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The Grocery Retailing Sector in Germany:
ECR Activities in Comparison to the USA

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Abstract

The German food retail sector and food manufacturers are in a state of transition due to a complex mix of technological and market forces. Competition continues to increase due to sluggish demand and increasing consumer mobility. The high degree of domestic and international concentration increases the intensity of competition. The top 20 food retailers obtain far more than two-thirds of total sales. Because of the increased competition among retailers, the number of retail stores will continue to decline. Food manufacturers fear the buying power of retailers in many ways. Distrust and struggle over the terms of trade characterize the relation between retailers and manufacturers. ECR activities in Germany lag behind relative to the US due to various cultural and procedural differences as well as strategic reasons. However, ECR provides a catalog of measures to achieve more efficiency and customer focus.

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Introduction

The food retail sector is most affected by the persistent weakness of economic activity in Germany, mainly due to the decreasing purchasing power of consumers (Eschbach, 1997). According to A.C. Nielsen, Germany's grocery retailing sector again failed to increase its trading volume in 1997. Turnover (sales revenue) was at the same level as in 1996 (DM 192B or \$111 billion). According to Nielsen, there were 70,400 stores in the country at the beginning of 1998: 1,900 fewer than the number the previous year. The decline is almost exclusively due to the shutdown of small stores less than 400 m² (~ 4,300 sq. ft.) in size (Wendt, 1997).

The food industry faces a number of necessary adaptations to be realized and problems to be tackled. For a long time, no growth impulses have emanated from the demand side. Only a few product categories show an increase in per capita consumption. The stagnant domestic demand was not sufficiently compensated by export (also due to the crisis in Asia). European integration continues and the introduction of the Euro as a single currency facilitates international business activities. However, it will also involve temporary cost increases (Wendt and Höper, 1997). The discussion about concentration in the grocery retailing sector and its impact on agribusiness as a whole goes on undiminished, and internationalization of trade in Europe increasingly has to be taken into account (Wendt and Höper, 1997).

In this paper, we examine the opportunities that ECR can offer to the retail sector and the food industry in Germany. We look at the concentration process in Germany and internationally. In this context, we analyze the various forms of grocery retailing in Germany and assess their prospects for the future. The cost structure and performance of Germany's food retail sector is examined in order to draw conclusions about its efficiency. Differences with the US market are pointed out and the resulting consequences are analyzed. Finally, we attempt a prognosis about ECR for food retailers and manufacturers.

Concentration Process

Domestic Concentration

In the last two decades, the German food retail sector has been shaped by increased competition and constant change. In 1980, the market share of the top three grocery retailers was 7.9%; 33.6% for the top 10 retailers (Lenel, 1997). In 1997, the market share of the ten leading retailers was 81.4%, with a turnover of DM 283B or \$164B. Meanwhile, 95.9% or almost the entire turnover of the sector (DM 334B or \$193B) is credited to the 30 largest retailers.

Table 1: Top Five German Food Retailers and their Turnover (1997)

Rank	Company / Group	Turnover (BDM/B\$)
1	Rewe Group, Cologne	37.4 / 21.6
2	Edeka / AVA Group, Hamburg	37.4 / 21.6
3	Aldi Group, Essen / Mühlheim	29.3 / 16.9
4	Metro Group, Cologne	28.2 / 16.3
5	Tengelmann Group, Mühlheim	19.0 / 10.9

Source: (DLG-Mitteilungen, 4/98)

At the present time, the high degree of concentration does not reduce the intensity of competition (Lachner, 1996). On the contrary, retailers compete fiercely for market shares, seemingly for consumers' benefit. However, one should not forget that such aggressive means can eventually eliminate competitors increasing the market power of the remaining companies. The speed of the concentration process continues to increase due to the elimination of international trade barriers and the international ambitions of leading retailers aiming at growth outside their saturated domestic markets. Clear strategies are vital for food retailers to maintain and strengthen their position in the domestic market place (Campbell, 1996).

Reasons for domestic concentration are demand side pressure and increased consumer mobility. Sluggish demand has increased the competitive pressure on each company especially in the grocery retailing sector. Furthermore, the high costs of internal rationalization measures foster the concentration process at the company level and affect the number of retail outlets (Poschacher, 1997). The geographic dimension of markets is affected by consumers' increased willingness and ability to travel

considerable distances to shop. This results in a disintegration of regional monopolies and intensified competition. Successful companies react to the changing demand side requirements using competitive instruments (i.e. larger outlets, price reductions, favorable locations) in an effort to create, maintain or even extend regional monopolies. At the same time, it increases their capital requirements. Smaller companies lacking capital are no longer able to face competition and are eliminated from the regional sub-market. Thus, the number of retailers and the choices for consumers decline and the intensity of competition is diminished (Schmidt, 1997).

