet density, high discounters share of the food market, high own label.
2-Denmark, Italy	High co-ops and low multiples share of the food market.
3-Greece, Spain, Portugal	High food outlet density, low own label, low road density, low standard of living.
4-France, Netherlands,UK	Low food outlet density, high own label, high multiples share of the food market.

Manufacturers were asked to rank these clusters beginning with the most important and so on. Although the manufacturers interviewed did not necessarily organise their business in terms of this pattern identified by the author, they did agree with the general grouping of countries and their important characteristics as interpreted by the author. The rankings as provided by the manufacturers are as follows:

Table 6.6: Important Regions in Terms of European Business

Manufacturer	Rank of Clusters
Colgate-Palmolive	4, 1 & 2, 3
Gillette	F & I, UK,D,E, NI & B, the rest
Kellogg	4, 1, 2, 3
Lever	4, 3, 1, 2
Pedigree Petfoods/Mars	4, 1, 2, 3
United Distillers	4, 3, 1, 2

All manufacturers, with the exception of Gillette who gave an indication of the most to the least profitable markets, cited these as being the most important regions in terms of European volume.

As can be seen from Table 6.6, cluster 4 is the most important region in terms of manufacturers' European business, thus rendering France, the Netherlands and the UK their most important markets. The countries in Cluster 1, Belgium and Germany, then appear to be the next most important region to manufacturers, with the exception of both Lever and United Distillers who stated Cluster 3, Greece, Spain and Portugal, as their next important market.

In the case of Lever the author assumes this difference could be explained by the fact that in these southern European markets, where retail trade structures are typically fragmented and less well organised than those in the north, their brands are generally the only ones that are available to consumers as there is perhaps not as great a choice, in the absence of own label competitors, as one would perhaps find in the UK (see Laaksonen, 1994). The importance of this region for United Distillers could be explained by the strength of the tourist trade in these markets, whereby tourists tend to take advantage of buying tax free spirits whilst on holiday. Colgate stated that cluster 1 and 2 were equally important. Denmark and Italy, cluster 2, then follow as the next important markets, again with the exceptions of Lever and United Distillers for those reasons

previously explained. Finally, cluster 3 comprising the southern European markets Greece, Spain and Portugal is cited as the least important. This is further confirmed by Gillette, who state that Greece and Portugal are their least profitable markets. Their interpretation of the importance of markets is different to the rest as a ranking in terms of profitability was given.

One individual stated that the most powerful and sophisticated countries will be more important than the rest in terms of a company's business. This statement holds true for most of the manufacturers as they cite France, Netherlands and the UK as being their most important markets.

6.3.2.1 Market Information - Evidence from Third Party Distribution Specialists

Those third party distribution specialists interviewed were asked about their presence in the European grocery sector in order to assess claims made in the literature in Chapter 3, that is to say that there is relationship between retail concentration of markets, the level of own branding and the degree of control of the supply chain (Ferne, 1992) and the strong relationship between concentration of grocery markets by multiple retailers and the degree of third party penetration (NFC, 1989).

Therefore, companies in the sample were asked which markets they were present in, in addition to the UK, and the retailers and manufacturers for whom they operate contracts in the grocery sector in order to assess claims made in the literature. The following table summarises their European grocery presence:

Table 6.7: Presence of Third Party Operators in Europe

Contractor	Countries	Retailers
BOC	France, Netherlands	Auchan, ITM, Ahold
Christian Salvesen	France, Belgium, Germany, Netherlands, Spain, Portugal	Auchan, Carrefour, Promodès, Ahold, Delhaize, GIB, Rewe, Aldi
Exel Logistics	France, Belgium, Netherlands, Spain, Portugal	Promodès, Leclerc, Ahold, GIB, Sonae
Harris Distribution	France, Germany	Auchan, Promodès, wide range in Germany
Hays	France, Germany	Carrefour, Aldi
McGregor Cory	Spain	Pryca

(A column detailing those manufacturers for whom these distributors undertake contract work was omitted but is discussed generally below).

From this table it is clear that third party distribution specialists are most heavily involved in the grocery markets of northern Europe and mainly with multiple retailers, e.g. Ahold in the Netherlands and Auchan in France, with a limited presence in the markets of southern Europe, findings which confirm NFC's findings in their 1989 report. It is also worthy of consideration that these companies were identified as being the leading retailers in their respective grocery markets as identified in Chapter 4 (see Table 4.15).

Contractors were asked if they undertook any distribution work for manufacturers in addition to that undertaken for retailers and the percentage of volume that is accounted for by business for clients both in the retail and manufacturing sectors. Of the six respondents asked, however, only two gave an indication of such a breakdown of their business. BOC, stated that they carry out distribution work for manufacturers of all sizes requiring temperature controlled distribution and that this business was broken down approximately 60:40 in the favour of retailers and manufacturers respectively in those markets in which they operate grocery contracts.

Christian Salvesen stated that in both the UK and Belgium, their business is divided approximately 75:25 in favour of retail clients. In France, marginally more business is accounted for by manufacturers with the breakdown between retailers and manufacturers approximately 50:50 by volume. In Germany, the situation is completely reversed as greater volume is devoted to manufacturing clients and is divided 25:75 in their favour. The remaining respondents who failed to detail this information gave only an indication of the names and sizes of manufacturers, ranging from those multinationals included in the sample of manufacturers such as Unilever and Mars to smaller nationally based manufacturers such as Homepride Foods and Dairy Crest, for example.

From those figures obtained concerning the proportion of contract business accounted for by both retail and manufacturing clients, although not truly representative of the European market for contract distribution as a whole, those responses obtained confirm ideas from the literature in Chapter 3, that is to say contracting out is largely a UK phenomenon with companies in France showing signs of its adoption, while in Germany it remains very much an "in-house" operation.

In terms of the length of time present in these foreign markets, notwithstanding BOC and Christian Salvesen who have been present in European markets since 1975 and 1982 respectively, the remaining four UK companies generally entered Europe between 1989 and 1993. The author is of the opinion that this is a reflection of the highly competitive nature of the UK contract distribution market during that particular period of time. Consequently, an important growth strategy pursued by the larger contractors, in addition to the acquisition of compatible domestic companies, has been the expansion of their operations abroad, with several of the market leaders continuing to maintain a strong position in this direction.

As with the sample of manufacturers, individuals from third party distribution specialists were also presented with the market structure clusters and characteristics (see

Table 6.5) and asked to rank the clusters in terms of their involvement in each. Distributors generally agreed with the clusters and their inherent characteristics, although they stated that distribution networks in Belgium and Netherlands are more akin to those present in the UK than France. They did concede, however, that the strong discount presence in Belgium would lead this market to show more of a similarity with Germany.

In order of importance, the markets contractors are most heavily involved in terms of the work they carry out for grocery retailers identified in the clusters in Table 6.8 is as follows:

Table 6.8: Important Regions in Terms of Contracts Operated

Distributor	Rank of Clusters
BOC	4
Exel Logistics	4,1,3
Harris Distribution	4,1
Hays	4
McGregor Cory	4,3
Christian Salvesen	4,1,3

As can be seen from the above table, cluster 4 (France, Netherlands, UK) is the most important region to all third party distribution specialists, with the exception of Exel who state that they are involved to much the same extent in all markets in which they are present. For those distributors with a presence in more markets than, for example BOC and Hays and Exel, cluster 1 (Belgium, Germany) is found to be the next most important European region. Harris Distribution who ranked this cluster in second place did so as a result of the importance of contracts operated in the German grocery market. Similarly, Salvesen undertake work for grocery retailers in Germany and Belgium and rank this cluster in second place accordingly. McGregor Cory rank cluster 3 (Greece, Spain, Portugal) as being their second most important region reflecting those contracts

undertaken for retailers in the Spanish grocery market. Christian Salvesen rank this cluster as least important reflecting their small presence in both the Spanish and Portuguese grocery markets.

Once the markets these contractors are present in had been established, it was then necessary to determine the predominant type of service provided by contractors to retailers in order to determine its validity with both Penman's (1991) and Cooper et al's (1991) observation described in the literature in Chapter 3. Thus, distributors were asked in the markets in which they are present to state the predominant type of service retailers require, that is to say, are, transport, warehousing or a combination of both services undertaken and are they operated on a dedicated basis.

BOC undertake an integrated service of transport and warehousing depending on the needs of individual retail clients in France. In the Netherlands, however, they undertake primarily transport from RDC's to stores as retailers tend to predominantly manage their temperature controlled distribution as an "in-house" operation.

Similarly, in France, Exel also undertake integrated transport and warehousing in line with individual retailers' requirements. The respondent from this company, however, was unwilling to disclose details of operations in other countries in which it has established a presence with respect to grocery contracts operated.

Harris predominantly undertake warehousing for retailers in France as there exists a large number of independent haulage contractors (owner drivers) who undertake an identical service at much lower rates rendering transport contracts scarce in this particular market. Similarly, in Germany, Harris mainly undertake warehousing services for retail clients as the transport market is highly regulated rendering it transport contracts extremely difficult to secure. Hays undertake a combination of transport and warehousing operations depending on the needs of individual retailers in France.

In Spain, McGregor Cory operate strictly warehousing services for retailers, as in common with other markets, a number of retailers posses their own transport fleets to support the majority of their distribution requirements, with the balance being sub-contracted to owner drivers, where necessary, who generally dominate the transport sector.

Christian Salvesen tend to undertake an integrated transport and warehousing service in most markets in which they are present due to the highly specialised nature of the service they provide, thus rendering transport only contracts relatively rare. They find the French market a particularly difficult one to deal with as retailers are very price oriented. For example, for a number of years Carrefour undertook their own transport requirements as they generally found it more cost effective to operate in this manner. The French often opt to undertake their own transport if it means the expense incurred is less than even the most competitive distributor's contract, ignoring the potential consequences for the supply chain as a whole.

Salvesen, while providing an integrated transport and storage service in the Netherlands, similar to the operations they undertake for UK retail clients, also view neighbouring Belgium as showing more similarities to the UK in terms of the level of centralisation and the nature of the contract, i.e. dedicated. Furthermore, smaller deliveries delivered on a more frequent basis are becoming popular in the Belgian grocery market. Storage facilities only are mainly operated for retailers in Spain with transport subcontracted to owner drivers in some cases who are often very difficult to control. However, although some retail clients prefer to retain control of the transport function as an "in-house" operation. The situation in Portugal is broadly similar to that in Spain, although no contract specific details were volunteered by respondents.

