

How changes in consumer behaviour and retailing affect competence requirements for food producers and processors¹

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Abstract

This paper analyses the changing competence requirements which members of the food chain face in their pursuit of competitive advantage. Two groups of trends serve as point of departure: more dynamic and heterogeneous consumer demands, which can be analysed in terms of consumer demands for sensory, health, process and convenience qualities, and changing roles for retailers in the food chain. Based on these trends, it is argued that competencies which can increase producers' level of market orientation get increased weight in the attainment of competitive advantage, and three types of competencies are singled out as especially important: consumer understanding, relationship management, and new product development. The development of market-related competencies aimed at exploiting trends in consumer behaviour and retailing will also entail changing forms of cooperation among members of the value chain, which favour both new ways of adding value but also new ways of matching consumer heterogeneity with heterogeneity in agricultural raw materials.

Introduction

Food is not just food - the selection and consumption of food has always been a matter subject to a complex network of cultural and individual factors. But today consumer food choice is more complex than ever before. Consumers have developed more dynamic, complex and differentiated demands. These changes in consumer behaviour, reinforced by changes in the retailing sector, provide both threats and opportunities for the food sector. On the one hand, they offer new opportunities for adding value and differentiating products, which can lead to less price competition, strong consumer preferences, brand equity, better negotiating power facing retailers and higher margins. On the other hand, doing this successfully requires competencies, which many actors in the food sector have only to a limited degree, and in many cases it requires new forms of cooperation between the actors in the food chain.

In this paper we sketch some trends in consumer food choice and in the food retailing sector with a view towards analysing implications for food producers and processors. In analysing these implications, we adopt a *competence perspective*, and we will focus especially on

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market-related competencies, which allow members of the food chain to act in a more *market-oriented* way. The paper is based on research carried out at the MAPP Centre³, which affects both its geographical and its scientific positioning. Geographically, we draw mainly on results from research carried out in Europe, and scientifically the paper follows the eclectic approach that is typical for the marketing discipline, with the concepts of competencies and market-orientation as two conceptual cornerstones.

The paper is organised as follows. We start by sketching trends in consumer food choice and in retailing, and then look at general implications of these trends for food producers' ability to attain sustainable competitive advantage. We then look at competencies necessary for such competitive advantage, namely consumer understanding, new product development, and relationship management. Finally, we analyse some implications for the configuration of the food value chain.

Trends in consumer food choice

Many food processors have been claiming that food consumers in the developed countries have become more difficult to understand and to predict. Some even claim that consumers act irrationally or even at random when choosing food products. We don't need to go that far, though – the complexity of consumer food choice can be viewed as a result of increasing differentiation of the food products to choose between on the one side, and increasing dynamics, complexity and heterogeneity of consumer demand on the other side (Grunert, 2002). It is a complexity which is amenable to analysis, and which can be turned into a source of competitive advantage for food producers.

We can still assume that consumer food choice is influenced by food products' prices and quality and consumers' income. But what consumers regard as 'quality' has undergone considerable change during the past decades. We can approximate today's consumer food quality perception by distinguishing four groups of quality attributes for food products: sensory attributes, health attributes, process attributes, and convenience attributes (Brunsø, Fjord & Grunert, 2002; Grunert, Baadsgaard, Larsen & Madsen, 1996).

Sensory attributes refer to the classical food quality aspects taste, appearance, and smell, with taste as the dominant aspect. Taste is an experience quality that can be evaluated only after the purchase, and consumers use a host of market signals, like brand, price, and quality labels, in trying to predict the taste experience (Grunert, Poulsen & Juhl, 2001).

Health has been of increasing importance for consumer food choice for the last 50 years or so, and today analyses of consumer food quality perception many times indicate that health and sensory considerations have about equal weight. Health-related qualities are quite different from sensory qualities, though, in that they are, for the consumer, invisible. While consumers have learned that there is a link between eating and health, they don't expect the consumption of a particular product on a particular occasion to have a health implication that they can

³ For more information on the MAPP Centre, please consult www.mapp.asb.dk.

experience. Many health effects of food are of a rather abstract nature – like the risk of particular diseases being reduced by a certain percentage – and thus do not lead to consequences that are readily accessible to experience.

Health as a choice criterion for food is thus a question of communication and of the interpretation of various signals. Messages about the healthiness of various types of food in the past have been conflicting, and consumers have constructed their own subjective theories of healthiness of food products. These theories depend on the learning history of the consumer and are thus individually different, but there are some recurring themes like that industrial production is less healthy than craftsmanship, that additives are unhealthy, that fat is bad and that vegetables are good (Brunsø, Fjord & Grunert, 2002).