Domestic concentration creates regional market structures with the danger of restricted competition. Matschuk and Vieth (1984) show that in grocery retailing the rates of return on sales and on equity depend on company size, where medium-sized companies have a better return on sales and equity than large companies. In their opinion and contrary to the Antitrust Commission's opinion, there is a considerable threat to competition due to the high concentration resulting from mergers in the food retail sector. Empirical studies of the US grocery market also show a positive correlation between concentration and price levels (Jammernegg, 1997). In countries with a high level of concentration, higher rates of return can be achieved which may explain the expansion of the German discounters into these countries.

The concentration process in food retailing also leads to a considerable reduction in the number of sales outlets which creates problems in the local supply situation. Consumers often complain about a decrease in supply alternatives. Shopping possibilities for older and less mobile consumers are often restricted. As shopping centers are built in the suburbs, the demise of specialty shops and a loss of inner city atmosphere ensue. However, consumer behavior contributed to the concentration process.

Moreover, fewer jobs result from the declining numbers of small outlets in response to the expansion of larger chain and discount stores. Smaller stores are more labor-intensive than larger stores based on self-service. Statistics show that the number of employees in relation to average store selling area has declined substantially. Thus, the domestic concentration process results in a net job loss. The number of employees in food retailing continues to decline. Moreover, synergy effects through mergers

and rationalization measures have resulted in cuts of 71,000 jobs (or about 12%) between 1992 and 1997 (Gordian, 1996).

International Concentration

Internationalization in retailing has increased dramatically in the 1990s. For instance, Wal-Mart (USA) and Carrefour (France) are expanding in South America, Ahold (Netherlands) and Sainsbury (UK) in the USA. Aldi and Lidl (both German) expanded within Europe. International concentration is the combined result of push and pull factors. Push factors are sluggish demand, excess supply and planning restrictions in the domestic markets. Pull factors are marketing opportunities abroad, the removal of international trade barriers, and the possibilities for cross-border mass advertising. Concentration takes place through elimination of competitors, branching out (internal growth) or take-over of stores or entire chains (external growth), increasing the entrepreneurial performance. Parallel to the organizational concentration there have been far-reaching changes in the sales outlets, mainly due to the introduction of self-service with larger selling areas and a rising capitalization while staffing decreases.

The Frankfurt-based market research institute, M+M Eurodata, determined that 50 major European retailers accounted for two thirds of total turnover in the sector in 1995. The ten leading firms are dominated by German and French chain store companies. The German Metro Group is the unchallenged leader in Europe followed by Rewe. Recently, Rewe has obtained the market leadership in Austria's food retail sector by taking over the Billa chain. Other examples of international concentration in the food retail sector are the majority acquisition of Intermarché by the German Spar group, the merger of Auchan and La Rinascente, and in cash and carry wholesaling Metro's complete taking-over of the Makro C&C Markets from the Dutch SVH holding (Wendt, 1997). An example of an American commitment in Germany is Wal-Mart's take-over of Wertkauf (Vongehr, 1997). According to Eurodata, there are striking differences in the concentration levels between national markets. The top five food retailers (highest turnover) in Norway, Sweden, Finland and Austria, which have the highest concentration levels, hold over 80% of the market. Countries where the top five hold

more than two-thirds of the market are Luxembourg, Denmark, Belgium and Portugal. In Switzerland, Germany, France, Spain, and the Netherlands, the market share of the five major firms is less than two thirds. Low concentration levels are recorded for Hungary, Greece, Italy, Slovakia, Poland, and the Czech Republic (Gordian, 1996).

The traditional American supermarket is threatened by new competitors. An FMI study shows that in 1994, American supermarkets lost a total turnover of more than US\$23B to alternative retail operations such as supercenters, warehouse clubs, and discounters. Thorough changes for the British retail industry are also expected. Increasing competitive pressure from discounters as well as planning restrictions for new stores on "green fields" outside of cities force traditional supermarket operators to look for new concepts.

Reasons for international concentration:

- (a) The abolition of borders, the establishment of a common market, and the introduction of a single currency facilitate the free movement of goods and capital within the European Union.
- (b) The opening of Eastern European markets and the improvement of the economic situation in those countries bring about opportunities and development prospects for retail trade.
- (c) Consumer behavior in Europe is becoming increasingly similar. An example is the discount market, which "conquered" Europe starting from Germany and is now popular even in Italy.
- (d) Retailers from countries with highly competitive markets see the opportunity to relocate to less competitive markets where higher returns can be achieved.
- (e) Internationalization in food retailing is a response to the international concentration process in food manufacturing. Securing a strong position in the retail market and thus buying power with food producers has become an essential impulse for expansion.
- (f) Domestic expansion is limited for large food retailers because of already high market shares. The only way to expand is to eliminate competitors. Diversification is another option for growth, but foreign expansion seems to be a more profitable alternative.
- (g) Potential foreign profits of competitors could be invested at home in one's domestic business - a

threat that prompts most of the larger food retailers to become active in foreign markets.

