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# Actual and potential development of consumer demand on the organic food market in Europe<sup>†</sup>

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# ABSTRACT

Development of demand for organic foods on three European markets (Denmark, Italy and UK) was investigated by means of quantitative analysis of household panel data and qualitative analysis of consumer life stories and shopping patterns. Potential development was investigated by means of scenario analysis undertaken by experts. Considerable differences between households underlay patterns of increasing aggregate demand at national levels, and fluctuations over time were identified at the household level. Interest in purchasing organic products on a regular basis and actual changes in shopping practices did not proceed apace. Limited availability has constituted a major barrier to increasing demand among 'regular' users. Demand on the part of 'occasional' users reflected a wider range of barriers, including lack of interest in and knowledge about production and processing and lack of trust in stakeholders and certification procedures. A likely scenario for future demand is that of continued stable expansion, dependent upon whether increasing input costs will favour organic production, whether the relative gap between organic and conventional food prices becomes smaller, whether organic products will be distributed more widely on national markets, and whether support for research and conversion of organic production systems on the part of public authorities is enhanced.

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# 1. Introduction

Global demand for organic food products has increased during the last two decades and more than doubled since 2000, Europe and North America together accounting for the vast majority of global sales [1]. However, this demand is by no means proportionately divided among national markets within the European region [2], nor is it evenly divided among consumers within any given market. Reasons why some consumers become loyal and stable buyers of organic food products over time, while others do not, have not yet been explored [3]. Nor is it clear to what extent similar factors underlie the development of similar demand patterns on different markets.

Taking its point of departure in three European organic markets at different stages of maturity, the objectives of the studies reported

The analyses of actual patterns of consumer demand for organic foods are based upon quantitative and qualitative data collected in three European countries: Denmark, Italy and the UK. The assessment of the potential development of the organic food market in Europe was undertaken by means of scenario analysis, carried out

here were: (1) to compare markets with regard to the relative stability of demand for organic foods at aggregate and household levels over time, (2) to identify similarities and differences among consumers who currently purchase organic foods with greater or lesser frequency in each of these markets and, on the basis of their life stories, to elucidate the character of factors that have influenced these demand patterns, and (3) to delineate probable scenarios regarding the potential future development of the European organic market up to the year 2015. Since the dynamics underlying past and current consumer demand provide only one side of the picture when seeking to develop and assess such scenarios, the latter task as we shall see called for the identification of a much wider range of factors likely to influence market development in different ways.

<sup>2.</sup> Materials and methods

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by teams of experts comprising research partners in the project Quality Low Input Food (QLIF) and external experts.

### 2.1. Quantitative data

Longitudinal analysis of the stability of demand patterns was based on comparative analyses of household panel data. The Danish panel (GfK Denmark) comprised 1325 households that have been active throughout the period 2001–2004. The Italian panel (Nielsen Company) comprised 5172 active households from July 2004 to June 2006, whereas the UK panel (TNS) had 8096 active households from July 2001 to June 2003 and again for the years 2005 and 2006, data for the period July 2003 to December 2004 not being available. The available data allowed us to trace the development of shopping patterns in individual households throughout a given period on each of these markets.

These data sets did not capture all food consumption in the households at issue. They comprised weekly recordings of food purchases for the same five product categories (eggs, fruits, milk, vegetables, and yoghurt) in all three countries. Purchases were measured as expenditures as well as volumes (either units or weight) and included organic as well as conventional varieties. These five product categories covered approximately 53% of the Danish organic market [4], approximately 50% of the organic market in the UK in 2005, with fruit and vegetables accounting for 35% of total organic purchases [5], whereas it was estimated that they accounted for approximately 42% of organic sales in Italy in 2006.

Approximately 20% of each panel was replaced annually, and in each case an attempt was made to ensure that national panels were representative. Although some slight deviations had been identified earlier [6], these panels were considered to be approximately representative. However, the available data in Italy mainly reflected supermarket purchases, such that some degree of underestimation of non-packed groceries sold through specialized shops and outdoor markets must be assumed.