More recently, food manufacturers have used the health criterion more proactively in their product development through the development of functional foods, i.e., food products which have an added positive health benefit (Frewer, Scholderer & Lambert, in press). Since the health benefit is still invisible for the consumer, the question of which health claims are allowed in the marketing of such products has become a major issue in the public debate. Even though the type of health claim of course will have an impact on consumer food choice, it should be noted that such health claims, as all other relevant information, will affect consumer food choice not as such, but as interpreted based on consumers' subjective food health theories (Bech-Larsen & Grunert, in press).

Process attributes relate to consumers' interest in the way a food product has been produced, even when this has no analysable impact on the final food product. Consumers pay premiums for organic products which look and taste the same, for products which were produced with due concern for animal welfare and/or environmental considerations, and products which are guaranteed GMO-free. While this interest in production methods has been underway for some time, European consumers' interest in the way food has been produced has been additionally increased by the recent series of food scares, BSE being the most prominent. These have broadened consumer interest in production aspects in general, whereas it seems that consumer interest in more specific aspects, like organic production, may already have topped in some countries (Scholderer et al., in press).

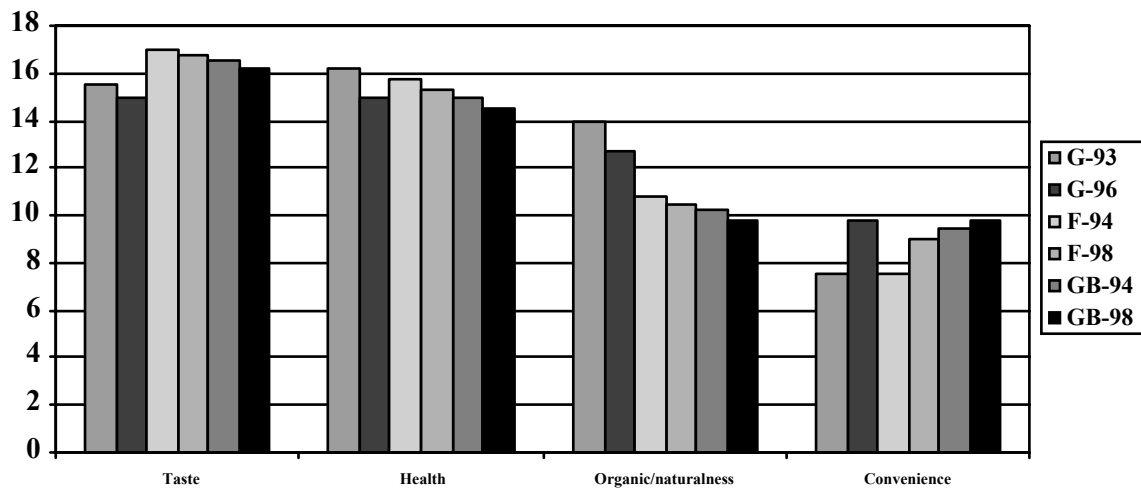
Consumer interest in *convenience* has been rising quite considerably over the past few decades. Convenience is here defined as aspects of the product which save time or energy throughout the private household's meal production chain, i.e., during shopping, storage, preparation, eating, and disposal. In a wider sense, convenience relates to home-meal replacement alternatives like eating out (Darian & Cohen, 1995). Increased demand for convenience has often been related to family demographics like both adult household members' participation in the work force (e.g., Darian & Klein, 1989; Soberon-Ferrer & Dardis, 1991), but newer research indicates that demand for convenience is best explained by households' subjective perceptions of their resource constraints (Scholderer & Grunert, in press).

Figure 1 shows results from surveys carried out in several European countries at two points in time, which allow looking at the development in the importance of the various food quality

dimensions. In France, Germany and the UK we see the high importance of taste and health, but we also see that the convenience dimension is the only one that was on the rise in the period in question.

Figure 1: Importance of four major quality dimensions of food

Based on survey data in three countries at two points in time; for details see Brunsø, Grunert, Bredahl & Bech, 2001



While this bundle of quality attributes with an impact on consumer food choice already indicates considerable complexity of consumer choices, there are three additional factors complicating the issue. These relate to the existence of *subjective trade-offs*, *cultural differences*, and *different consumer segments*.

Subjective trade-offs relate to the phenomenon that consumers may be interested in all four types of quality attributes, but that they at the same time believe them to be, at least partly, incompatible. A product attribute like high fat in a dairy product may be regarded as an indicator of both superior taste and inferior health, as the example in figure 2 shows. Organics may be desired as a form of production but may at the same time be perceived as less convenient. Convenience products with a high degree of processing may be regarded as undesirable in terms of their industrial way of production. These trade-off may be resolved by consumers in different ways under different situations, depending on the in that situation dominant buying motives.