Buying Power of Food Retailers

What characterizes a company capable of mastering the present market situation in the food retail sector? The top 20 retailers obtain far more than two thirds of the total turnover in the institutional grocery trade and each of them is so big and has so much influence that no manufacturer can disregard them. It has not always been like this and food manufacturers were able to manage things as they liked. With the rise of discounters, hypermarkets, self-service department stores and the creation of increasingly large wholesale and retail units the influence of the food manufacturing sector declined. The grocery market was newly divided: brand names disappeared, new brands emerged, and old ties broke apart (Schellenberger, 1994).

Food manufacturers feel the buying power of retailers in many ways. The terms of trade have changed to the advantage of retailers who exercise pressure on prices and conditions with the threat not to sell the products of particular suppliers. Retailers may also threaten to reduce their orders or to exclude all or some products of a supplier from sale promotions. Retailers and suppliers negotiate the terms of trade individually. Delivery contracts are the result of voluntary concessions made by the supplier as well as the importance and negotiation skills of the retailer. Besides gross price rebates, supply contracts may include cash discounts, grace periods, agreements on the distribution of transport costs and risks, as well as various side payments and other services including entrance and listing fees, shelf and shop window rents, advertising contributions, merchandising, and price-marking carried out by suppliers. Buying power is not only a problem for the vertical relation of suppliers and retailers but also a demand-led discrimination against weak competitors (Lenel, 1997).

The effect of the concentration process on the competitive situation in the food retail sector is controversial. In 1996, the German Antitrust Commission took the view that there is no decline in the intensity of competition and attempts made by retailers to improve their market position by taking over other firms or through more favorable supply conditions are equalized regularly and comparatively fast through competitive response" (Kaas, 1994). The most important result of competition in the food retail

sector is certainly a cheaper and improved consumer supply. The German Antitrust Commission sees the growth of the major firms as **A**improving a company's position in relation to their suppliers and enhancing its market significance in local markets.**A** However, the increased concentration does not necessarily improve the supply to consumers, and may exploit food manufacturers, eliminate competitors and increase the economic power of the remaining companies.

Outlet Types

The concentration process in the German grocery retail sector occurring at the cost of small stores with less than 400 m² (4,300 sq. feet) of selling area will continue, especially when taking into account the low levels of economic growth, the high unemployment, and the austerity measures resulting in declining purchasing power. The Nielsen index for the food retail sector showed a 2.7% decline in the number of stores, with an even bigger decline in the number of small stores. The decline of self-service chain stores in Germany is also continuing. In January 1997, 63,511 stores were counted - a decrease of 376 stores or 0.6% compared to a year earlier.

Table 2: Outlet Types in the German Food Retail Sector

Outlet Type	Selling Area	Product Assortment
Self-Service Store	< 200 m ² (2,150 sq. ft.)	Groceries Only
Self-Service Market	200 B 400 m ²	Groceries, Fresh Food and Non-food
Supermarket	> 400 m ² (4,300 sq. ft.)	Fresh Food (Non-food area <20%)
Discounter	n.a.	High Volume Items only
Consumer Market	> 1500 m ² (16,150 sq. ft.)	Groceries and Non-food
Self Service Dept. Store	> 5000 m ² (53,750 sq. ft.)	Groceries and Non-food
Cash and Carry Market	n.a.	Food and Non-food Items for Resale

Source: Günther (1997)

The average selling area is 314 m² (3,380 sq. ft.) for a self-service market, 495 m² (5,330 sq. ft.) for a discounter, 921 m² (9,915 sq. ft.) for a supermarket, 3258 m² (35,072 sq. ft.) for a consumer market, and 6581 m² (70,844 sq. ft.) for a self-service department store. Note that a consumer market is a large supermarket where the non-food area typically exceeds 20% of the selling area. Obviously, parallel to the store size, the annual turnover increases from about DM 3.9M (\$2.6M) for self-service markets to about DM 59.7M (\$39.9M) for the department stores. On average, there are 10.6 full-time employees in a self-service market and 78.6 full-time employees in a self-service department store. Thus, there is one full-time employee for 30 m² (323 sq. ft.) of selling area in small self-service markets. In self-service department stores, this number is about three times as large (one full-time employee for 87 m² or 937 sq. ft.).

Comparing an average self-service market to an average self-service department store, the selling area increases 21-fold, the turnover 15-fold, but the number of employees only 7-fold. On average, a self-service market counts 635 customers (transactions) per working day, while a self-service department store counts 3,306 customers or five times as many. The average purchase per customer is DM 20.80 (\$13.90) for a self-service market and DM 60.20 (\$40.33) for a self-service department store, which is explained by the wider assortment of non-food items. For the different outlet types, the number of customers and the average purchase per customer increases, but the ratio of customers per square feet of selling area decreases with the store size (Groner, 1996).