From these responses, therefore, it can be concluded that it is generally retailers in the countries of northern Europe, for example, the UK and Netherlands, who are demanding a more integrated and dedicated approach to management of the supply chain. Whereas,

in the markets of southern Europe, a more piecemeal approach to managing the supply chain exists. While this north/south divide is apparent between the general level of distribution development and the types of contract operated across Europe, those respondents interviewed stated that the distribution requirements of retailers on the continent of Europe are changing, albeit at different rates. To illustrate this point with an example from the survey, the respondent from McGregor Cory, stated that approximately one year after establishing a presence in the Spanish market, retailers began to suggest more suitable approaches to the distribution function to the contractor. This was found to be a function of the senior management of retail organisations becoming increasingly aware of logistics and distribution and the competitive edge that can be attained from an efficiently run distribution network.

Furthermore, is the prevailing desire among European retailers to emulate an integrated approach similar to that which has contributed to the success of grocery retailers in the UK, with a number of retailers on the continent of Europe seeking to outsource for the very first time? There would appear to be scope for the further development of contract distribution operations in southern European markets as only half of the respondents interviewed were operating contracts for retail clients in this region.

As European retailers are perhaps seeking to emulate the integrated logistics approach which prevails in the UK, grocery retailers in the UK are becoming more demanding in terms of their individual logistics requirements. Evidence of this is the challenge posed by the management of the whole supply chain as opposed to concentrating on secondary distribution (Fernie, 1992). Management of the whole supply chain involves assuming responsibility for primary, in addition to secondary distribution, which involves collecting stock directly from the manufacturer for forward delivery to RDC's.

All contractors interviewed are involved in undertaking some primary distribution for retailers in the UK where the leading grocery multiples are driving an increasing volume of in-bound stock on to their fleets at an earlier stage. The exception is McGregor Cory

who are currently looking at the management of the entire supply chain for the first time. This practice is predominantly a UK phenomenon, but signs of its appearance throughout the rest of Europe are emerging.

When comparing the ranking of clusters derived from the responses obtained from distributors to those of the manufacturers, it is clear that all agree that cluster 4 (France, Netherlands, UK) is the most important region to these groups of respondents from the set of four clusters generated for the market structure data. These findings add further weight to the claim made in Chapter 5 that in terms of retail structure in the European grocery trade, there exists a marked north-south divide between those countries in northern Europe, e.g. the UK, France and the Netherlands and those in the south such as Greece, Spain and Portugal.

6.3.3 Supply Chain Management Issues

In section 6.3.1 the integration of operations which connects those previously dispersed national subsidiaries in local markets and regions into an integrated logistics system was discussed. This section, however, is concerned with rationalisation of logistics systems with the aim of achieving improved results with fewer resources, a pertinent example of such an initiative being the consolidation of warehouses, the second major change in the reconfiguration of European supply chain systems.

O'Laughlin et al (1993) state that one of the most visible signs of logistics integration and rationalisation in Europe is the drive to reduce the number of distribution facilities and evidence of this is from those companies most advanced in rationalising their logistics networks who are eliminating 50% or more of their facilities from their distribution networks in order to significantly reduce the amount of stock in the supply pipeline.

The growing trend towards concentrating production into fewer, larger sites puts pressure on the logistics function, for example, the fewer the production and storage sites used by a company, the fewer alternatives are available if some factor beyond the company's control prevents the normal flow of materials (Cooper et al, 1991). As goods begin to travel longer distances, an increased need has arisen for fast, reliable and more cost effective transport in order to maintain levels of customer service.

All companies interviewed have significantly reduced the number of secondary warehouses they operate, but only three manufacturers volunteered detailed figures to quantify this claim. This lack of response from manufacturers was particularly disappointing, however, it still gives an indication that the general trend is of the rationalisation of warehousing facilities which is occurring at a pan-European level, as Table 6.9 illustrates:

Table 6.9: Rationalisation of Warehousing - Selected Companies

Company	Pre-Rationalisation	Post-Rationalisation
Colgate-Palmolive	>70	<15
Gillette	13	5
Pedigree Petfoods/Mars	90	60

Colgate-Palmolive has undertaken the greatest reduction in stockholding points throughout Europe, reducing its warehousing capacity by over 50% moving from more than 70 warehouses to less than 15 during the last decade. Although Gillette has reduced its stocked warehouses from 13 to 8 over a period of approximately 8 years, its aim is to further reduce this figure to 5 or 6 over the coming years, with countries dedicated to serving particular regions, e.g. Denmark serving the Scandinavian market, Germany supplying Austria, Belgium and the Netherlands. Kellogg has also undertaken a significant effort to reduce the number of stockholding points in their network, especially in the UK whereby it has closed 5 former depots and consolidated stockholding between production facilities at Manchester and Wrexham, now regarded as one stockholding point. On the continent of Europe the rationalisation of warehousing facilities is currently under consideration to reduce numbers, for example the 9 warehouses currently operated in Spain which they would potentially be consolidated into around 2 stockholding points. Lever, although gave no details about numbers and locations of warehouses, has been gradually reducing their secondary warehouses. Pedigree Petfoods/Mars, in common with Colgate, has drastically reduced the number of warehouses from 90 to 60 and aim to further reduce this figure to around 30 by undertaking further rationalisation over the coming years.

A programme of radical rationalisation is currently underway at United Distillers as it aims to eliminate the existing network of local warehouses replacing them with two large and a smaller regional distribution centre (RDC). Currently, there are two stocked central distribution centres (CDC's) in the UK which receive finished goods from manufacturing plants and await orders generated from in-market companies. The role of

these CDC's is very similar to the concept of a retailer's RDC in that they are primarily responsible for stocking individual country markets as opposed to stores. Once orders are received at these depots goods are then distributed to local country warehouses of the sales organisations who placed the order. A substantial amount of buffer stock, therefore, is held in advance to supply in-market companies.

United Distillers, however, aims to drive stockholding into the market place with the development of regional market RDC's, one of which would be responsible for the Iberian region, serving Spain, Portugal and the Canary Islands, possibly located in Madrid, serving 4 "stockless" depots or transshipment points. The second, for the region of Northern Europe, would serve Germany, the Benelux countries, Austria, Switzerland and a small part of France, with 2 sub-depots in Germany, one in the Netherlands, Switzerland and Austria. The UK would serve France. Finally, a depot in Denmark would serve Spain, Portugal, Greece and Italy as a result of the tax strips that have to be applied to bottles which restrict the sale of the same product in different countries due to differences in the strengths of the spirits. Unstripped bottles would be sent in to Denmark for distribution to in-markets where strip stamps would be applied. At present this laborious process is carried out in Scotland, whereby the strips are bought locally for application in Scotland and then shipped out to appropriate countries for forward distribution.

As was mentioned earlier in this section, rationalisation of this nature requires a more reliable transport operation in order to maintain customer service levels. There is a general trend among the manufacturers interviewed towards the use of third party contractors to undertake their current distribution requirements. All transport is carried out by contractors for both Colgate-Palmolive and Gillette. Gillette employs a wide range of different carriers, for example, in the UK it tends to use two or three of the larger companies, such as BOC and P&O, whereas on the continent of Europe regional/local carriers are preferred as it is generally easier to secure replacement contracts as a result of the competitive nature of the transport market in some countries.

Prior to 1990, United Distillers undertook distribution in the UK as an “in-house” operation, now contractors carry out all distribution to the trade. The situation is rather different on the continent of Europe whereby a certain degree of reliance on joint ventures with other drinks' companies is present, e.g. LVMH in France and Bacardi and Martini in Spain, in order to distribute its products through the established distribution networks of such suppliers. Kellogg operates with a mixture of "in-house" and third party distribution contracts, for example, in Spain 60% of distribution is carried out by the manufacturing plant in Valls, while the remaining 40% is undertaken by local contractor Danzas which distributes its products through its own established network. Lever outsource some distribution to contractors as do Pedigree Petfoods, but unfortunately gave no specific details of the nature of these contracts.

Delivery patterns to retailers in Europe are also changing, with a marked decline in direct store deliveries prevalent throughout Europe as retailers assume more control of the supply chain by developing their own centralised warehouses coupled with the continued erosion of the presence of wholesalers in the supply chain (Andersen, 1992). Manufacturers were thus presented with the trading format clusters and their important characteristics derived from the analysis discussed in Chapter 5 and asked to state how their products were channelled to retailers to establish a general pattern of deliveries on the continent of Europe. For reference purposes these clusters and their important characteristics are as follows:

Table 6.10: Clusters and Important Characteristics for Trading Format Data

Cluster	Characteristics
1-Belgium, Germany, Denmark	High hypermarket density, high discounters share of food retailing
2-Greece	High supermarket density, low hypermarket density
3-Italy, Portugal, Spain, Netherlands	Low hypermarket density
4-France, UK	High hypermarket density

All manufacturers generally agreed with this pattern of clusters regarding different trading formats and their inherent characteristics detailed above. Furthermore, similar perceptions about levels of centralisation and direct store deliveries prevailed, although there were some exceptions.

Each of these clusters will now be discussed in turn in terms of how manufacturers deliver to retailers in each and their general comments about the trade within each. In the first cluster, Belgium, Germany, Denmark, distribution tends to be relatively centralised, with approximately 70-80% of product being delivered in this manner and the remainder delivered directly to stores, as estimated by respondents from Gillette, Pedigree Petfoods and Unilever. The respondent from Kellogg, however, views Belgium as being less developed than those other retailers in the rest of the group in terms of centralisation, a view also held by the respondent from Colgate-Palmolive, who found that retailers were slow to move to centralised deliveries in this country. United Distillers would argue with this view, stating that the development of centralised distribution is more akin to levels present in the Netherlands. As far as Germany is concerned, there is a consensus amongst those interviewed that a great deal of deliveries generally consist of small order sizes, thus rendering delivery costly for manufacturers. Additionally, all respondents stated that as a number of different formats are being serviced from large hypermarket type stores at one end of the spectrum to small discount stores at the other, the distribution system in Germany is consequently highly complex in nature. Some also stated that there is still a strong wholesale presence evident in Germany. In Denmark, the bulk of shipments by manufacturers are delivered to wholesalers and a handful of major retailers, approximately 50%, with the remainder delivered direct to stores. Where centralisation occurs, the small number of large retailers involved, for example Dansk Supermarked, are becoming quite sophisticated with very short order cycle times in places.

In the second cluster representing Greece, distribution is either undertaken direct to stores or sold to an agent who assumes responsibility for distribution through his own channels. Trading formats in Greece are generally viewed by all respondents as being unsophisticated, diverse and operating in a highly fragmented retail trade.

In Cluster 3, Italy, Portugal and Spain, characterised by a low hypermarket density, all respondents essentially agreed that countries in this cluster are generally at the same stage of development with regard to distribution networks. In Italy, the retail trade is very fragmented with a vast number of very small stores, rendering delivery very costly as retailers generally favour smaller drop sizes. Some product is sent to customer warehouses, whilst some is also sent to a break bulk network. Portugal, is another highly fragmented market with direct store deliveries to small stores and different outlets, estimated at around 50%. In Spain a similar situation prevails with very costly deliveries made direct to stores. These countries are changing quickly, however, and are beginning to move very slowly towards the logistics practices of northern Europe as a result of the influx of retail groups from this particular region and their distribution practices. Spain are moving slowly with regard to centralising deliveries as a result of the stretched geography of the main towns and centres of population. The key retailers in the Netherlands, a country also included in this cluster as a result of the prominence of smaller-scale retailing, are perceived as being highly centralised and have more in common with those in the UK and Belgium, with levels of centralisation estimated at around 70%.