### 2.2. Qualitative data

The development of personal and household food practices over time were explored in depth by means of recorded personal interviews with an adult representative of 54 households (18 households in each country), supplemented in each case by participant observation of a shopping trip followed by a further interview. With a view to cross-validation and triangulation of data, additional interviews were undertaken with a close family member, and shopping trips were video-recorded with the aid of an inconspicuous device. The interviews focused on the development of conceptions, preferences and practices with regard to organic foods, and on narrative accounts of the character of events or persons that had influenced decisions to purchase or not to purchase these products. Gardner's [7,8] account of the processes whereby changes of mind and habits occur over time provided a conceptual framework for the design of the interview schedule, coding guide and thematic analysis. Dick and Basu's [9] account of loyalty and substitution strategies provided a framework within which observations of shopping practices were analysed.

Inclusion criteria for recruitment of all potential subjects were: age between 25 and 69 years, exclusive or shared responsibility for household shopping, and involvement in food quality, as measured by a cut off point on a standardized involvement scale. Based on available quantitative analysis [10], a quota sampling method was developed with reference to place of residence, gender, household type, usual choice of shopping venue, and the frequency with which organic food products were currently purchased. Half of the recruited subjects in each country were resident in the capital city

or another major city and half were resident in an average-sized town, defined in accordance with national demographic data.

Men comprised approximately one third of recruited subjects in the national samples, which in each case also included at least four of the following household types: single-person households, young adults (25–35 years) without children, adult(s) with at least one child/children less than 11 years old, and older couples (55–65 years). The percentage of subjects who usually shopped in supermarkets or other multiples (as compared with specialized shops, outdoor markets or other venues) was weighted to reflect known shopping patterns in each country. This percentage was highest in Denmark (85%) and lowest in Italy (50%).

Each national sample comprised three user groups, defined as follows:

Regular users (N=8): reported purchasing an organic product within one or more of the following product categories one or more times per week: bread, fruit/vegetables, dairy products or eggs.

Occasional users (N=6): reported purchasing one or more of the above products less often than once a week and did not buy any of these products as often as once a week.

*Non-users* (*N* = 4): reported that they never bought an organic variant of any of these products.

Appropriate methods of making initial contact with potential subjects were adapted to local conditions, but all selected subjects were screened by means of a standardized, structured questionnaire. Data were collected during the period December 2006–August 2007. Additional data collection, designed to fill the quota for subjects who usually shop in supermarkets, was undertaken in UK in 2008. Interviews with family members and videos of shopping trips were found to serve the intended purpose of providing cross-validation. All interviews and shopping trips were audio-recorded and full transcriptions were subsequently made.

A standardized codebook was developed jointly by the research teams, following the procedure and logic of team-based codebook development with reference to qualitative data [11,12]. Coding was subsequently undertaken with the aid of the NVIVO 7 software programme. A thematic methodology was pursued in the analyses of national data in accordance with guidelines, and comparative analysis subsequently based upon reports of national findings [13–16].

# 2.3. Scenario analysis

Scenario analysis is usually used to identify and delineate a set of possible futures, each of which is plausible, but none of which is assured [17], the purpose being to visualize, describe and evaluate likely reactions of a complex system in a fashion as consistent and exhaustive as possible. The standard so-called 'managerial' approach to this task was adopted in the present instance, whereby analysis is based on the subjective assessments and judgements of a selected group of experts [18,19]. The reference starting point of this analysis was the current situation of the organic food market in Europe. The analysis proceeded deductively in three steps during the course of 2008.