Performance and Costs

Space Performance and Space Costs

Space performance measures the gross turnover per square foot of selling area and is one of the most important performance ratios in retailing, allowing for a quick and useful evaluation of a store. Due to the ^Aself-service principle,[@] the space performance measure typically declines for the larger retail units. Total space costs in relation to gross turnover vary between 4.2% and 5.9% for the different outlet types listed in Table 2. The value for consumer markets and supermarkets are the highest and for discounters are the lowest. The rent paid per square foot of selling area depends to a large extent on the location of a particular outlet type.

Staff Performance and Staff Costs

Annual turnover per full-time employee is a measure of staff performance. On average, it is about DM 363,200 (or \$243,344) for self-service markets. The staff performance measure increases for supermarkets, consumer markets and discounters up to about DM 759,500 (or \$508,865) for self-service department stores. Depending on the outlet type, the staff performance typically increases with the size of a store.

Staff costs (on a full-time basis) range from DM 45,500 - 53,900 (\$30,485 - 36,113) per year and are similar for the different outlet types. Gross salaries, wages, paid premiums, and employer contributions to statutory social security are the basis for calculating staff costs. The measure ^Astaff cost as a percentage of annual turnover[@] is used to compare personnel costs for the different outlet types. It decreases for the larger outlet types in the food retail sector. The figure is about 13.5% for self-service markets, and declines to about 8.1% for self-service department stores. The staff costs for discounters, however, are by far the lowest (only 6.6% of annual turnover).

Checkout Performance

The average number of checkout stands is 2.6 for self-service markets, 2.8 for discounters, 4.2 for supermarkets, 9.6 for consumer markets, and 15.6 for self-service department stores. The ratio $\frac{\text{selling area}}{\text{checkout}}$ is important to evaluate checkout performance. In larger stores, more selling area per checkout stand is covered. The number of necessary checkout stands in a store depends on outlet type, selling area, store location which in turn influences customer frequency. The number of customers covered by a checkout stand depends on the product assortment and differs between outlet types. The ratio $\frac{\text{customers}}{\text{checkout stand per year}}$ is about 84,600 for the small self-service markets and about 63,600 for the big self-service department stores.

Since the $\frac{\text{average purchase per transaction}}{\text{customers per checkout stand per year}}$ increases faster for the larger retail outlets than the $\frac{\text{customers per checkout stand per year}}{\text{turnover per checkout stand}}$ decreases, the $\frac{\text{turnover per checkout stand}}{\text{selling area}}$ increases with the selling area of the different outlet types. Thus, a checkout stand in a small self-service market can cover a volume of nearly DM 1.2M (\$804,000), but more than three times as much (DM 3.8M or \$2.55M) in a large self-service department store.

Inventory Turnover

Inventory is particularly relevant in business management, because it locks up capital, thus causing capital costs. For self-service department stores, the $\frac{\text{inventory per square foot of selling area}}{\text{inventory turnover}}$ is about twice as large as for discounters (DM 1,138 or \$762 vs. DM 558 or \$374). For discounters, the average frequency of inventory turnover is the highest (about 16 times per year) and for self-service department stores, it is the lowest (about 6.7 times per year). The measure declines the larger the selling area and the more non-food items are sold in the store. Accordingly, outlet types with a higher frequency of inventory turnover have shorter storage periods. Discounters store their assortment for only 23 days on average, supermarkets for 30 days, while self-service department stores keep it for 55 days before selling it.

Total Costs

Total direct costs of running a branch store relative to its gross turnover are the lowest for discounters (13.6%). Self-service department stores follow with 19%, consumer markets with 19.5%, supermarkets with 19.7%, and self-service markets with 21.8%. The main cost categories are labor and space costs which alone cover 86% of total costs for self-service markets, but only 68% for self-service department stores.

With the exception of discounters, the share of staff costs relative to turnover declines for the larger outlet types. The measure equals about 13.5% for self-service markets, 8.1% for self-service department stores, and only 6.6% for discounters. Shares of space costs relative to turnover are not homogeneous across outlet types. The figure ranges from about 4% for small self-service markets to about 6% for smaller consumer markets (<2,500 m² [26,912 sq. ft.]) of selling area (Groner, 1996).

Efficient Consumer Response (ECR)

Introduction

In Germany, the relation between retailer and manufacturer is characterized by distrust and a struggle over the terms of trade. However, the concept of ECR is based on cooperation between retailers and manufacturers. The term **Efficient Consumer Response** is not easy to grasp. The definition of the Food Marketing Institute (1994) is as follows:

ECR is a grocery industry strategy in which retailers, wholesalers, brokers and suppliers work more closely together to bring better value to the consumer.

The definition indicates that ECR was initiated in grocery retailing. However, today it applies to the entire consumer goods industry and is defined more generally (von der Heydt, 1997):

ECR is a company vision and strategy based on a trusting partnership and cooperation between manufacturers and retailers, focusing elaborate techniques designed to remove inefficiencies along the marketing chain, taking into account consumer needs and maximum customer satisfaction, to create mutual benefits for each party involved which otherwise cannot be achieved.