The final cluster, France and the UK, characterised by high hypermarket density, witnesses the highest level of retail centralisation of all the countries, approximately 80-90%. In the UK very little branch delivery occurs, with retailers in this market at the forefront in terms of the level and sophistication of centralisation, according to all respondents. An interesting parallel, however, was provided by the respondent from Kellogg who stated that until May 1992, branch deliveries were still made to the UK's leading grocery retailer J.Sainsbury as a result of the retailer's refusal to accommodate

its typically bulky products in its highly efficient centralised distribution network. In France, although there is a high level of centralisation found for some of the larger retailers, a number of deliveries are still made direct to stores especially for those chains where hypermarkets are dominant and stock is held on the premises largely for geographical reasons. That is to say, the isolated or "stand alone" status of the hypermarket in a number of instances and the vast size of the country often makes it difficult to guarantee next day delivery as a result of the distances that have to be travelled. Therefore, it generally makes more sense to hold inventory at store level rather than serving the hypermarket from a separate distribution centre.

Retail customers receiving deliveries from these manufacturers generally measure service levels in terms of "order-fill" (the proportion of orders that are shipped exactly as they were ordered) and a reliable and consistent service. Gillette find that retail customers are more concerned about full orders rather than with the speed at which they are delivered. Colgate would argue that a combination of factors such as "completeness" and "on-time" qualifies as the "perfect order" in the retailers' opinion, the method by which they measure customer service. Similarly, United Distillers view this combination of completeness and on-time as being important determinants of an acceptable service level. According to Lever, it is only retail clients in UK and Netherlands who are actually concerned with such issues, and as such as they have sophisticated techniques for measuring completeness and timeliness of deliveries.

6.3.3.1 Centralisation- The Third Party View

In order to obtain a greater insight into distribution patterns on the continent of Europe, specifically the centralisation of stock into retail distribution networks and the development of initiatives such as the development of multi-temperature warehouses, the sample of third party distributors were asked to comment on these issues with regard to the trading format clusters, (see Table 6.10).

All respondents agreed with the general pattern of these clusters, however, they did state that the retail trade and distribution networks in the Netherlands has more in common with Belgium and the UK than those countries it is grouped with in this analysis, i.e. Italy, Portugal and Spain. Furthermore, Greece they stated demonstrates more characteristics in common with the aforementioned countries and thus should be grouped with them.

Respondents were then asked to comment on both the level and sophistication of retail centralisation in these regions. In cluster 1, Belgium, Germany, Denmark, all respondents stated that of all three countries in the group, Belgium is by far the most centralised with levels of centralisation present similar to those in the UK and the Netherlands, a view which contrasts with that held by those manufacturers interviewed. Germany is viewed as perhaps having the lowest level of centralisation compared to those other countries in the cluster, but distributors state that little is known about the German market as a result of the secretive nature of many of the privately owned retail companies and the highly regulated nature of the transport market. The respondent from McGregor Cory did state, however, that a number of "in-house" operations prevail in Germany which seem to be very efficient in the absence of third party contractors, thus Germany should not be viewed as being less integrated with respect to distribution development compared to other countries, simply different. None of the respondents have operations in the Danish market and thus could not comment on exact levels of centralisation but did state that levels are generally low as a consequence of a highly concentrated wholesale network and retailers preferring to operate their distribution networks "in-house".

Similarly, none of the respondents in the sample have operations in the Greek market (cluster 2 in Table 6.10) and thus did not comment on actual levels of centralisation but did state that the current systems in place are generally poorly developed or non-existent in some in cases.

In Spain, the situation mirrors France to a certain extent in that centralisation occurs on a regional rather than on a national basis. For example, McGregor Cory operates a centralised operation in Catalonia, a region in north-east Spain, for Pryca but find it difficult to centralise in any other way as a result of the stretched geography of the country.

These assertions, however, should be treated with a degree of caution as UK distribution contractors' knowledge of European retailers' logistics systems are at best limited and very often client specific.

In general, grocery retailers in cluster 3 are becoming increasingly influenced both directly and indirectly by those approaches to logistics evident in northern European countries. Direct influence is permeating these markets as, commensurate with the introduction of their retail formats and concepts, "foreign" retailers are transferring corresponding practices of distribution to support these initiatives. A pertinent example being the introduction of the hypermarket concept to Spain by leading French grocery retailers Carrefour and Promodès.

Cluster 4, France and the UK, is perceived as being the most developed market in terms of retail centralisation, which can be primarily accounted for by the presence of the UK in this cluster. The respondent from Exel, however, states that it should be borne in mind that the current level of centralisation (about 90% is channelled through a centralised system, Fernie, 1992), has arisen as a result of the structure of the market and geographic influences. France, although clustered with the UK, is unusual as centralisation occurs within regions and not on a national basis. For example, BOC have warehouses in strategic points such as Lille in the north of the country and Paris in order to serve stores in the environs. This type of "centralisation" is seen as very much a function of the geography of the country.

This factor of regionality is further illustrated by Christian Salvesen who state that Carrefour undertake a great deal of their buying operation for regions, thus rendering distribution "decentralised" in that respect. BOC add weight to the argument and state that while some retailers are concentrated and assume control of the supply chain, others are willing to allow manufacturers to remain responsible for the distribution operation.

The physical geography of France as an important characteristic influencing the distribution function was alluded to in the analysis undertaken in the previous chapter (see Section 5.5.3) when considering important physical and socio-economic factors which have an impact on the distribution function.

6.3.3.2 Composite Warehousing - The Third Party View

The development of composite warehousing tends also to be a function of the geo-demographics of countries and the trading formats present, thus respondents from distribution companies were again presented with the trading format clusters and asked to comment on levels and development of composite warehousing in the regions identified (see Table 6.10).

In cluster 1, Belgium, Germany, Denmark, all respondents stated that levels of multi-temperature warehousing in Belgium are similar to those found in both the UK and the Netherlands as a result of a number of similarities these countries possess in terms of; areas, population densities and spreads, a grocery market controlled by a small number of multiple groups, in addition to the favourable attitudes that exist towards distribution developments. Germany appears to be moving slowly in this direction according to BOC, but the market itself is still very fragmented and with an "archaic" distribution system. No information was volunteered by the respondents regarding the development of multi-temperature warehousing in the Danish market.

In cluster 2, representing Greece, in common with knowledge concerning the Danish market, little information was volunteered by respondents as none operate distribution contracts in this particular grocery market.

In cluster 3, Italy, Portugal, Spain, and the Netherlands, very few integrated facilities for temperature controlled goods exists, the exception being the Netherlands, with deliveries being received from product specific warehouses, a scenario which was predominant in the UK in the 1970s. For example, in Spain, McGregor Cory undertake no composite distribution for Pryca as all temperature controlled goods are received direct from the manufacturer or from product specific warehouses. As was stated when discussing the first cluster, composite distribution in the Netherlands shows many similarities to that which exists in the UK.

The literature discussed in Chapter 3 would tend to indicate that closely linked to the strategy of centralisation has been the development of composite distribution. As is implied by the name, composite distribution embraces products from all temperature ranges under one roof, from ambient to frozen. Delivery from the distribution centre is streamlined as specially designed compartmentalised trailers deliver goods from three different temperature ranges: frozen, ambient and chilled, as opposed to sending one trailer for each particular temperature range. However, on consideration of this description it could be argued that in the Netherlands composite distribution in its true form does now exist in this country.

This conclusion is drawn on consideration of the opening of a new distribution/production complex in Zaandam in 1993 by leading grocery retailer Ahold, which the retailer referred to as a "composite" warehouse complex (Ahold, 1993). This complex, however, is actually a combination of three independent operations; a fresh products centre, a regional distribution centre and a products return centre.

Additionally, the concept of multi-temperature vehicles is embraced in a crude sense, where previously four different trucks delivered to stores, product is separated into

"cold" and "warm" streams, with two types of vehicle required to deliver product to stores under the "composite" regime.

In the final cluster, France and the UK, although possessing a number of characteristics in common with the UK model, development of composites is more sporadic, with single temperature warehouses resembling product category warehouses responsible for servicing stores in France.

When comparing the responses from both samples of respondents, with specific reference to delivery patterns on the continent of Europe, a number of similarities are evident. It would appear that cluster 4 (France and the UK), demonstrates the highest levels of centralisation, although the situation is not quite as clear in France as in the UK as a result of the geography of the country. In Cluster 1, Belgium, Germany and Denmark, manufacturers and distributors alike stated that it would be more appropriate to include the Netherlands in this cluster as it is more like Belgium than the countries it is presently grouped with, thus rendering Cluster 1 as having the second highest levels of retail centralisation. Germany is perhaps the exception as the predominance of the discount sector in this market renders direct store deliveries an important characteristic. Furthermore, a strong wholesaler presence still prevails in Denmark, although a handful of the leading retailers are continually moving to increased centralisation. Cluster 3, Italy, Portugal, Spain, with the exception of the Netherlands, presently demonstrates relatively low levels of centralisation as a result of the fragmented nature of the retail trade rendering these countries reliant on direct store deliveries. This situation, however, will change under the influence of the logistics innovations transferred from those foreign retailers who currently have an interest in these markets. Finally, in Cluster 2, Greece, the concept of centralisation is virtually non-existent, with direct store deliveries and manufacturers agents still primarily responsible for delivery to stores.

The overall trend towards composite warehousing also mirrors the pattern of centralisation described above. The respondent from Exel Logistics bring our attention to the fact that it is all too often assumed that the success of logistics innovations such as centralisation and composite warehousing that are important and prevalent in the UK should be directly transferable to other markets, but how can it be the most appropriate logistics solution in a market such as France which is four to five times larger in geographic terms than the UK?

From the discussion of results from respondents from third party distribution specialists, it would appear that countries on the continent of Europe are all at very different stages with regard to distribution development. Countries demonstrating more similarities to the UK, a country which is perceived to have a highly integrated and efficient distribution culture, would appear to be the Netherlands and Belgium, and in some specific cases grocery retailers in France.

These initial sections have drawn extensively on the cluster analysis generated in the previous chapter. The remaining three sections of the survey work will be devoted to important operational issues which arose in the literature in Chapter 3 as they have a significant impact on relationships between suppliers and retailers in the supply chain.