Figure 2: Associations to ‘high fat content’ in a yoghurt product

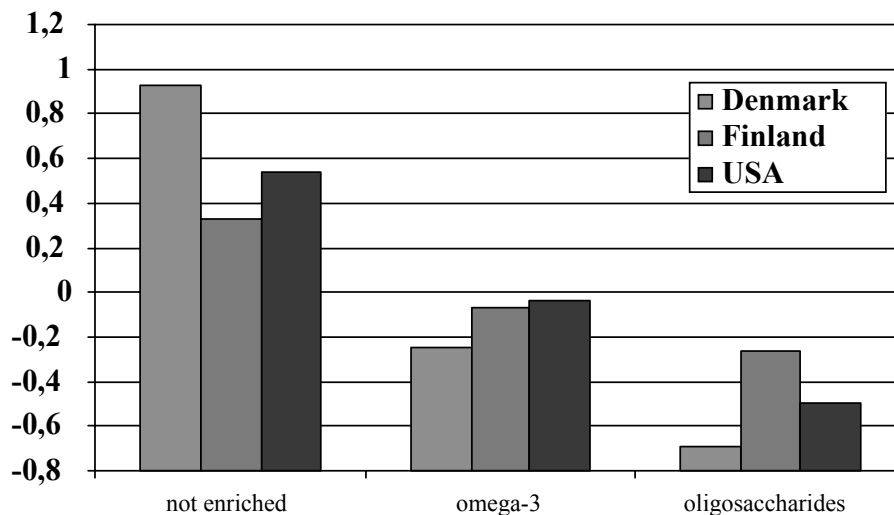
Based on laddering data collected by Bredahl, 1999, German sample of consumers, dashed lines indicate negative relationship



It is widely acknowledged that food choice is subject to *cultural differences*. These differences will affect how the four types of quality attributes mentioned above affect food choice. As everybody knows, taste preferences differ between countries, but also the perception of what is healthy, what is convenient, and which types of production are acceptable may differ. Rapeseed oil is regarded as high quality and healthy in Scandinavia, but as low quality in France (Nielsen, Bech-Larsen & Grunert, 1998). Animal welfare is a very desirable quality of the production process in the UK, but much less so in Southern Europe. Organic convenience products may be acceptable in the UK, but much less so in Germany, where organic production is mentally linked to low levels of processing (Grunert & Bech-Larsen, 2001). Acceptance of functional food products is higher in Finland, where biotechnology has a good reputation in the public discussion, but less so in Denmark, where consumers are sceptical about high-tech applications in food production, as the example in figure 3 shows.

Figure 3: Predicted market shares for functional food product concepts by country and type of enrichment

Reanalysed from data from Bech-Larsen & Grunert, in press, based on conjoint analysis with juice and spread as carrier



Finally, even within countries, consumers may differ considerably in their preferences for food. In all countries we find consumers who are not very interested in food, and which put low emphasis on food quality issues. Likewise, there are consumers for whom food and eating is a source of stability and safety in their lives, and who therefore put high emphasis on traditional food qualities, known products and production methods, and non-innovative forms of preparing meals. There are consumers with a very rational approach to food choice and others with an innovation-oriented, social and adventurous approach. Between these *consumer segments*, the weighting of the various quality attributes will differ, but also their interpretation (Grunert, Brunsø, Bredahl & Bech, 2001).

We have, in this section, argued that changes in consumer food choice can be fruitfully analysed as a process where the way in which consumers perceive quality in a food product has become more multidimensional. We have pointed at sensory attributes, health, convenience and process characteristics as major dimensions of perceived food quality. We have also argued that subjective trade-offs among these dimensions and cultural differences in their perception and interpretation complicate the picture further. This short introduction to the way in which consumers perceive food quality shows the complexity of these perceptual processes and makes it understandable that food producers sometimes find understanding consumer food choice an arduous task. The more dynamic, complex and heterogeneous consumer demands are, the more difficult consumers become to understand. But at the same time this creates new opportunities for food producers for adding value and differentiating products, which we will come back to later.