Although both definitions may appear rather vague, they express the key elements of ECR. According to the principle **A**cooperation not confrontation,[@] the consumer is the starting and reference point for joint activities between food manufacturers and retailers. Cooperation between manufacturers and retailers is best described by an excerpt from the legendary Coca-Cola study: **A**Cooperation between industry and retailing is characterized through the exchange of sensitive internal and/or external information and data and by common processes and procedures in decision-making, clearly aiming at mutually benefiting from the resulting advantages.[@] (Coca-Cola Retailing Research Group, 1994). However, not only retailers are facing the challenge of developing complete and innovative solutions when confronted with problems within complex markets and legal structures. Solutions aim at potentials along the entire marketing chain and cannot be achieved at the product or company level alone (Günther, 1997).

Starting Situation for ECR

Witte (1997) characterizes the **demand side** in highly-developed economies by:

no or low population growth	stagnant real disposable income
less traditional household characteristics	increasing average age
increased use of fast information gathering	changing consumer habits
consumers want more value for less money	changed price/value relations

Affected by retailers and consumers, the **supply side** exhibits (Kroger, 1997):

excess capacities glut of innovations growing marketing expenses globalization of brands increasing demands of the trading firms increasing demands of the consumers pressure on prices/costs/margins

Due to competitive dynamics, the **marketing chain** becomes increasingly linked and more complex (Heinemann, 1997). According to Witte (1997) significant factors are:

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| <ul style="list-style-type: none">• an increasingly <i>heterogeneous consumer market</i> where standard marketing tools may not affect preferences and brand loyalty. <i>Polarization and fragmentation</i> as well as high price sensitivity requires fast, flexible, minimum cost reactions to the changing consumer needs,• a constantly <i>growing product variety</i> due to consumer market heterogeneity,• <i>legal provisions</i> (e.g. packaging laws) imposing additional restrictions at strategic and operational levels,• the <i>fusion of retail markets</i> which have lost their regional character. More foreign suppliers enter the German market. Direct deliveries are replaced by a distribution system via central warehouses with new demands on the logistics management,• <i>technological development</i> towards automation and networking as a prerequisite for organizational and marketing concepts of the future. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The following trends characterize highly-developed countries at the **retail level** (Witte, 1997):

stagnant or declining consumer spending	excess retail capacity
growing pressure on prices/costs/margins	intense competition
growing buying power of retailers	increased presence of discounters
significance of brand names	more information about consumers

Against this background, ECR is often mentioned as a solution for both manufacturers and retailers. However, ECR is more than reengineering logistics and cost-cutting. The right way to apply ECR is to use the cost reductions achieved to promote growth. ECR calls on retailers and manufacturers to put consumer needs in first place and to meet them as efficiently as possible. ECR means that the entire marketing chain from the supplier of raw material to the manufacturer, the retailer and the final consumer is optimized such that each sale - recorded by scanners - directly results in a

signal to production. Insufficient production estimates, costly administration, and intermediate storage are eliminated. However, the optimization of the supply chain cannot be attained by individual action. An open cooperation based on partnership is necessary if the parties involved want to achieve optimal cost reductions and growth. Three essential concepts to achieve these goals are linked with ECR (Kroger, 1997):

1. Efficiency	2. Consumer Orientation	3. Responsiveness
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Efficiency aims at optimal resource use for the whole supply chain. The performance of resource inputs is analyzed and optimized. Every activity is to be executed at minimum cost.

Consumer orientation is to raise consumer satisfaction and loyalty. Requirements for the production process regarding costs, quality and time are established together with the customers (the beneficiaries of the activities).

Responsiveness is to satisfy consumer needs on time stressing the increasing importance of time in competition: performance has to be accomplished in shorter periods, at minimum costs and tailored to the needs of the market.

ECR involves a consumer oriented examination of processes to develop cooperation strategies between manufacturers and retailers. In doing so, ECR is based on four strategic areas optimizing the *flow of information and goods* over the entire supply chain. Necessary information is made available in a precise way and on time to ensure a regular and smooth flow of goods suiting the needs of the market. An information network and a continuous data exchange via Electronic Data Interchange (EDI) promote an up-to-date preparation of production and management processes so that supply gaps can be avoided and administration costs are reduced to a minimum level. The use of information technology appropriate for the respective process is used in order to be efficient. Extensive standardization and networking of information exhaust performance potentials for the physical flow of goods.

Strategic Elements of ECR

Efficient replenishment (ER) is cooperation in operational logistics and information technology to make the right product available in the right quantity at the right time and place. Actual point of sale (POS) data are gathered via checkout scanners and then analyzed. Orders are automatically transmitted to the manufacturer and executed. The flow of information and goods is optimized, eliminating unnecessary storage (e.g. via cross-docking: arrival of delivery trucks in a central warehouse almost at the same time, avoiding intermediate storage). Thus, the logistics system is regulated by the final consumer (pull). Important benefits of ER are fewer **out-of-stock** situations, lower inventory requirements, more efficient use of shipping trucks, improved storage operation, a reduction in unsold goods, and fewer consumer returns and complaints.