6.3.4 Marketing Issues

This section draws on ideas generated from the GEA (1994) report in a section referred to as "Collaboration in Marketing", whereby the logic of such collaboration in the supply chain is to combine both the abilities of suppliers and retailers to produce a synergy which will ultimately improve the effectiveness of individual partners as opposed to collaboration in the marketing area which is normally focused on the improvement of sales and margins rather than cost cutting.

GEA (1994) discusses three areas of marketing collaboration in their report which will provide a useful framework for the discussion in this section, namely; Efficient Store Assortment, Efficient Promotion and Efficient Product Launch and Development.

6.3.4.1 Efficient Store Assortment

The management of store assortment is concerned with a series of decisions and actions taken by the retailer to maximise sales, margins and consumer satisfaction in a specific category of goods, which includes a number of the following parameters: space allocation, product location, product range or assortment, pricing, quality/price/consumer role played by various brands and display characteristics (number of facings per brand/item and their position on the shelf). If work on assortment is undertaken by the retailer in collaboration with the supplier, many benefits will be produced for both parties. GEA (1994) state that this type of collaboration, which involves the development of new common objectives based on a closer understanding of the needs of the consumer, will result in around a 10-15% increase in sales and an increase in gross margin of 5-7% of the whole category concerned, which is valid for both retailer and supplier.

At Colgate collaboration in space allocation and product assortment is still very much in its infancy in terms of use with the retailer for negotiation purposes. Partnerships of a more general nature are currently limited to a few retailers in the UK, France and Germany. Gillette are close to a few strong retailers in the UK in this respect who are both progressive and aggressive when negotiating as they are interested primarily in cutting costs rather than achieving benefits for the supply chain as a whole. The larger retailers, however, tend to dictate terms as far as space allocation is concerned and Gillette often fail to obtain the terms they would like. Kellogg are concerned with the management of space to a large extent in that its representatives visit stores to analyse the profitability of the space of other brands compared to its brands, utilising such information to persuade retailers to stock more Kellogg brands. Both the respondents from Lever and Pedigree Petfoods could not comment sufficiently on this issue.

Finally, United Distillers find that retailers also dictate terms as far as store assortment is concerned, but on occasion, benefits are achieved as a result of retail oriented initiatives. A case in point being United Distillers, who as a result of supplying J.Sainsbury with cases of whisky containing a specified amount of stock to comply with the retailer's objective of reducing stockholding at store level, ultimately benefited from Sainsbury's decision to delist a competing manufacturer's brand of whisky.

A response of this nature would tend to imply that while on the surface "collaboration" of a sort is occurring, the situation is actually one whereby the retailer is exercising power in order to obtain the most favourable terms from the manufacturer.

6.3.4.2 Efficient Promotion

GEA (1994) highlight three levels at which collaboration between supplier and retailer can occur, however, of most importance in the context of this study is the development of sales through joint consumer promotions. The main action for the achievement of this objective is the existence of a selling team from the supplier, including key accounts, marketing managers and merchandising specialists who should work closely with their counterparts in retail organisations if this form of collaboration is to be successful.

Davies (1993) noted that the general decline in the importance of the sales force in the UK could be directly attributable to increasing concentration and centralisation of retailers, specifically in the grocery sector whereby the size of such teams decreased by one third between 1977 and 1987 (Chapter 3 discusses the role of the field salesman in assisting store managers stocking decisions). Commensurate with this decline, the number of national account managers has subsequently increased. Whereas in the past a typical sales force selling to the grocery sector comprised a small central core of key account managers and a large sales force in the field (Grant, 1988), presently the field sales force has decreased coupled with the growing importance placed on a central

negotiating team, thus reflecting the overall importance of key accounts to manufacturers.

The situation in some countries on the continent of Europe is still reminiscent of that which was prevalent in the UK during the period to which the aforementioned authors are referring.

Manufacturers were asked how different markets are serviced in the context of the clusters in order to assess how they compare to Grant's (1988) observation and to establish to what extent the selling teams from their companies collaborated with their retail counterparts. The general view among these manufacturers is that the level and type of trade marketing support is a function of the stage of development in individual grocery markets, i.e. in more integrated markets such as the UK, France and the Netherlands, a national account management structure is in place for key accounts, with support provided by a small field sales force. For example, Kellogg utilise a sales force in the UK of about 100 for different areas/regions. In France, however, the weight is towards a national account management structure as the geography of the country renders it more difficult to allow a sales force to physically visit stores. The Netherlands is serviced by their sales office in Belgium as a very low penetration of Kellogg's brands in the Dutch market prevails which could be accounted for by consumer tastes where perhaps there is a preference to consume a breakfast of cheese, cooked meats and bread rather than ready-to-eat cereals. Greece tends to be serviced by a field sales force or agents who distribute the product to stores through their own distribution networks. In Italy, Spain and Portugal, the field sales force still prevails, although there is a growing importance of key account management, albeit slowly. Germany, Belgium and Denmark are similar to the UK and France, with a national account management structure in place supported by a small field sales force. Kellogg have no such structure in Belgium and Denmark, with a sales team only responsible for the market. United Distillers are very different compared to other manufacturers as sales companies are

present in all countries whereby the sales force forecast demand, which is then passed on to the CDC (a definition of this term is given in section 6.3.3) for processing.

None of the personnel interviewed had the detailed knowledge to comment if collaboration in certain aspects of promotion took place between themselves and their retail counterparts, with the exception of United Distillers, who provided an example concerning tailor made promotions, to include advertising hoarding specific to each retailer's individual requirements, a practice which is very common in markets such as the Netherlands, France, Germany and Belgium. By the provision of such a service to retailers in these countries, United Distillers not only reduces the amount of handling in the order assembly process, it also receives a more "indirect" benefit, i.e. the increased awareness of their brands as a result of the advertising.

6.3.4.3 Efficient Product Launch and Development

The process of product development with leading suppliers and retailers can occur at three levels, according to GEA (1994). However, the one of direct relevance to this research investigation is the development and production of own labels. This is an area which they state is receiving closer attention in the grocery industry, the rationale behind such collaboration being that leading suppliers, as a result of their expertise, can assist retailers in the positioning of their own labels in an innovative and complementary manner. Furthermore, they also state that leading suppliers have usually developed a certain number of products which have not been launched because of an incompatibility with their own specific brand, products which could conceivably be launched under a retailer's name.

The brands of all those manufacturers interviewed for the purpose of this research historically grew because retailers could not provide consumers with the variety and quality of products they desired and branding gave the manufacturer a direct link with the consumer, thus building strong brand franchises. The rise of retailers own-label brands, however, has placed retailers in a position to compete with the quality branded

merchandise of manufacturers and has contributed to their increased power position, e.g. in the UK own labels now account for 32% of grocery sales (Glemet and Mira, 1993) as they now aim to make consumers loyal to the store rather than the brand.

It is the strength of their individual brand franchises that deters manufacturers in this sample from producing own label products. All those interviewed for this research have the ability to produce these products and are often asked to do so but have no intention of pursuing such a strategy, making this message very clear in their advertising slogans. For example, Kellogg emphasise on their packaging *"we don't make cereals for anybody else"*. Similarly, Colgate have recently begun to print similar statements on the reverse of their toothpaste packaging. The exception, however, is United Distillers who produce own label spirits for a few of the major retailers in the UK. This, the author believes, can perhaps be accounted for by the complexity involved in manufacturing products of this nature which deters the existence of manufacturers of secondary brands, who generally produce own label products for retail customers, from entering the market. They state that production of own label for retailers on the continent of Europe does not occur as retailers in other European markets are not in such a strong position in terms of the development of own label as their counterparts in the UK, in the respondent's opinion. Ideally, United Distillers would prefer not to produce own label in the UK, but do not wish to lose business to a competing manufacturer in the event of discontinuing production, as the respondent stated:

"If the price was right from the retailer and we didn't pursue it, we couldn't afford for this missed opportunity to fall into the hands of a competitor." (United Distillers)

All manufacturers in this survey believe that by producing own label products, value would be taken away from their branded products and the strength of the brand franchises weakened as the following quotes illustrate:

"Own label is parasitic. If it wasn't for the brands the copy-cats wouldn't exist."

(Kellogg)

"We can charge a higher price for a product with the Gillette brand name on it, not because we have to cover a higher cost base, but because we believe it has some special qualities which differentiates it from the rest." (Gillette)

"Smaller companies who do not have such strong and powerful brand franchises as giants such as Mars, Gillette and Colgate tend to produce own label." (Pedigree Petfoods/Mars)

All manufacturers cite a number of disadvantages associated with the production of these products including; the manufacturer is at the whim of the retailer as there is ever increasing pressure to meet their price criteria; capacity problems may be encountered; the own labels may need to have scheduling priority over branded products and extra overheads are incurred for a lower profit margin.

The responses generated from this research programme would tend to contradict the claims made by GEA (1994) in their research where over half of the major European manufacturers in their sample were already producing private labels and more than one third of the non-producers are considering this issue. However, it must be borne in mind that the sample size used in the GEA research covered a significantly larger number of manufacturers, including a number of second generation manufacturers with less powerful brands.

6.3.5 Information Technology Issues

A major contribution that information technology has brought to the logistical environment is that the transparency of the supply chain is increased (Cooper et al, 1991). The introduction of electronic point of sale equipment (EPOS) completely changed the way in which retailers checked quantities of stock at the store and the re-

ordering of new stock. The development of EPOS was a response to the retailers' need for both accurate and current information on both sales and stock.

Sparks (1987) states that retailers benefit from information of this kind in two ways, hard and soft benefits. Hard benefits are tangible and come in the form of the need for less staff to carry out reduced tasks around the store, e.g. stocktaking. Whereas soft benefits are intangible and may be, for example, the re-evaluation of their marketing efforts by availability of better sales information.

Information of this nature could thus be viewed as a power advantage for retailers as they possess the knowledge of sales of manufacturers' products and the consumers that are buying them. For a number of years, retailers have not been willing to share information of this nature with manufacturers who had to rely on retail audits for information as to the performance of their branded products. Manufacturers were thus asked if retailers on the continent of Europe shared EPOS data with them.

Colgate-Palmolive find that although data is only shared by retailers in Belgium, Denmark, France, Germany, the Netherlands and the UK, in most cases retailers charge a fee for provision of information. Pedigree Petfoods/Mars find the same pattern of information sharing as the latter, but comment that the German retailers are not quite so willing as the rest to share, whereas those in the UK and France share extensively. This view is further confirmed by United Distillers who see the UK as the most sophisticated market in terms of IT development with their major retail accounts in the UK sharing information extensively.

Gillette still rely on audits from Nielsen for information on brand performance as very few retailers are prepared to share performance indicators with them. However, even if retailers were prepared to share information with them they admit that they would not be equipped to handle such information. Kellogg find themselves in a similar position regarding EPOS information as Gillette, but would like to be in a position to receive

such information in order to understand demand earlier as they are apprehensive about eliminating vast quantities of stock from the supply chain. No information is shared by retailers in the markets of southern Europe as retailers are relatively underdeveloped in terms of IT developments compared to their northern European counterparts.