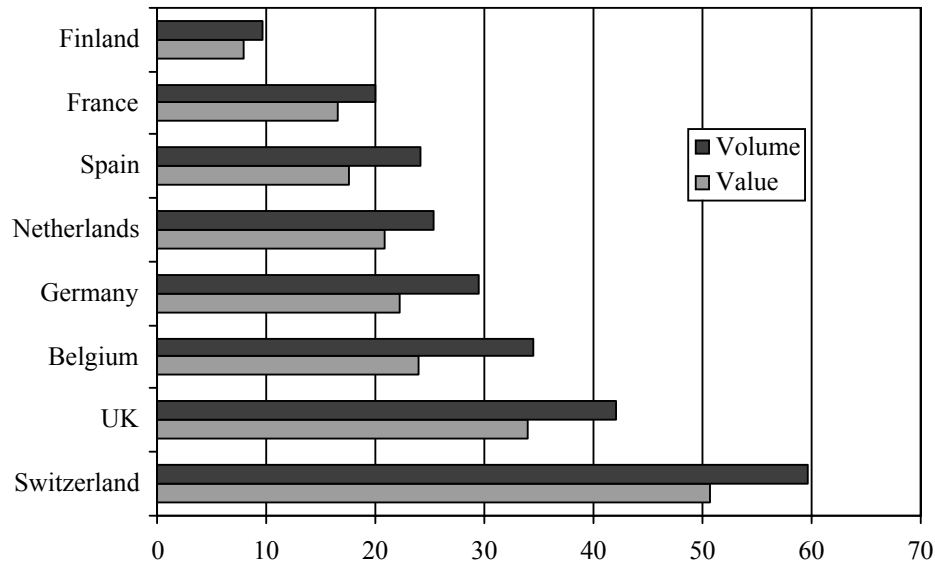
Trends in retailing

The structural changes in retailing in Europe and the growth of retail private labels have been extensively documented, so we can be brief here. Private label shares of food sales for a number of European countries are shown in figure 4. It shows that there is considerable variation across Europe, with Switzerland and the UK topping the list. Eastern Europe is not shown in the table, but private label penetration in Eastern Europe is currently low (Esbjerg &

Skytte, 1999). No matter what the current level of private label penetration, though, most retailers seem to have plans to increase it.

Figure 4: Shares of private labels in food by country

From KPMG, 2000.



Several reasons have been suggested for why retailers try to increase the share of private label sales, including higher margins for private labels and better negotiating power for retailers facing national brand manufacturers. The aspect we want to concentrate on here is the changing role of retailers in the overall food value chain. The concentration process in the retail sector has changed both the power balance in the food chain and the competition among retailers. Retailers have adopted more proactive marketing strategies, where they try to achieve customer loyalty not only by parameters like service, location and store layout, but also by having more influence on the overall value creation process in the food chain. Private labels can be viewed as a major instrument for actively shaping the kinds of products consumers can choose among in the store, as these are the only ones where retailers can be sure that consumers cannot find them in competing stores as well. Consequently, there has been a trend towards the development of high quality, differentiated private label products, and the quality of these products has been shown to be a major determinant of consumers' decision to buy them (Hoch & Banerji, 1993; Steenkamp, 2001).

Table 1: Criteria when selecting suppliers for fish and cheese products among European retail buyers

Based on conjoint data, from Skytte & Blunch, 2001

	Fish				Cheese			
	Relative importance in %	Average part worths			Relative importance in %	Average part worths		
Quality of product	13	Average -.84	Above average .15	Premium .69	12	Average -.74	Above average .13	Premium .61
Product	8	-.10			10	-.11		

price		(vector)				(vector)		
Consistency	6	Average -.34	Superior .34		6	Average -.34	Superior .34	
Market information	6	No -.34	Yes .34		6	No -.33	Yes .33	
Traceability	11	No -.65	Yes .65		12	No -.66	Yes .66	
Sufficient quantities	16	No -.93	Yes .93		17	No -.95	Yes .95	
Promotion	2	Average -.10	Superior .10		3	Average -.16	Superior .16	
Wide range	5	Average -.30	Superior .30		5	Average -.30	Superior .30	
Long-term relationships	17	No -1.02	Yes 1.02		18	No -1.02	Yes 1.02	
Reputation	6	Average -.37	Superior .37		6	Average -.35	Superior .35	
National/ foreign	10	Foreign without sales office -.63	Foreign with sales office -.05	National .58	7	Foreign without sales office -.44	Foreign with sales office .09	National .35

These changes in retail structure and strategy have implications for retailer choice of suppliers. Branding, for consumers, has the functions of reducing purchase risk and of information costs (Erdem & Swait, 1998). When retailers take over the branding function, they have to make sure that their brands also can fulfil these functions, if their brands are to be successful with consumers. We can therefore expect that the increased prominence of private labels also has an impact on the type of criteria retail purchasers apply when selecting suppliers and products. Table 1 shows results from a major study on retail buying behaviour, based on interviews with 751 retail purchasers in 16 European countries (Skytte & Blunch, 2001). The results (for two product categories, fish and cheese) show that, in addition to the classical criteria like price and quality, especially traceability and the willingness of suppliers to engage in long-term relationships with the retailer are important criteria. These are criteria that we would expect to have increased in importance due to the greater prominence of private labels.

Unfortunately, we have no longitudinal data that would allow us to trace changes in retailers' criteria for choosing suppliers over time. As a proxy, though, we can draw on results from an analysis of purchase criteria on Eastern Europe, where the private label development is still in its infancy (Blunch, Skytte & Esbjerg, 1999). Table 2 shows relative importances for the same set of supplier choice criteria as in table 1 for samples of retail purchasers in Germany and in Poland. The most striking difference concerns the importance of traceability, which is of very high importance in Germany, but practically without importance in Poland. Long-term relationships, while also valued in Poland, have clearly higher weights in the German sample.