A key challenge to ECR results from uncertain demand conditions. Inventory is a costly form of insurance against these uncertainties. The *bullwhip effect* is an important phenomenon in this context: fluctuations in demand increase from the retailer to the wholesaler, the producer and the supplier of raw materials, without fundamental fluctuations in the final consumer demand. It is caused by obsolete demand forecasts, fluctuating product prices and order sizes too large, i.e. by the fact that the partners in the supply chain do not see the bigger picture. The bullwhip effect can be fought by the joint planning of price, transport and storage (Jammerneegg, 1996). Furthermore, it is possible to reduce fixed order costs using EDI. Outsourcing to a logistics service provider serving several companies en route saves fixed transport costs. However, the prerequisite is that current POS data are available to every partner in the supply chain.

Efficient Assortment aims to optimize the assortment in a store which is affected by conflicting interests between retailers and manufacturers. Retailers want the highest possible return on their whole assortment while manufacturers want to place their own products in an optimal way. Essential to achieving efficient assortment is successful *Category Management*. From a consumer point of view, all products are divided into different categories which are managed as independent business units (profit centers). ECR increasingly focuses on Category Management. Key tasks of Category Managers are

efficient product development, introduction and promotion. Category managers need information about all factors influencing the assortment. Geared toward regional purchasing patterns and different customer structures, assortment categories are examined and positioned in the market. Using POS data, the available shelf space is optimized. The result is increased customer satisfaction and a higher turnover.

Efficient Promotion aims to increase the efficiency of sales promotion. POS data are used to determine the consumers' reaction to promotion measures. The conclusions reached help to choose the optimal products for price reductions as well as their optimal markup. Another strategy is every-day-low-pricing (EDLP): all promotion activities and quantity discounts on the manufacturer and retail side are eliminated. EDLP leads to cost reductions in logistics, ordering, and in the sales department, which can be passed on to the final consumer. In the end, ECR may lead to a replacement of special offers with every-day-low prices (Tietz, 1995).

Efficient Product Introduction facilitates the process of new product introductions. It is based on the exchange of POS data, market research findings, and information on consumers preferences and habits to develop promising designs, to test the new product, to determine the optimal price, to develop an appropriate promotion strategy, to identify a suitable place on the shelf, and to implement necessary adaptations in logistics. Close cooperation between retailers and manufacturers reduces the cost and raises the quality and acceptance of new products.

ECR Europe

Linking information systems and the exchange of sensitive information is a (culturally) complicated issue that applies in particular to food retailers and manufacturers. In recent years, mutual distrust between prospective ECR partners has become widespread. The result is constant suspicion when a cooperative offer is made. In order to approach matters without prejudice, the organization, ECR Europe, was established with equal representation of retailers and manufacturers. The goal is to foster dialog between the parties and to promote feasible solutions.

Table 3: Members of ECR Europe

Manufacturers	Coca-Cola, Johnson & Johnson, Kraft Jacobs Suchard, Mars, Nestlé, Procter & Gamble, Sardus, Unilever
Retailers	Albert Heijn, Auchan, ICA, Metro, Promodès, Rewe, Tesco, La Rinascente, Safeway

Cost Reduction Potential

Partnerships in the marketing and supply chain are just at the beginning, but their potential is enormous. In the US, the cost reduction potential is about 10.8% of turnover in consumer prices (Kurt Salomon Associates, 1993). In Europe, the cost reduction potential is about 2.3 - 3.4% of turnover in consumer prices, of which logistics account for 1.5 - 2.5% and marketing for 0.8 - 0.9%. In Germany, the potential is 3.5% of turnover through ECR (Coca-Cola Retailing Research Group, 1995).

ECR Europe concludes that the operational costs in the supply chain of the grocery sector could be reduced by about US\$27B per year. Inventories could be reduced by over 40%. Together, this would constitute a cost reduction potential of 5.7% or US\$33B. Moreover, ECR Europe estimates that the cost of the logistics chain could be lowered to a level of about 7.5% of turnover. In light of the narrow margins in the sector, it would seem appropriate for the industry to cooperate and exhaust cost reduction potentials. In this context, five fundamental issues arise:

1. Who will achieve the gains?
2. How large are the gains?
3. When are the gains noticeable?
4. How are the gains achieved?
5. How are the gains distributed?

No matter how much emphasis is placed on cooperation, there will be distributive battles over the gains from ECR. Their result will depend on the relative strength of ECR partners. Taking this into account, estimates conclude that between 50 and 70% of the gains will go to retailers. However, according to an industry survey in the US, 36% of those asked acknowledge benefits for manufacturers, 24% benefits for retailers, and only 8% of those asked see benefits for consumers. Until now, comprehensive ECR structures have not been implemented in Continental Europe. The first projects are getting started, but

they are not more than tests. Thus, it is still too early to comment on how actual gains are achieved and/or distributed.