EDI is a more recent technology which offers significant potential benefits in the supply chain as was discussed in Chapter 3. Manufacturers were thus asked to state in which countries they had EDI links with grocery retailers. While Lever claims to have EDI links with retailers in all countries, Colgate-Palmolive, Pedigree Petfoods/Mars and Kellogg all have links with retailers in Belgium, Denmark, France, Germany, the Netherlands and the UK, although Kellogg brings our attention to the fact that countries are all at different stages of development.

For example, although the Italian market is quite well equipped to accommodate this technology, the wider underdeveloped marketplace renders its implementation difficult. In France, the development of EDI is perceived as being underdeveloped, but this appears to be an internal phenomenon rather than one reflecting the level of development in the marketplace. Gillette and United Distillers only volunteered information that they had links with the top six to eight accounts in the UK.

The countries of southern Europe would appear to be relatively underdeveloped compared to the rest in terms of EDI development as Kellogg state that orders are received by post or fax systems. There is a general view that UK retailers are at the forefront of EDI development in the grocery sector.

The availability of technology does not necessarily transpire in its real use, as among those manufacturers interviewed, transmission of the most important documents is generally still quite limited. In terms of the documents transmitted by EDI, mainly orders are received for processing, but invoices are becoming more frequently transmitted in this manner. Companies are at different stages of EDI development, with

Colgate-Palmolive transmitting orders, invoices and transport documents in almost all countries, whereas Gillette would appear to be the least developed as orders are not directly received by computer, they are transmitted by fax and re-entered into Gillette's computerised system..

Advantages of EDI for manufacturers generally seem to be for selfish reasons in that existence of this technology reduces clerical efforts in most cases. Some, however, would argue with this and state that it is not cost effective as more work is created for the manufacturer. Similar to the example provided by Gillette above, United Distillers find that when dealing with the UK retailer J.Sainsbury, orders received from this particular retailer have to be re-entered into the manufacturer's computerised system in order to be compatible with Sainsbury's ordering process.

From this it can be concluded that retailers have most to gain from EDI as they are keen to further reduce operating costs. However, much still needs to be done in terms of development of this technology with regard to developing compatible operating standards.

6.3.6 Attitudes to Relationships

This final section of the survey is concerned with the general attitudes of both manufacturers and distributors alike with regard to their relationships with retail clients and potential areas for future development in distribution co-operation between manufacturers and retailers.

When asked their views on the evolution of the development of relationships with the retail trade, manufacturers stated that throughout the past two decades grocery retailers in the UK have been the more powerful players in the channel and continue to remain in a very strong position. The exception to this is Kellogg who, unlike other manufacturers, dictated which retailers could carry their stock throughout the 1970s and 1980s. This situation began to change in 1983 when Sainsbury began to pressurise

Kellogg to palletise deliveries, which stimulated a programme of palletisation by the manufacturer. Throughout the 1980's, the power of the retailers became increasingly dominant and consequently the power of Kellogg and other manufacturers was slowly eroded. Additionally, this wave of power is sweeping across the continent of Europe, although at different rates according to the manufacturers interviewed.

There is a view, however, that the most powerful retailers have exhausted all possibilities terms of supply chain developments to drive unwanted inventory from the supply chain and must now look to manufacturers for assistance in future developments in this area as the following quote illustrates:

"During the 1970s, manufacturers were still very much in control, with the 1980s witnessing a shift in the balance of power towards the retail trade. In the current decade power still rests largely with the retailers but they cannot continue to improve the supply chain without the co-operation of manufacturers." (Mars/Pedigree Petfoods)

Although it would seem that retailers must now turn to manufacturers in a less adversarial and co-operative manner to develop further supply chain improvements, those manufacturers interviewed feel under increasing pressure from the largest retailers in the UK and on the continent of Europe, as they strive to drive more unwanted stock out of the supply chain. This is illustrated in the following quote:

"Grocery retailing in Europe will continue to become more intensive into the next decade as increasingly saturated and competitive markets will force retailers to examine supply chain economics to gain further efficiencies. Pressure will then be forced back up the supply pipeline to manufacturers who will then have to find new methods which don't increase costs. For example, the sharing of trucks or groupage as retailers continue to take part rather than full loads." (Gillette)

As a result of the adversarial stance taken by retailers towards manufacturers, suppliers have placed greater demands on agents such as third-party contractors to reduce the pressure placed on them by the retail trade, according to those third party distributors interviewed.

In terms of how continued retail concentration and supply chain innovations as demonstrated by grocery retailers on the continent of Europe have affected contractors, all stated that retailers are now beginning to realise that the benefits from centralised distribution as a means of increased profitability have been exhausted in the markets of northern Europe, especially in the UK, and must now look to contractors to assist with controlling in-bound stock from the supply side. The drive for greater efficiency in the supply chain has resulted in retailers demanding more frequent deliveries in significantly smaller quantities.

Consequently, greater demands are being placed on contractors in terms of the service they provide for retail clients. Contractors, it would appear are expected to be increasingly flexible, possessing the ability to change to meet clients' changing requirements.

With regard to their relationship with retail clients, third party operators generally perceive relations as being one-sided with the clients receiving most of the benefits. Harris describe their relationship with retail clients as "*a one-way street*" whereby the retail customer reaps all the benefits as they are looking to contractors to commit their resources but are not prepared to reward them with a long term contract in return..

Contractors were asked for their views on supply chain relationships and their future development on the continent of Europe. There is a common view that power still ultimately rests with the retailer and will continue to prevail into the future. BOC believe retailers will increase their individual power positions through continued own label development and cites the recent "cola war" between Sainsbury and Coca-Cola as

a pertinent example of this. Exel are also in agreement with this proposition that power has arisen as a function of own label development. The increasing power of retailers will continue in the UK and spread across Europe, although at different rates, is the general opinion among contractors. Christian Salvesen views the rest of Europe moving the same way as the UK in this respect, but ultimately will be dependent on the relative strength of the players involved.

With regard to future development of supply chain co-operation, a number of suggestions were proposed by manufacturers regarding this particular issue. All manufacturers would ideally like to benefit from shared sales information provided by retailers in order to forecast jointly, eliminating all unnecessary stock from the supply chain without the retailer assuming that the solution to this problem is to simply push excess stock back up the supply pipeline. Additionally, the respondents from Colgate and Lever would like to see the development of standardised replenishment programs to facilitate this process.

Similarly, all manufacturers would welcome the development of a common EDI standard across Europe as such a system would speed up the adoption of this technology throughout the grocery sector. Respondents from Gillette and Lever would like to see the introduction of "Europallets" as product currently must be taken from pallets as finished goods and placed on corresponding pallets for redistribution to retailers.

6.4 CONCLUSION

Through the undertaking of exploratory primary research with the main supply chain participants, that is to say grocery manufacturers and third party distribution specialists, a greater understanding of supply chain relationships in a logistical context has been gained.

In line with increasing concentration in the retailing sector, manufacturers have consolidated their respective European operations, involving both the integration of

manufacturing operations and rationalisation of numbers and locations of warehouses in the distribution network. The development of centralised networks of this nature has resulted in improved productivity and profitability, and improved levels of service.

As pan-European manufacturing configurations have gradually evolved pan-European brands have emerged, as manufacturers strengthen their positions in response to increasing retail concentration, which has occurred through the international developments of individual retail chains, in addition to power achieved through the formation of retail alliances. While a number of manufacturers have entirely standardised brands throughout Europe, others remain committed to maintaining a very much localised approach to branding. Although not all manufacturers interviewed in this survey pursue a harmonised branding strategy, there is consensus that such an approach affords benefits in terms of scale economies in production and marketing specifically, with those not pursuing such a strategy affording it serious consideration.

With respect to retail trade customers in the European markets in which those manufacturers interviewed are present, the north/south divide between European markets, as identified in the previous chapter, is evident with those markets of northern Europe assuming more importance in terms of manufacturers' business compared with those of southern Europe. Furthermore, third party distributors from the UK operating on the continent of Europe are most heavily involved in the grocery markets of northern Europe, although individual country requirements vary markedly, with retailers at different stages of development with regard to the distribution function, in addition to the differing attitudes to the distribution function which prevail.

Patterns of distribution with regard to delivering to the retail trade were also found to be characterised by a north/south divide, those retailers in northern Europe generally operating centralised distribution networks, although some more committed than others, while the markets of southern Europe remain characterised by direct store deliveries undertaken by the manufacturer. However, it must be borne in mind that physical and

socio-economic factors and store types do influence the type of distribution support to warehouses and stores in the retail chain. For example, the UK and France were found to possess the highest levels of centralised distribution, although in France this concept is operated on a regional basis as a result of geographic influences. Belgium and the Netherlands were also found to be highly centralised as a result of possessing similar characteristics in terms of geography and demographics. Germany, however, exhibits a lesser degree of centralisation compared to its northern European counterparts as a result of the strong discounting presence, rendering direct store deliveries an important characteristic in this market. A strong wholesale presence in Denmark also affords the concept limited application, although a number of the larger retailers are developing centralised distribution networks. Relatively low levels of centralisation and a high degree of direct store deliveries are important characteristics of distribution networks operated in the markets of southern Europe.

Collaboration in areas of marketing is currently limited to a few retailers, although retailers still remain powerful where collaboration is taking place and it is concentrated among a few key accounts whereby the collaborating “teams” from both manufacturing and retailing companies work very closely in any number of areas. Collaboration in product development at that time was extremely limited, manufacturers are of the opinion that the production of own labels would detract from the powerful brands they had built with consumers. An interesting development in this area, however, was announced in June 1995, when Mars, among one of the leading brand owners included in the survey work undertaken, surrendered to market pressures with its decision to supply own label cooking sauces to major grocery retailers. The company has been aggressively promoting own label products from its Master Foods subsidiary after this surprising change in company policy.

The development of IT is very much viewed as a function of the development of the retail trade, limited to the countries of northern Europe, in common with findings suggested by the literature. However, the sharing of information generated from

scanning technology by retailers is not at all widespread, a concept which would facilitate better planning on the behalf of the manufacturer with regard to production scheduling and levels of stockholding alike. EDI, a more recent technology which affords benefits in the to both manufacturers and retailers is not widely developed with obstacles to its adoption on the part of manufacturers manifesting themselves in a lack of comparable standards.

While the literature reviewed in earlier chapters would tend to suggest more associative relationships between manufacturers and retailers, those manufacturers interviewed still view retailers as holding a power position in the channel relationship, demonstrating typically aggressive behaviour in a number of instances. Further developments to drive unwanted stock from the supply chain, however, will require retailers adopting a less adversarial stance to their relations with manufacturers and acceptance of the fact that further improvements in supply chain efficiencies will not be realised unless they are committed to working together in the pursuit of joint goals.