There are several plausible explanations for retailers' increased interest in traceability and long-term relationships with producers. One, already noted, is that the branding function naturally leads to more responsibility for product design and quality control. Unless retailers engage in backward vertical integration (which is not the rule), traceability and closer cooperation with manufacturers is called for in order to bring about products that bear the

retailer's mark in terms of design, positioning and quality consistency. But retailers many times have to rely on manufacturers also for other reasons. While retailers, due to the availability of scanner data, have a wealth of data on sales of products and of those determinants of sales which they control themselves (like price promotions and shelf allocation), many retailers have little or no knowledge on determinants of buying behaviour on the consumer side (Grunert, Skytte, Esbjerg & Poulsen, 2002). Manufacturers, which concentrate on a more narrow range of products than retailers, have many times a better understanding of consumer demands than retailers, and retailers may want to draw on this expertise when developing private label products.

Table 2: Relative importance of criteria when selecting suppliers for fish and cheese products among German and Polish retail buyers

Based on conjoint data, from Blunch, Skytte & Esbjerg, 1999

	Germany		Poland	
	Relative importance in %		Relative importance in %	
	Fish	Cheese	Fish	Cheese
Quality of product	11	11	11	8
Product price	6	4	5	0
Consistency	2	2	0	1
Market information	4	6	0	3
Traceability	15	24	0	1
Sufficient quantities	17	12	4	0
Promotion	3	5	5	8
Wide range	3	2	3	7
Long-term relationships	16	14	10	13
Reputation	2	0	9	7
National/foreign	9	5	13	17

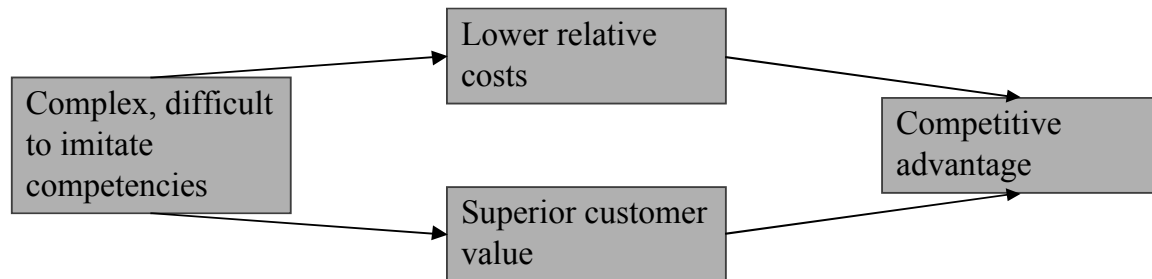
We should note that retailers have a host of other parameters in addition to private labels that they can use to exploit their positioning facing consumers. We have therefore also seen new trends in the development of different store formats, store layouts, various forms of service, and the combination of traditional retailing with e-tailing. These trends will not be commented further here.

Implications for the competitive advantage of food producers

The two groups of trends discussed above, in consumer behaviour and in retailing, create both threats and opportunities for food producers and thus their opportunities for achieving a competitive advantage on international food markets. In analysing these implications, we will use a revised version of the SPP framework (Sources of advantage - Positional advantage - Performance outcomes) for analysing competitive advantage proposed by Day and Wensley (1988), depicted in figure 5. Day and Wensley relate superior performance, as measured by profitability or market share, to two layers of causes. At the first layer, differences in performance between companies competing under the same external conditions are related to only two possible causes, namely differences in the value created in the eyes of the customer and differences in the relative costs incurred in creating this value. Companies enjoying lower relative costs and/or superior customer value are said to have a positional advantage. Positional advantage is, in the original Day and Wensley model, related to superior skills and resources in the organisation. We replace this by the term *competencies*, which we define as the combination of skills and resources with the aim of creating customer value (Grunert, Larsen, Madsen & Baadsgaard, 1996; see also Sanchez, 1997; Sanchez & Heene, 1997). In addition, we add a dynamic perspective by focussing on those competencies that give a

competitive advantage that is sustainable over time. By drawing on concepts from the resource-based perspective (Barney, 1991), we emphasise competencies which are complex and difficult to imitate as major sources of sustainable positional advantage (see also Hunt & Morgan, 1995).

Figure 5: A framework for analysing competitive advantage



The changes in consumer behaviour described above imply changes in the way consumers perceive value in food products. While earlier on food products possessing basic qualities in terms of taste and nutrition may have been perceived as good value by consumers, the trends described above imply that the perception of high value will be linked to a broader array of factors, covering the four groups of quality attributes discussed earlier, namely sensory, health, process and convenience quality. At the same time, the described individual, segment-specific and cultural differences will imply that the process by which a consumer forms value perceptions when buying food will vary widely, especially from the viewpoint of an internationally operating food producer. These changes in the ways in which food consumers perceive value in food products therefore require food producers to possess not only competencies in producing food products meeting these dynamic, complex and heterogeneous demands, but also competencies in being able to understand these diverse ways in which consumers see value in food products.