Firstly, the medium term time frame (2015) and spatial frameworks (Europe at large) were defined and 12 experts on the organic food market were selected, using the multi-stakeholder selection process [20]. Secondly, these experts were involved in knowledge generation, initially on an individual basis, then as participants in a group. Each expert was invited to respond individually to a semi-structured questionnaire, administered electronically and designed to generate knowledge about driving forces in the current market. Questions were structured by the principles of STEEP analysis, referring to social, technological, economic, ecological and political factors. Respondents were asked to assess the uncertainty and impact of each of the factors identified using Likert-type scales. For uncertainty, the scale ranged from 0 (no uncertainty) to 5 (very high

uncertainty), whereas impact was measured on a range from 1 (very low) to 5 (very high). All factors identified were subsequently subjected to content analysis by two independent coders with a view to avoiding any duplication, and subsequently classified as *uncertainties* (driving forces *strictu sensu*) or *predetermined trends* on the basis of scores assigned. During a 2-day workshop, the team of experts sought to reduce complexity by clustering the wide range of factors identified, with a view to generating plausible scenarios. In this process, Jugermann's suggestion to use a forward-looking approach in generating scenarios and a backward-inference approach in building causal representations of alternative futures and seeking to sketch out plausible storylines was followed [21]. In a third and final step, the scenarios were carefully examined and evaluated by these experts, influence diagrams were collectively generated, and narrative accounts of the story lines at issue were formulated.

During each phase of this process, data were carefully recorded and structured. The scenario workshop was managed by a professional facilitator. Three experts failed to attend the workshop and one left early due to urgent business problems. Of the eight remaining experts (5 men and 3 women), six were academic researchers and two represented industry (the organic sector). Their average age was 47.6 years, and mean professional experience in the organic food market was 16.7 years.

#### 3. Results and discussion

# 3.1. Actual development of demand

The analysis of panel data reveals some marked differences between the levels of consumer demand on these three markets. It also reveals some striking points of similarity between consumer segments, irrespective of the particular market at issue [22]. Only 17% of the Danish consumers do not purchase any organic food products ('non-users'), whereas this segment is markedly larger in both Italy (37%) and the UK (39%). Although more than 80% of the Danish households buy some organic products and more than 60% of Italian and British households do so, demand is very far from being distributed evenly across these consumers.

In all three countries, at least half of all households (50–58%) spent no more than a minute portion of their food budgets (1–5%) on organic products, whereas a relatively small minority of households spent on average between one quarter and one third of their food budgets on these products. For the most recent year for which data are available, the latter segment comprised 25% of Danish households, 13% of Italian households, but only 6% of British households. It is demand from this segment (of 'regular' or 'heavy' users) that also accounts for the majority of organic sales on all three markets.

Demand from this segment of 'regular' users accounted for 82% of all sales of the products investigated in both Denmark and Italy, and for 60% of all such sales in the UK. The purchasing volume of these 'regular' users clearly underlines the importance of this consumer segment on all three markets. In contrast, households that spent least on organic products (1% of their food budgets on average), accounted for no more than 4–6% of total organic sales in Denmark and Italy. The aggregate demand from the latter segment, however, does play a more significant role on the UK market, insofar as these consumers together accounted for 25% of all sales of the products investigated.

On examining the development of purchasing patterns over time, it transpires that the relative size of these segments on each market has been relatively stable during the period of investigation. The level of expenditure on organic products, however, was far from stable at the household level. Two thirds of all Danish and British households increased or decreased their level of expenditure over

time. Demand at the household level was more stable in Italy (including the segment classified as 'non-users' at the start of the period at issue), where half of all households increased or decreased their expenditure on organic products over time. It emerges that 'regular' users, who spent a relatively greater proportion of the food budgets on organic food, were the most stable households among organic purchasers in all three countries. The qualitative data throw considerably more light on differences between 'regular', 'occasional' and 'non-users', as well as similarities across these markets.