Differences between Germany and the US

Repeatedly it is argued that ECR in Germany lags behind relative to other countries. We examine this argument in detail using objective and subjective criteria regarding the current situation. Nine theses are formulated with reference to an article entitled **Wal-Mart Myth Leads to the Wrong Positioning of ECR** (Hallier, 1997).

Thesis 1: Compared to Germany, the logistics chain is considerably longer in the US, where more than half of the grocery sales are handled by wholesalers and brokers. On average, the length of stay in the distribution chain is 100 days per item in the US, but only 50 days in Germany. That explains why *potential* cost reductions due to ECR are higher in the US. However, *actual* cost reductions in the US have been lower than predicted by experts.

Thesis 2: ECR is often misinterpreted, in part due to the Wal-Mart Myth. However, it is wrong to explain Wal-Mart's success through ECR alone as other factors such as location policy, employee profit-sharing schemes, and a spirit towards innovation and technology are equally important. Moreover, the Wal-Mart myth leads many to believe that only certain elements of ECR must be implemented to eliminate all business and retail management related problems. ECR is not a secret recipe, but must be tailored to the procedures of the supply chain and to specific structures within a company. What is right for one company may be wrong for another.

Thesis 3: Procedural differences exist. In Germany annual contracts are dominant, while in the US business is mostly done **deal by deal**. Moreover, the average number of items in a supermarket is more than 30,000 in the US - in Germany this number is less than 10,000.

Thesis 4: In the US, the more prevalent use of scanners, which started earlier than in Germany, has led to ample experience with consumer data. Moreover, US rebate regulations, which allow discounts for particular customers, further promote consumer loyalty schemes. In Germany, retailers cannot grant

good customers other bonuses than casual customers.

Thesis 5: Cultural differences are another impeding factor. Germans strive for perfection while Anglo-Saxons have a trial and error mentality. Too often Germans continue to discuss theories of failure and success, when companies in other countries put practical implementation to the test.

Thesis 6: In Europe, priority within ECR is given to EDI and Efficient Replenishment, but neither is pursued much in Germany. In Britain, outsourcing to a logistics service provider is an established strategy to save transport costs. It seems that for strategic reasons, German retailers are reluctant to take similar steps, but initial advances are seen (e.g. cross-docking for sale items).

Thesis 7: With respect to efficient supply channels, German discounters can stand any international comparison. This is not possible without excellent organizational skills, among other things. Instead of increasing profits, cost savings due to rationalization measures are passed on directly to German consumers in an effort to raise market shares. Focusing on the *consumer*, one might argue that this actually is consumer-friendly behavior, as opposed to a strict focus on marketing efforts which raise the profits of retailers and the food industry.

Thesis 8: Large cost reductions are only achieved, if a critical mass is achieved. As long as pioneer initiatives induce new costs, the mutual benefits for retailers and manufacturers are small. This is the fate for a number of pilot projects and one reason why ECR is only used by a handful of key companies in the market. In the current competitive situation in Germany, many small and medium-sized companies cannot afford investments in ECR initiatives for possible returns in the future. Financing initiatives for pilot projects may then be a way to foster the progress of ECR.

Thesis 9: In Germany, the time for a strategic reorientation has come. In the past decade, the focus has been on the necessary adjustments due to reunification and market potentials in Eastern Europe. Financial and human resources have primarily been used for acquisitions and securing new locations. On the other hand, in the US the priority has been to optimize the supply chain.

Risks and Barriers

ECR involves dependency risks. Dependence on particular suppliers or on the performance of Category Managers is due to the structural changes implied by ECR. A lack of buffer stocks increases the risk in the event of a strike. Orientation and adaptation of Category Management to a particular supplier can lead to incompatibilities with other suppliers. ECR also may provoke negative reactions on the consumer side because of more transparency. Category Management would require that sales data combined with credit/debit card information be made available. This will not be welcomed by all consumers and may face legal challenges.

In Germany, ECR initiatives often face criticism and distrust. Implementation problems are related to retail trade (e.g. dissent on the distribution of cost reductions, previous conflicts, organizational structure, lack of trust, misuse of data) and the manufacturer (e.g. lack of know-how, management support, information technology and other resources). Technological barriers may exist as the flow of paper records must be substituted by electronic data interchange (EDI). However, the main problem is the change needed in the way of thinking and not so much the adaptation of information systems and reorganization. Thus, the following basic prerequisites for a successful ECR cooperation between retailers and manufacturers are necessary:

- personal commitment and involvement of the top management
- launching of training programs for the employees
- launching of pilot schemes with partners
- multifunctional action teams.

Cost reductions and growth will ensue only if retailers and manufacturers start a step-by-step partnership and rapidly work toward a critical mass. Potential cost reductions of 5-6% and growth prospects of 5% should encourage the parties involved to be proactive on ECR.