The SPP framework is a dyadic model, and we have interpreted it as describing a dyad consisting of a food producer and consumers (end users). We may use the same framework to look at the dyad consisting of a food producer and its retail customers. Also retail buyers perceive, to varying degrees, value in a supplier and its products, as described above. The extent of perceived value will, among other factors, depend on the extent the retail purchaser believes that the supplier will be able to support the strategy of the retailer and the extent to which the products supplied will, in turn, be perceived as good value by the retailer's customers, i.e., consumers. We can thus extend the dyadic SPP framework to a value chain framework, where each member of the value chain perceives value in the supplies sourced from the preceding link, but where this value perception will, at least partly, be determined by assumptions on the way value is perceived by the chain members further down the chain.

From this perspective, we can interpret the trends in retailing in their implications for the joint value creation by producers and retailers. Also retailers are confronted with the consumer trends described earlier and have to address dynamic, complex and heterogeneous consumer demands. In addition, they want to be more than just a platform for producers' attempts to

meet these demands; they want to take an active part in the process of filling them. In fulfilling this active role, they need a considerably higher degree of cooperation with food producers than earlier.

From the food producer's viewpoint, the developments in the retailing sector thus not only mean that retail purchasers' requirements have changed. They mean most notably that there is a new role for food producers in joint end user value creation together with retailers. This requires competencies not only in being able to produce those products retailers want, it also requires competencies with regard to the management of relationships between producers and retailers.

The trends described above thus have changed the ways in which a food producer can attain a competitive advantage. There are new ways of creating value in the eyes of the consumer. There are new ways of creating value in the eyes of the retailer. And there are new ways of creating value for consumers by cooperation with retailers. In the following, we will discuss in more details the competencies needed to address these challenges.

Market-related competencies in the food sector

In order to turn the opportunities which consumer and retail trends offer into competitive advantage, food producers thus need to develop certain competencies. We can here roughly distinguish between production-related and market-related competencies, where production-related competencies deal with how to produce something and market-related competencies with finding out what to produce and how to market it. Market-related competencies allow food producers to be *market-oriented*. Market orientation, often defined as "the organisationwide generation of market intelligence, pertaining to current and future customer needs, dissemination of the intelligence across departments, and organisation-wide responsiveness to it" (Kohli & Jaworski, 1990), has been identified as a major driver of competitive advantage, also in the food sector. In addition, market-related competencies have been shown to possess many of those characteristics which make competencies both rare, valuable and difficult to imitate, i.e., make them sources of sustainable competitive advantage. Thus, market-related competencies typically are socially complex, causally ambiguous, involve interaction among humans, and involve a good deal of tacit knowledge, and their effectiveness may increase over time.

An emphasis on market orientation and market-related competencies will typically also have implications for production-related competencies. Since market orientation will have its major positive impact on competitive advantage in situations where customer demands are dynamic, complex and heterogeneous (Grunert et al., 2002), being market-oriented will result in the adaptation of existing and the development of new products. A higher degree of market orientation will therefore usually result in a demand for more flexibility with regard to the production-related competencies. This goes both for flexibility in using available resources in alternative operations, typically required when products are differentiated, and for flexibility in identifying, configuring, and deploying chains of resources for new uses, typically required in the context of new product development (Sanchez, in press).

Decision-makers in food companies are clearly aware of the importance of market-related competencies, but also of the need for further development of these competencies. Table 3 shows some results from a study, in which top decision-makers in Danish food processing companies⁴ were asked to rate 39 competence elements with regard to perceived importance for attaining competitive advantage and with regard to proficiency of their own organisation (the data are reanalysed from Harmsen, Grunert & Bove, 2000). A ‘deficit index’ was computed by subtracting the proficiency rating from the importance rating, so that higher values indicate a larger discrepancy between perceived importance and own proficiency. It is clearly seen that market-related competence elements top the list, related both to obtaining market intelligence and to using it in the organisation, especially in the context of new product development. Efficiency- and production-related competence elements are further down the list. In another study (Harmsen & Jensen, in press), groups of industry leaders were confronted with information on relevant market trends and were then asked, using a reversed laddering procedure, to translate these into relevant competencies to be developed in their organisations in order to be able to meet these market trends. Of 28 different competence elements, those mentioned most frequently as necessary to meet current market trends were product development, managing customer relations, ability to adapt/flexibility, development and implementation of strategy, and market analysis competence. With the exception of strategy (which encompasses all activities of the organisation), all of these are market-related competencies.