CHAPTER 6 - REFERENCES

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CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

7.1 INTRODUCTION

The purpose of this chapter is to summarise the findings presented in the thesis and to provide an overall conclusion to the research investigation. Limitations associated with both the secondary data collection and their subsequent statistical analysis and the primary survey work undertaken will be highlighted. Finally, recommendations for further research will be proposed.

7.2 CONCLUSIONS

7.2.1 Theoretical Considerations

The theoretical foundations of this research lie in the marketing channels literature and its underlying behavioural concepts. Thus, relationships between manufacturers and retailers are essentially explained by the concepts of power and conflict which arise from interdependency between these channel participants as they pursue common goals.

Interdependency was found to be unevenly balanced in many channel relationships, and as the degree of interdependency changes between channel participants, so power relations emerge. This scenario was particularly evident in the UK grocery sector where the balance of power in channel relationships has shifted dramatically over the years clearly in favour of retailers, a trend also prevalent in an increasing number of grocery retail markets in northern Europe.

On consideration of both academic research in this area and commentary from industry practitioners, there is an increasing body of evidence to support the proposition that a profound change has taken place in channel relationships. Such change manifests itself

in the move from a "one-off" discrete transaction to a situation whereby relationships are more associative and of a longer-term duration. In such instances, channel participants realise that by managing conflict by negotiation instead of the utilisation of power as a negotiating tool, efficiency and effectiveness of the entire supply chain can be achieved.

As increasing concentration has occurred in the grocery manufacturing and retailing sectors alike, a more focused approach to buyer-seller relationships has emerged as retailers form closer relationships with a smaller number of key suppliers. Thus, as the fundamental nature of relationships has changed, the base of literature in which they should now be viewed has also changed. This change emerges in conjunction with the significant directional change which has been witnessed in the literature on marketing theory with an increasing emphasis on the formation of relationships and their inherent exchange processes.

Much has been written by academics (Hellberg and Engh, 1990; Matthysons and Van den Bulle, 1994; Ganesan, 1994), consultants (Walker, 1991; Hollis and Vadenboncoeur, 1993) and industry practitioners (Whiteoak, 1993; Machell, 1993) on associative relationships or "partnershiping" which is of direct relevance to the fast moving consumer goods industry. Furthermore, a corresponding body of literature has emerged with specific reference to the purchasing function in the development of partnering relationships (see for example Bessant et al, 1994; Macbeth, 1994; and Gadde and Hakansson, 1994). While the aforementioned authors generally conclude that business relationships should not simply be viewed as an exchange of goods for payment, but as *"managing the relationship to deliver both short-term operational and medium to long-term strategic benefits"* (Macbeth, 1994, p.25), it must be borne in mind that this body of literature is more applicable to manufacturing industries, drawing on analogies from, for example, the car industry.

Consequently, throughout the 1990s the partnership issue has become the subject of intense debate particularly at many industry conferences and seminars. The underlying aim of partnership is to allow manufacturers and retailers alike to be able to achieve supply chain efficiencies. The challenge facing both channel partners is the ability to manage the whole supply chain in a more integrated and cost efficient manner.

The notion of partnerships, however, is hardly a new concept since it has been a feature of some purchases by multiple retailers since the turn of the century. The concept of retailers and manufacturers working together in a mutually beneficial manner was first suggested by Jefferys (1954) whilst referring to what he termed the third phase in the evolution of distributive trades:

"It will be a phase in which, in respect of a wider sector of demand, the problem of matching in time and place the flow of goods with the needs of the consumer and his right to select individually will be seen as reducible to a number of relatively simple principles that call for the close co-ordination between producer and distributor" (p.120).

It has taken, however, almost 40 years to reach such a position with the origins of collaborative relationships established in the late 1980s (see for example; Anderson and Narus, 1984; Dwyer et al, 1987; Wilson and Mummalaneni, 1986). The concept, however, is still in its embryonic stage with extensive scope for translation of theoretical concepts into practical solutions still remaining.

The wide ranging base of literature encompassing those issues relevant to understanding relationships between members in marketing channels was presented in the first two chapters. The traditional and historic channel literature was reviewed in Chapter 1, while Chapter 2 went on to explore further bases of literature relevant to changing relationships in the grocery sector. A review of this magnitude was deemed necessary as channel relationships ultimately affect the physical flow of goods from one channel member to another. That is to say, where the balance of power in a channel relationship lies clearly in favour of retailers, then it follows that retailers will assume control of the

physical distribution function, effectively dictating to suppliers how stock should be channelled. Therefore, prior to gaining an understanding of how changing channel relationships between retailers and their suppliers have affected the physical flow of stock to both warehouses and stores in the retail chain, one must first understand the changes that have occurred between these parties in their role as participants in complex channel relationships.

Thus, the implications of changing retailer-supplier relationships on the physical distribution function in the international grocery retailing sector were developed in Chapter 3, specifically the formation of partnerships to eliminate excess time, cost and stock from the supply chain. In this chapter, it was demonstrated that distribution networks and their inherent management practices vary considerably between different countries.

Furthermore, when making international comparisons of supply chain management concerning the formation collaborative relationships, it was found that practices developed in the USA such as Efficient Consumer Response and Quick Response are actually more developed on the continent of Europe compared to their country of origin, although individual country markets are currently at different stages of development as a detailed analysis of the levels and locations of inventory held demonstrated. An important observation which emerged from the third chapter revealed that the UK model of supply chain management is actually very different to that prevailing on the continent of Europe with distribution practices quite unique to UK grocery retailers.

Therefore, the purpose of the research undertaken by the author was to test claims made in an exploratory piece of work by Fernie (1992), that the greater the retail concentration present in individual country markets, a higher level of retail branding emerges, in addition to the quality of distribution service support to stores. These factors subsequently result in a greater likelihood that retailers will assume control of the supply

chain, as the balance of power in their channel relationship with suppliers clearly lies in their favour.

7.2.2 Research Findings

These claims were tested in the first stage of the research investigation through the collection of secondary data for 18 variables relevant to understanding supply chain relations from a logistical viewpoint across 10 member countries of the EU. Chapters 4 and 5 gave a comprehensive account of the first stage of the research investigation detailing the data collection process and analysis respectively.

Following the application of a variety of multivariate statistical techniques to the data set collected, a meaningful taxonomy of grocery retail structures was generated which identified that homogeneous groups of European countries existed based on possessing similar characteristics. This taxonomy comprised three distinct sets of groups of countries as the variables identified as understanding supply chain relations from a logistical viewpoint were found to have three particular sub-sets. Thus, important variables were selected and placed into the following sub-sets: market structure; trading format; and physical and socio-economic variables.

The findings from this analysis would tend to indicate that a north/south divide exists in terms of grocery retail markets. Those retailers in northern European countries possess characteristics typical of retail controlled supply chains (e.g. low food outlet density, high penetration of own label, high proportion of food sales accounted for by multiple retailers and high hypermarket density) and those in the south exhibiting characteristics of manufacturer-driven supply chains (e.g. high food outlet density, low own label penetration and low hypermarket density). Nevertheless, further analysis indicates that some countries join different groups depending on the individual characteristics assigned to them. Thus, countries are generally at different stages of development with regard to distribution requirements and subsequent relationships with manufacturers.

The UK demonstrates the greatest commitment towards a retailer-driven supply chain, which supports the claim made in the earlier literature review. The Netherlands, Belgium and in some instances France, were also found to portray a number of characteristics similar to the UK grocery market. It is in countries such as these where retailers are generally more powerful than manufacturers and as such demonstrate the greatest potential to become more involved in supply chain collaboration.

The second stage of the research further explored how logistical support to both warehouses and stores in the retail chain varies in time and space across Europe by drawing on the taxonomy of grocery markets generated from the previous stage.

This involved undertaking further primary research with manufacturers and third party distribution specialists with a pan-European grocery presence to substantiate the findings generated from the analysis of secondary data. Results from both sets of respondents confirmed the finding that a north/south divide exists in European grocery retail markets, with those concentrated markets of northern Europe generally assuming a greater proportion of their European business and third party distribution specialists predominantly operating grocery contracts for retailers in these markets. However, stages of development differ from country to country with regard to their distribution networks and the type of distribution service required

From the survey of manufacturers, those factors identified in the literature as being conducive to the development of collaborative relationships such as the level of commitment to information technology, were found to be present in the grocery markets of northern Europe, further substantiating the north/south divide that emerged from the taxonomy of grocery retail markets. However, it must be borne in mind that only a partial view of supply chain relationships in a European context was gained from this stage of the research investigation and largely from a UK perspective (an important limitation which will be considered as a later stage in this chapter).

Notwithstanding, collaboration between manufacturers and retailers, where it does exist, is currently limited to a few retailers, although retailers are still generally perceived by manufacturers and distributors alike as being the more powerful participant in the channel relationship. Further collaboration in a number of key strategic areas will not materialise unless retailers are prepared to share risks and more importantly, information. While they continue to refuse to share information of this nature which would benefit all supply chain participants, the balance of power will clearly remain in their favour.

Thus, there is indeed a greater likelihood that grocery retailers in the markets of northern Europe will assume control of the supply chain, emerging as the more powerful participants in the channel relationship, largely as a result of the high levels of retail concentration present and a greater commitment to the development of own brands. The emergent conflicting relations which arise from such a power position, however, are generally accepted by their suppliers as the norm in the attainment of goals, although it remains a source of annoyance.

Collaboration between retailers and their suppliers has occurred from a realisation that mutual benefits for all supply chain participants, including end-consumers, will increase as unnecessary inventory and associated costs are eliminated from the supply chain, improving responsiveness. At a European level, supply chain collaboration is largely confined to the more powerful retailers as they make more suitable partners as a consequence of possessing strong marketing and merchandising abilities.

In a geographic context, the strongest partners for developing collaborative supply chain relations are located in northern Europe, although specific countries are at different stages of development. While it is a trend currently permeating the most powerful/advanced markets of Europe, it will perhaps spread to the peripheral markets of southern Europe such as Greece, Portugal and Spain.

7.3 PROBLEMS AND LIMITATIONS

During the programme of research undertaken, the author encountered several distinct problems in both stages of the investigation, giving rise to a number of limitations.

Thus, the conclusions drawn should generally be treated with some degree of caution.

7.3.1 Secondary Data Collection

With regard to the first stage of the research programme, i.e. the collection of secondary data which generated the taxonomy of grocery retail markets, the author encountered difficulties with respect to the availability, reliability and comparability of data. These three major shortcomings of collecting secondary data on foreign markets as identified by academics writing in the field of international marketing research were discussed in detail in Chapter 4.