Conditions for Success

An ECR offensive may not be successful by definition. We examine five prerequisites for the success of ECR (from a retailers point of view):

1. ECR is firm specific. It promotes price discounting as a way to attain market leadership. Concepts

that focus on improving markups and include additional services (e.g. depth of product range or shopping atmosphere) in their price calculations, will not be very successful with ECR.

2. The distribution of cost reductions through ECR remains a question of power. Only equal positions of power between retailers and manufacturers will secure win/win-situations.
3. ECR can only be applied to demand-oriented assortments and assumes a **permanent flow** of items with synchronous production. A **seasonal flow** (e.g. Christmas items) inadvertently results in supply bottlenecks, because ECR allows no demand buffers.
4. ECR can be applied selectively to declining food and growing nonfood assortments. ECR measures should be examined for each supplier and each assortment.
5. ECR must be examined against the background of specific company strategies. ECR always leads to a restructuring process. It requires standardized and centralized trading concepts and a critical examination of ECR is necessary if differentiated and decentralized structures exist.

These arguments show that ECR is not necessarily successful. Nevertheless, every trading firm should consider ECR. The Wal-Mart example shows that it holds enormous possibilities for trade. ECR should not be an end in itself or a matter of prestige. Moreover, it can in fact also be of advantage to trading firms when applied selectively.

Conclusion

ECR is based on a particular philosophy or attitude, and with intensifying competition it provides a catalog of measures to achieve more efficiency and customer focus. However, implementation problems are enormous and developing a **culture of cooperation** is difficult. Conflicting goals, a lack of trust, high investments costs and unilateral initiatives make ideal win-win situations often appear pure theory.

At the moment, ECR is often a line-up of individual activities rather than an integrated overall plan. However, no company can afford to ignore ECR in the long run and nearly all German retailers are implementing aspects of it or plan to do so in the near future (Homburg, 1997). However, the

implementation process is slow and difficult because distrust between retailers and manufacturers is deeply rooted and a big obstacle for ECR. Nevertheless, continued efforts on both sides including the digitalization of trade will advance ECR because cooperation is always better than confrontation.

Prognosis

Food Manufacturing Sector

Only those companies that react flexibly to changing markets and trends and place innovative products in expanding market segments are likely to be successful. Determining factors for the future development of the German food manufacturing sector are (Breitenacher, 1996):

- Bleak domestic growth prospects as many regional markets are saturated. Growth potentials only for high-quality, or trend products (reflecting dietary, health, and environmental concerns).
- Confrontation with problems of pollution control and health protection.
- Geographical proximity to the East European food industry with low-cost labor that could soon turn into serious competition.
- Increasingly global competition and more concentration in the food retail sector will further increase the intensity of competition.
- New prospects for exports and more competition from abroad (primarily affecting medium-sized companies competing with global players) due to GATT agreements.

German food manufacturers will need to follow adaptation requirements in the years to come in order to remain sufficiently competitive (Geyer, 1997):

- To focus on high-quality products and foreign markets that promise growth,
- To achieve more brand loyalty in the German market through communication campaigns in order to prompt powerful retailers to sell their products,
- To pursue systematic and strict cost management at all company levels (e.g. concentrate the manufacturing of particular products at a few Eastern European locations, transfer logistics and sales activity to trading firms or specialized service providers, mergers or amalgamations of production facilities in particular product categories to increase productivity).

Food Retail Sector

A.C. Nielsen (1997) forecasts that the number of stores will continue to go down while sales growth rates stay at low levels. In 2005, about 60,000 stores will achieve a turnover of DM 254 B (or \$147 B). From 1998 - 2005, the annual sales growth will range between 1 and 2% which will further increase concentration. With respect to outlet types, discounters will further strengthen their position. The small grocery shop in the neighborhood with 200 to 400 m² (2,150 - 4,300 sq. ft.) of selling area will continue to exist on the personal commitment of the shopkeepers. Retail groups such as Rewe or Edeka will present their offers on the Internet. Customers can click and order goods which are then delivered to their home. Subsidiary branches of chain stores with limited staff will suffer losses as they cannot finance an order and delivery service. A supermarket with 400 to 1,000 m² (4,300 - 10,750 sq. ft.) of selling area and a dedicated shopkeeper can survive with a good parking situation. Consumer markets with 1,000 to 2,000 m² (10,750 - 21,500 sq. ft.) of selling area will suffer losses due to their lack of proximity to customers and their limited assortment. Order supermarkets will be established where goods can be collected or delivered directly to the customer. Discounters will not benefit from online shopping. When orders are processed via data network and additional order picking staff is required, their low prices cannot be maintained.

In 2005, the food retail sector will be dominated by large-space stores and discounters including Aldi, potentially commanding over 75% of total turnover. The share of supermarkets and smaller stores will be less than 24% (in 1995 this was still 30%). A.C. Nielsen's market research concludes that "... concerning the large-space stores and the discounters, the concentration in the grocery retailing sector will continue - also due to the change in store opening hours."

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