Table 3: Food industry competence elements ranked according to discrepancy between importance and proficiency

Reanalysed from Harmsen, Grunert & Bove, 2000, see text for explanation

Deficit index	Competence elements
1.46	Following up on marketing activities
1.37	Benchmarking
1.37	Training and education of sales force
1.30	Systematic and continuous surveillance of suppliers
1.30	Company’s brand image
1.28	Marketing competence, having a marketing department
1.26	Fast dissemination of information about competitors or customers
1.20	Ability to develop products with a high degree of newness
1.19	Logistics management
1.19	Ability to develop good product concepts
1.17	Emphasize communication with selected partners (relationship management)
1.15	Systematic and continuous surveillance of competitors
1.13	Ability to reduce development time
1.11	Achieve balance between quality and costs
1.11	Improve processes and activities (BPR)
1.09	Ability to achieve cost reductions
1.07	Ability to exploit economies of scale
1.02	Use information on customers and competitors in strategic planning
1.00	Cross-functional co-operation in product development
0.98	Collecting information on consumers

⁴ Denmark is one of Europe’s major food exporting countries, with notable shares of the world market especially in dairy and pork. While the results do not generalise to the food industry in other countries, similar results in other West European countries which are major food exporters are not unlikely.

0.94	Planning and executing promotional activities with external partners
0.89	Culture that promotes the achievement of goals
0.83	Strategic planning
0.80	Analyses of customer satisfaction with own and competing products
0.80	Customer knowledge of sales force
0.78	Cross-functional co-operation on changes in products and services
0.78	Company's image
0.76	Promotional activities
0.66	Managing the sales force
0.61	Quality control systems
0.57	Co-operation with external partners in product development
0.57	Target marketing to specific customer segments
0.54	Reacting to changes in customer demands in a satisfactory way
0.52	Fast response to customer wants concerning changes in products and services
0.39	Regular meetings to discuss market developments
0.31	Co-ordination of production processes
0.15	Ability to communicate visions and values by internal marketing
0.02	Management of suppliers
-.39	Insight into changes in direct customers' needs and wants

We will in the following single out three types of competencies for further comment, since we believe them, based on the above, to be especially crucial for exploiting the mentioned consumer and retail trends. These are understanding consumers, new product development, and managing relationships.

It is clear from the above description of consumer trends that *understanding consumers* is a competence of prime importance. The development in consumer demands opens up for new possibilities for adding value and differentiating products, but since there are so many options for adding value and differentiation, a close link to understanding consumers becomes crucial. This should not be confounded with asking consumers which kind of products they want. Experience in product development shows that, when asked directly, consumers can mostly only come up with suggestions for improvements of existing products. Successful consumer understanding implies understanding the mechanisms underlying consumer food choice, the trends in the development of major purchase motives, the role of situational factors in food choice etc. Because of segment-specific and cultural differences, as discussed above, such understanding will not travel easily from one market to another, and the more a food producer aims to build a competitive advantage based on high value-added products, the more it may become necessary to concentrate on a few markets, where the necessary degree of consumer understanding can be achieved (Madsen, 1990). Also, such knowledge becomes useful for food producers only to the extent it can be turned into applications in the organisation, i.e., is fed into the company's organisational learning process. Consumer understanding is thus not a competence that can be outsourced; in a food producing company that aims at exploiting the opportunities of trends in consumer food choice, the ability to analyse and understand consumers becomes a core competence (Prahalad & Hamel, 1990).

Consumer understanding can lead to the attainment of competitive advantage to the extent it contributes to the successful *development of new products*. Developing new products is a risky and difficult matter, as witnessed by the high failure rates of new product introductions (exact figures vary considerably according to the criterion used for success and failure, but it is safe to say that they are way above 60%). Decades of research on success factors in new product development (Brown & Eisenhardt, 1995; Craig & Hart, 1992), some of which has also been done in the food industry (Harmsen & Biemans, 1995; Jensen & Harmsen, 2001; Kristensen, Østergaard & Juhl, 1998), have resulted in a considerable body of good advice with regard to the *management and organisation* of product development, and with regard to the importance of *linking the product development process to the market*, by providing market input throughout the product development process from idea generation through concept testing to the development of prototypes. In developing modern food products matching modern consumer trends, it should especially be noted that many of the unique qualities of these products, like health effects and methods of production, are invisible to the consumer and therefore have to be communicated. In these cases, the contingent development of the physical product and the communication about the product becomes an important competence element to develop. Inputs from consumer analysis, which can provide guidance for the development of both the physical product and the communication, can be a way of furthering this contingency (Søndergaard, in preparation).

Finally, *managing relationships* in the value chain is a third competence closely linked to the