7.3.1.1 Availability of Data

Problems associated with the availability of data manifested themselves in a general shortfall in the reporting of detailed retail statistics, an issue when collecting data for Ireland and Luxembourg, which resulted in their subsequent exclusion from the study. However, a considerable amount of time was spent investigating possible sources of data for the variables selected for these and the remaining ten countries in order to feasibly assess which countries and variables to include in the study.

7.3.1.2 Reliability of Data

Reliability, the second major obstacle researchers often encounter when undertaking international market research, is an important consideration and was more of a pertinent issue for some variables than others. Drawing on the market share variable as a relevant example, the author identified a number of divergent opinions on grocery retailers' market shares. Anomalies largely arose as a result of published share data being derived from a number of sources which measured the concept differently, i.e. food versus grocery. Furthermore, the individual research houses/management consultancies responsible for the publication of such data were generally unwilling to reveal how

shares were calculated. Thus, as such sources could not be strictly relied upon, the author decided to collect and calculate her own set of market share figures by applying a common approach for each country.

7.3.1.3 Comparability of Data

Comparability of data, in common with the opinions formed by academics writing in the field of international marketing research, was affected by its date of publication. This particular problem was exacerbated in the collection of data to generate the set of comparable market share figures. For example, in Portugal, an annual survey of retail enterprises did not commence until 1987. Therefore, the most recent information on market size (grocery retail value sales) and individual turnover as reported by the leading grocery retail chains (figures necessary for the calculation of comparable market shares as devised by the author) refers to the year 1988, rendering the data relatively out-of-date.

The collection of comparable data in this research investigation took a considerable length of time to complete for all the variables selected as the author endeavoured to find the best set for these variables in order to generate a meaningful taxonomy of grocery retail markets. However, as a result of the interrelated problems of availability, reliability and comparability experienced with the data, the taxonomy should be treated with a degree of caution as it provides an overall picture of the way in which ten EU member states group together at a given point in time, although the year series' for the data collected do differ in some instances. Furthermore, while the taxonomy provides a "current" insight into European grocery retail structures, future revision of the secondary data collected to incorporate more recent data, where available, may well offer an alternative pattern to the clusters generated.

Comparability of data also had an impact on the choice of variables selected to explain retail structures. Certainly, the inclusion of variables such as the percentage of sales channelled through centralised distribution networks in different countries would have

been a very interesting comparison to make. Similarly, comparing the proportion of retail sales passing through supermarket chains etc. by product category (ambient, frozen and chilled) in order to track both the level of centralised distribution facilities and the development of composite warehousing facilities in individual country markets, would also have made for an interesting perspective. However, the lack of comparable detailed retail data renders such a comparison across a number of European countries impossible. This offers an explanation as to why variables of this nature were excluded from the study.

7.3.1.4 Time Constraints

A further inhibiting factor in this investigation was the time consuming nature of the data collection process. In total, the collection of the comparable data used in the analysis took around one year, with a subsequent six months spent both analysing and interpreting the results generated. For some variables, however, a greater amount of time and effort was devoted to the collection of the most recent and comparable data available. A particular example of such an exercise was the collection of data in order to permit the calculation of a comparable set of market share figures. This variable was initially identified as being of potential importance as an explanatory variable to understand why certain countries perhaps group together in the light of the link academics have previously made concerning retail concentration (as measured by market share) and the subsequent degree of sophistication or development of grocery retail markets. As the data analysis progressed, however, it became increasingly apparent that market share was not an important explanatory variable, a fact which disappointed the author in view of the time spent collecting the relevant data.

7.3.2 Primary Data Collection

With regard to the second stage of the research investigation, which aimed to substantiate the findings generated from the previous stage by interviewing key personnel in both leading grocery manufacturing companies and third party distribution specialists, a number of limitations are also evident.

7.3.2.1 The Grocery Retailing Viewpoint

Perhaps the most pronounced shortcoming stems from an inability to collect data from grocery retailers. The current presentation of interview data from both the aforementioned parties provides a largely biased view of supply chain issues in a European context. Thus, not only would it have been more interesting, it would have been far more appropriate to obtain the views of European retail executives concerning their interpretation of supply chain issues and relationships. Had this objective been achieved, those views presented by their counterparts in manufacturing and distribution companies would have been counterbalanced, providing a more symmetrical picture of supply chain relationships. However, as was discussed in Chapter 6, grocery retail executives were excluded from the sample on the basis of unsuccessful attempts by, for example, the Institute of Grocery Distribution (IGD) to collect primary data from individuals representative of this sector.

During 1992, the IGD embarked on their European Retail Distribution survey in order to illustrate the development of retail distribution structures in major European countries. The survey involved distributing 100 questionnaires to a selection of Europe's leading grocery retailers, from which an overall response rate of 14% was obtained.

Such a response rate can perhaps be partly attributable to the issue of ownership of companies. That is to say, companies which are either privately or publicly owned have differing policies on disseminating information. For example, the majority of retailers on the continent of Europe, particularly those in France and Germany, are privately owned, placing them under no obligation to disclose, for example, financial information. Thus, it is feasible to assume that an unwillingness to disclose information regarding their financial situation would perhaps extend to other aspects of their operations, namely the distribution and logistics function.

Thus, in view of the lack of co-operation with surveys of this nature, rendering the collection of primary data from retailers a notoriously difficult task, the focus of the

primary research was specifically on those parties who supply the grocery retail sector, namely grocery manufacturers and third party distribution specialists.

Furthermore, as limited secondary data on the logistical operations of European retailers exists for those reasons discussed an insight into the operations and attitudes of the aforementioned parties presented one approach to gaining a partial understanding of changing supply chain relationships in Europe and their impact on channels of physical distribution in this particular programme of research. Therefore, it should be borne in mind that what is discussed in the text concerning retailers' distribution operations is inferred, in the absence of any substantive evidence from retail companies themselves.

7.3.2.2 An Emerging Retail Viewpoint

Since the author embarked on the programme of research, studies which explore supply chain issues including the retail viewpoint have recently begun to emerge. These studies have been undertaken by management consultancies which possess vast resources to undertake survey work on a wide scale. An important example is the study undertaken by GEA (1994) on supply chain collaboration, whereby this particular Italian consultancy formed a consortia with similar bodies throughout Europe, such as P-E International in the UK with sponsorship to undertake the research provided by the Coca-Cola Retailing Research Group. Thus, in such a scenario both resources and knowledge are pooled in order to obtain results which are generally more representative of the pan-European situation by including the views of all channel participants.

However, the author wishes to criticise the work of GEA and its associates for two reasons. In the first instance, the study was limited to five main countries which are perhaps representative of the largest retail markets in Europe and as such renders the collection of data a relatively straightforward task. Secondly, the sample was rather contrived in that potential respondents attended an organised conference and were expected to complete a lengthy questionnaire spanning a total of 46 detailed questions during their attendance. Certainly, this approach generated a breadth of response with

empirical evidence gleaned from an analysis of 127 completed questionnaires, but perhaps information of a richer nature was omitted due to the rigid structure of the questionnaire format employed. Breadth and richness of data, it was argued in Chapter 6, are usually generated from undertaking semi-structured interviews where the interviewer has the ability to probe the respondent where there is, for example, ambiguity in the answer volunteered.

The work undertaken by GEA, however, did reach an important conclusion which this study failed to do. That is to say, at the outset of the research, the author intended to undertake a pan-European survey. At the close of the research, however, what was effectively attained was a UK based survey providing views and opinions on the European situation from a strictly British viewpoint given that all those respondents interviewed were based in the UK or UK nationals based in other European countries. However, a lack of resources in terms of both financial support and time, coupled with an unwillingness on the behalf of respondents to participate in the research go some way to explaining the viewpoint taken in the description of the empirical evidence obtained.

Similarly, the survey of third party distribution specialists suffered from an identical weakness, which again would have been overcome had greater resources in terms of both finance and time been available to the author. In view of this common limitation, perhaps a different perspective would have been gained in the description of empirical work if European nationals had been surveyed rather than their UK counterparts.

7.3.2.3 Factors Affecting the Response from Executives in the Manufacturing Sector

A further constraint encountered during this stage of the study was the difficulty experienced in collecting detailed primary data from the individuals interviewed, an issue which was especially evident in the case of executives from the grocery manufacturing sector. As these individuals typically held senior positions in their respective organisations, while possessing the ability to comment at length about a "global" supply chain situation, in issue specific areas they were unable to comment in

any great depth. A particular example of this problem was the inability to volunteer information on the uptake of specific technologies important to the development of collaborative supply chain relations. Therefore, perhaps it would have been more advantageous to undertake a series of interviews with personnel in other operational areas and at different levels in the organisational hierarchy.

To further compound this problem, in some instances, as respondents were representatives of companies having private ownership status, they were generally unwilling to divulge information they perceived to be of a sensitive or confidential nature.

7.4 RECOMMENDATIONS FOR FURTHER RESEARCH

The research undertaken by the author has provided a backcloth to understanding grocery retail markets as affected by relationships in Europe which has established and broadly substantiated general trends in existence throughout continental Europe.

7.4.1 Revision of Secondary Data Collected

At this point in time, however, it is thought that no added knowledge would be gained from the further development of the taxonomy of grocery retail structures as the secondary data available are not any richer. While this current taxonomy provides an insight into such structures across ten countries of the EU, revision of the secondary data collected to generate the taxonomy could be undertaken at some stage in the future in order to establish if more recent data and its subsequent analysis would alter the pattern of clusters.

Furthermore, the inclusion of relevant secondary data in a clustering analysis for those countries which have subsequently joined the EU, and other non-EU nations such as Norway and Switzerland, would only enhance and compound the problem of availability, comparability and reliability of data. Such an analysis, however, will only be possible with the harmonisation of data collection methods by Eurostat in common

with a similar methodological approach developed for EU countries. At present, Eurostat only provide structural data for the former EFTA countries in their compendium of retail statistics, but intends to collect more retail specific information for these countries at some point in the future.

Another area for further research could manifest itself in the collection and modelling of secondary data for markets other than Western Europe, such as the former eastern bloc countries. The relatively untapped markets of central and eastern Europe provide high potential demand for consumer goods, rendering them adaptable to modern retail formats such as supermarkets. While the cultural and geographical proximity of markets such as Hungary and Poland could be viewed as an asset to European retailers, their distributive trades have been largely neglected. Therefore, it is perhaps reasonable to conclude that retail systems in such countries are perhaps more underdeveloped than those peripheral European markets such as Greece and Portugal (markets which are also characterised by the having a low density of retail outlets).

Although general market trends can be monitored, statistical monitoring is extremely difficult as a result of political and economic unrest which occurred after the demise of the Iron Curtain in 1990. Thus, as Eurostat do not expect reliable and comparable official statistics on some variables to emerge for some time to come, it is perhaps advisable to confine data collection exercises to larger markets where data is more readily available and less problematic with regard to comparability and reliability.

The research undertaken by the author has demonstrated that a definite north/south divide exists with regard to European grocery retail market structures, with specific differences arising with regard to the pattern countries form depending on the specific variables being considered. For example, while the UK and France were shown to group together when considering the market structure and trading format sub-sets of variables, but when the physical and socio-economic sub-set of variables was considered, France emerged as a cluster in its own right, as a result of the sheer

geographic size of the country. Therefore, more detailed empirical work is required to be undertaken by academics on a country by country basis in order to fully understand the individual grocery retail distribution systems and cultures present throughout the continent of Europe. For example, why France stood out as a cluster in its own right with regard to the physical and socio-economic sub-set of variables. Is it a consequence of the physical size of the country, or are there other factors which have a bearing on this result?

7.4.2 Collection of Further Primary Data - Current Studies

Empirical work of this ilk is emerging, albeit slowly, essentially testing those hypotheses generated by the author in her taxonomy of European grocery retail market structures. Research in the field of distribution and logistics was once an area largely neglected in international retailing research by academics in the UK. Furthermore, in continental Europe even fewer researchers considered channels of physical distribution in the international logistics arena. This balance, however, is being redressed as the research evolving in this field is being proposed largely by academics from a non-UK base.

Furthermore, those emerging studies increasingly involve the collection of primary data from retailers in order to obtain a more balanced and deeper view of grocery distribution and relationship issues, essentially focusing on single countries and involve undertaking semi-structured interviews with senior managers in major foreign grocery retailing companies. In this manner, more detailed and balanced knowledge concerning company and country specific strategies is coming to the fore, which the following two examples illustrate.

Fernie and Pierrel (1996) undertook a comparative analysis of the evolution and development of own branding strategies in the UK and French grocery markets. Primary research was carried out by conducting semi-structured interviews with senior managers of French grocery retailers in order to determine the nature of their own

branding strategies compared with their UK counterparts, drawing analogies with British grocery retailers.

The results from their research indicate that it is unlikely that French retailers will develop store brands to the same extent and on the same scale as the leading UK grocery retailers. Thus, findings such as this would tend to contradict the findings of the author who stated that the UK and France are very alike in terms of market structure (a sub-set of variables which included own label), possessing a number of similar characteristics, as was proven by the generation of a taxonomy of European grocery retail market structures. However, the Fernie and Pierrel study considers aspects such as the organisational structure of the French grocery business, a factor which the author did allude to in Chapter 5 specifically, but as a variable to be included in the statistical analysis undertaken in its own right, would have been exceedingly difficult to quantify in the context of the analysis undertaken.

A finding which did emerge from this recent study, which goes some way towards substantiating the cluster analysis undertaken by the author in her research is that Carrefour, the only hypermarket operator in France which has ventured down the same path as UK multiples with regard to own branding, has pushed a more value-added differentiation approach to own-branding, in common with its UK counterparts.

Placing this finding in the context of the author's taxonomy of grocery retail markets goes some way to explaining why the UK and France grouped together in the analysis of the market structure data sub-set (see p.224). However, an analysis of the graphical representation of this particular grouping shows that the UK actually joins the group last which would indicate that is perhaps more distinct from those other countries present, i.e. France and the Netherlands.

Paché (1995) examined the reasons driving French food retailers to build major speculative inventories through forward buying practices, a practice presently evident in

the French retailing industry. The storage of speculative inventories, however, calls into question the underlying rationale of efficient consumer response as was discussed in Chapter 3, the persistence of forward buying potentially endangering the implementation of a system founded in the optimisation of logistical operations throughout marketing channels, this rendering the introduction of partnerships more difficult.

Paché's paper studies the practice of forward buying, demonstrating that it is far from being a simple episode or a passing phase. His studies draw on that information collected from semi-structured interviews with logistics managers of ten major French food retailers and as such is a growing body of research aimed at gaining a greater understanding of the logistics and distribution strategies, systems and cultures throughout both continental Europe and the wider international grocery retailing arena.

7.4.3 Further Empirical Evidence -Testing the Taxonomy of Grocery Markets

Thus, in view of the two examples of current relevant studies outlined above which both coincide with and post-date the author's own programme of research, the following recommendation is proposed. It is thought that any future research undertaken which would add value to the original taxonomy generated would manifest itself in a series of in-depth country studies of grocery retail market structures for the ten EU countries included therein.

That is to say, by testing every grocery retail market in order to assess if certain explanations emerge to satisfy the existing statistical evidence the current pattern of clusters would either be substantiated or their validity challenged, thus warranting further investigation.

Drawing on the peripheral European markets of Spain, Portugal and Greece which had a tendency to group together, for example, one could undertake a series of interviews with logistics managers of major retailers in the countries in this cluster in order to explore, for example, the influence of French grocery retailing on existing distribution systems

and cultures. In Spain particularly, a number of French retail groups have built a strong presence through the hypermarket concept as a result of their geographical proximity and in view of restrictions in the domestic market for further expansion. Therefore, it would be interesting to examine the extent to which, for example, forward buying is practised in the Spanish market, given that it is currently firmly entrenched in France, and its subsequent effect on the optimisation of the distribution and logistics operations.

In this manner a greater understanding of individual grocery retail distribution systems and cultures in individual country markets and the emerging implications for supply chain relationships would begin to emerge from a European perspective.

CHAPTER 7 - REFERENCES

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APPENDIX 1

INTERVIEW STRUCTURE FOR FOOD MANUFACTURERS

CONTACT INFORMATION:

Name of Respondent:

Company:

Position in Company:

Address:

Telephone Number:

AIMS AND OBJECTIVES:

The aim of this research is to assess the impact of the manufacturer-retailer relationship in the context of the European grocery retail trade and its impact on physical distribution strategies. Clusters of like countries based on similar retail trade structures have been identified and will form the basis of a discussion concerning a wide range of supply chain issues.

SECTION 1 - PRODUCT AND MARKET INFORMATION:

1.1 What food/grocery products do you produce and what brand names fall into these categories? (for background information).

PRODUCT CATEGORIES	BRAND NAMES

1.2 How do these brands differ across Europe in terms of brand name, packaging and formulation. Pan-European brands?

1.3 If "pan-European" brands are manufactured what impact does this have on supply chain management?

1.4 What kind of product policy will your company pursue over the next 5 years? Adapting products to suit individual markets or greater standardisation?

1.5 Which of the following regions is your most important market in terms of your European business? (Obtain a ranking of clusters in terms of importance if sales figures are not given, **1** being the **most important**, **2** being the **next important** etc). (Show market structure clusters).

CLUSTER	% OF EUROPEAN SALES
1	
2	
3	
4	

1.6 Are you in a position to supply own label in addition to your own brands? Are you even interested in such a proposition?

1.7 If you do, in which clusters. If no see 1.8.

1.8 Would you indicate some of the disadvantages that you believe arise from the production of own labels?

SECTION 2 - PRODUCTION:

2.1 In what way have changing market conditions, e.g. increasing retail concentration and consolidation affected the location of your production facilities? Outline any major restructuring that has taken place over recent years.

2.2 Factors responsible for this restructuring?

a. Tangible advantages of this?

b. Any disadvantages?

SECTION 3 - SUPPLY CHAIN MANAGEMENT:

3.1 What major changes have occurred in your distribution network over the last 5-10 years in terms of location and number of depots/warehouses?

3.2 Would you indicate the predominant way in which your products are channelled in each of the following clusters:

(Percentage of volume that is shipped to retailers' regional distribution centres as opposed to that delivered directly to stores)

(Show trading format clusters).

Cluster 1:

Cluster 2:

Cluster 3:

Cluster 4:

3.3 How do you measure customer service?

3.4 How do your customers measure customer service?

SECTION 4 - TRADING RELATIONS:

4.1 How are your accounts serviced in the context of the following clusters (e.g national account management structure and extent field sales force etc).

(Show trading format clusters).

4.3 Parameters applied to trade customers to assess if trading is viable.

Gross margin, DPP, space management, brand profitability, customer profitability, sales volume/value?

SECTION 5 - INFORMATION TECHNOLOGY ISSUES:

5.1 Do retailers in any of the following clusters share information gathered from EPoS on product line sales and performance indicators in the sectors in which you operate? (Show trading format clusters)

CLUSTER	SHARED INFO - YES/NO
1	
2	
3	
4	

5.2 In how many of the following clusters do you have EDI links with grocery retailers?

CLUSTER	EDI LINKS - YES/NO
1	
2	
3	
4	

5.3 Which of the following documents are currently transmitted via EDI networks in the following clusters? Which will be transmitted in the future?

Cluster	Orders	Invoices	Trans. Docs	Other
1				
2				
3				
4				

5.4 What do you think the benefits of EDI links hold for distribution?

5.5 Areas in which technological applications used?

DPP, Category management, sales forecasting, customer service management

SECTION 6- ATTITUDES TO RELATIONSHIPS:

6.1 How do you view your strategic relationship in distribution co-operation with retailers during the 1970s, 1980s and 1990s? (UK compared to the rest of Europe, those countries which are showing parallels to the UK and those that are not, i.e. still remain very much supplier dominated).

6.2 Would you indicate any areas for improvement in distribution development/co-operation with regard to trade customers.

APPENDIX 2

INTERVIEW STRUCTURE FOR DISTRIBUTION COMPANY EXECUTIVES

CONTACT INFORMATION:

Name of Respondent:

Company:

Position in Company:

Telephone Number:

1. MARKET INFORMATION:

1.1 In which European countries are you present?

1.2 Approximately how long have you been present here (individual countries)?

1.3 (If more than 1), in which country are you most heavily involved in terms of the work you carry out for grocery retailers? - Rank countries in order of importance.

1.4 Which grocery retailers do you carry out work for?

1.5 Do you carry out any work for food manufacturers in these countries? If "yes", which ones?

2. CONTRACT INFORMATION:

2.1 Would you name the predominant type of contract which retailers require in the different markets in which you operate? i.e transport, warehousing, a combination of both.

2.2 Have the distribution requirements of retailers changed over time in terms of the type of service you provide them with in these countries? i.e. have retailers become more sophisticated in terms of the type of service they are demanding?

2.3 Are you involved in carrying out any primary distribution for retailers?

3. MARKET DIFFERENCES:

3.1 Would you comment on the level and sophistication of retail centralisation in the markets in which you operate.

3.2 Similarly, how advanced are these countries in terms of the development of composite warehouses?

3.3 The UK is widely quoted as being unique in terms of the way in which the distribution structure has evolved and the supply chain is managed. Are there any countries beginning to show similarities to the UK? What are these similarities?

4. MANUFACTURER-RETAILER RELATIONS:

4.1 In what way have changing market conditions in the UK, i.e. increasing retail concentration and consolidation, affected the way in which you operate?

4.2 A lot is said about the concept of partnershiping and significant steps have been made here in the UK to embrace this concept? How do you see the relationship between manufacturers and retailers developing in the UK and on the continent of Europe in the future?