trends described. This goes for both upstream and downstream links. Downstream, managing relationships with retailers by responding to retailers' call for traceability and long-term relationships, especially in the area of private label products, is a way of responding to the changes in retailers' role. Upstream, managing relationships to suppliers becomes more important whenever new ways of differentiation and value adding require changes already in the raw materials or primary supplies. Differentiation in primary production or early in the value chain requires the resulting products to be kept separate from the rest throughout the rest of the value chain. This by itself increases transaction costs; in addition, the asset specificity associated with investing in production methods and products for more specific applications and target groups will entail that the optimal governance structure in many cases changes from spot markets to long-term relationship economics (Klein & Shelanski, 1996; Rindfleisch & Heide, 1997; Williamson, 1991). While these three groups of competencies are relevant for most modern food processors, their relative weight and their way of implementation will depend on the strategy by which the producers want to exploit the consumer and retail trends. A major distinction in this context is whether the producer wants to implement an own brand strategy or whether the producer aims to become a supplier to retailers' private labels. In the first case, the producer communicates directly with the consumer and competencies in understanding consumers and being able to communicate with them become priority. In the latter case, a certain extent of consumer understanding may be obtained from the retail partner, and the retail partner will also stand for much of the communication with the consumer. In this case, managing relationships will become priority. Competence in developing new products will be important in both cases, but the implementation of this competence will differ: when the producer enters a long-term partnership with retailers, much of the product development process will be a collaborative effort, with frequent communication with the retail partner (Traill & Grunert, 1997).

Market orientation of the food chain

We have addressed changes in the relationships between producers and retailers that may result from consumer and retail trends. However, as already indicated, these trends may affect relationships in the rest of the food value chain as well.

We have argued that changes in consumer behaviour have made consumer demands more dynamic, complex and heterogeneous. We have argued that food producers can exploit these developments to their advantage by being market-oriented, by developing market-related competencies that will allow them to understand consumer demands and turn this understanding into the development of new products. However, we have not addressed the question which link in the overall food value chain we are really talking about.

In principle, consumer demands for adapted and/or differentiated products can be addressed at every link in the value chain (Grunert et al., 2002). Sometimes all the differentiation and adaptation needed can be addressed by the link immediately preceding the retailer, like when consumer demand for variety in yoghurts is addressed by mixing new flavourings into the product. Many times, however, consumer demands will require adaptations further up in the value chain, like when certain consumer segments develop a demand for meat production

with due concern for animal welfare. In these cases, the whole value chain needs to develop a certain degree of market orientation in order to exploit the changing consumer demands. The information on consumer demands has to travel throughout the value chain back to primary production, a process which can be facilitated by auxiliary institutions like marketing boards or trade associations. The resulting differentiated product from primary production has to be kept separate from other products throughout the value chain, which necessitates additional investments not only in primary production, but also in the other links of the chain. Both the requirements for a better information flow between chain members and the need for more specific assets will in many cases change the governance structure of the chain from market transactions to relational transactions. Turning the argument around, a lack of relational transactions can be a major barrier for exploiting dynamic, complex and heterogeneous consumer demands. The beef sector in Europe is a case in point: while consumers ask both for more consistent quality and for differentiation in quality levels, the product is mostly still treated as a commodity, since the structure of the beef sector (where beef production is mostly a side effect of milk production) has prevented differentiation of production and thus possibilities for developing branded, quality-differentiated products (Nielsen & Jeppesen, 2001).

The beef example also raises another important point. Beef, like most other agricultural products, is subject to biological variation. In primary production, quality will always vary. Many developments in production technology both in primary production and in the subsequent stages of the value chain have traditionally had the aim of reducing this biological variation in order to fulfil a demand of both processors and consumers for consistent quality. However, when consumer demands become more differentiated, this raises the question whether some of the natural biological variation can be profitably exploited to fill these differentiated demands. In other words, the function of the value chain becomes not only to add value, but also to match a heterogeneous raw material with a heterogeneous consumer demand. As noted, this will usually require changes in the configuration of the value chain (Grunert et al., 2002).

The market for orange juice is an interesting example here (Neves & Neves, 1999; Sonne, Bech-Larsen & Jeppesen, in preparation). Consumer demands are differentiated and differ, among other things, in preferences for sugar and acidity in the juice. The raw material, oranges, is heterogeneous and differs, among other things, in content of sugar and acidity. But most of the orange juice consumed is produced from frozen concentrate, which is traded as a commodity. Producers of the concentrate aim to reduce the heterogeneity, whereas bottlers using it try to increase it by adding sugar and other ingredients.

When food producers try to exploit the changes in consumer behaviour and retailing by developing new products with higher degrees of differentiation and added value, this will in many cases therefore have implications not only for their own competence development, but for the whole value chain. More cooperation between value chain members will in many cases be necessary to ensure the amount of segregation, traceability and information transfer required.

Conclusions

In this paper, we have attempted to show that trends on food markets favour the development of new food products with more added value and higher degrees of differentiation. Both developments in consumer demand and changes in the retail industry create opportunities for food producers and food chains to be innovative in filling these demands profitably. However, being able to exploit these opportunities requires certain sets of competencies in the food value chain. For food producers not possessing these competencies, the new developments will be a threat, not an opportunity, and they may be forced to continue to compete on price and efficiency in producing bulk products. The competencies we have identified as crucial, namely consumer understanding, new product development and relationship management, are complex and causally ambiguous, and can therefore not be built overnight. But for those food chains possessing them, they may become a source of lasting competitive advantage in international food markets.

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