# 3.1.1. Regular users

The life stories of consumers in all three markets reveal a similar pattern. Biographically speaking, those who were currently 'regular' users of organic products tended to have developed a strong interest in food quality and healthy eating habits prior to the development of their interest in organic foods [16]. Moreover, the development of a positive mindset with respect to organic foods tended to have been in place before any marked changes in shopping practices with respect to regular purchases of organic products actually occurred. Their stories reveal that a change of mind with respect to organic products and a change of routine practices with respect to purchasing and consuming them did not follow apace.

Changes of mind take their point of departure in an interest in health, focusing on the absence of unwanted substances (such as pesticides, residues and additives) in organic products, followed by a more or less gradual development of awareness of environmental and ethical benefits associated with organic production. Changes in shopping practices, however, directly reflect market developments, particularly with regard to availability, improvements in product quality, the depth and range of assortment and the reduction of relative price differences between organic and conventional product variants

For the most part, 'regular' users did not have extensive knowledge about food production or processing. They did tend to be information seekers, however, particularly regarding product quality, origins and processing, as well as ethical, social and environmental impacts of production. In Italy, a need for information was often reflected in tendencies to seek advice from shopkeepers, whereas information from mass media was more often mentioned by British and Danish consumers. In all three countries, however, 'regular' users tended to constantly monitor the market, comparing product assortment, quality and prices, and purposefully choose particular shopping venues with a view to maximizing their access to organic food products. In some cases, particular chains were avoided on the grounds that they were too expensive or because they were suspected of acting on the basis of 'profiteering' motives rather than in accordance with the ideals of organic production.

Most 'regular' users had gradually expanded the range of product groups within which organic variants were selected over a relatively long period of time. Some proclaimed the goal of purchasing only organic variants of all foods as an ideal yet to be attained, whereas others had developed a careful prioritization of the food groups within which they currently bought organic variants. Both sub-groups maintain, however, that there is a limit on the price premiums they find acceptable. These variable limits were also observed in practice during accompanied shopping trips, just as dissatisfaction with product quality was observed as a reason for substituting an organic with a conventional variant. Substitution also occurred for the reason that 'local', 'free range' or 'fair trade' products were perceived as being acceptable substitutes for organic variants. The most common reason for choosing conventional variants among 'regular' users, however, was the poor (or non-existent) assortment of organic variants in several food categories. This was evident for example among one sub-group of Danish 'regular' users who only selected organic products from

the limited range of organic food categories available to them in discount stores.

#### 3.1.2. Occasional and non-users

'Occasional' users, as indicated by the results of quantitative analysis, constituted a very large proportion of the population on all three markets. It was therefore not surprising to discover that they constituted the most diverse of the consumer segments under consideration. Given a small sample size and a tendency to distinguish sub-groups in all analyses of national data, only a few generalizations with regard to common characteristics can be made. Generally, both 'occasional' and 'non-users' have very limited knowledge about organic food products, production or processing and do not actively seek further information. Some 'occasional' users expressed an interest in healthy eating habits, food quality, food origins, environmental sustainability, animal welfare or other value-based benefits, which 'regular' users tended to associate with organic production. Within limits, they were also willing to consider the possibility of paying a higher price for particular organic products. Others more closely resembled 'non-users' in exhibiting markedly less or no interest in these issues, and were familiar with organic products mainly because these were displayed in usual shopping venues.

Some 'occasional' users prioritized the purchase of one or two organic products due to a particular satisfaction with quality and taste, whereas others made occasional purchases of an organic product that attracted attention by reason of being new or reasonably priced. 'Occasional' users tended to be price sensitive, to be markedly more oriented towards traditional eating habits, convenience product ingredients and convenient shopping venues, than 'regular' users. Scepticism about the trustworthiness of organic labels and confusion about differences between organic and other products was also found.

'Non-users' tended to clearly express a general resistance to the idea of paying higher prices for organic products, and for the most part did not perceive any particular rewards or benefits as accruing to organic products or production. Moreover, they tended to distrust organic farmers and growers. Their distrust extended to certification procedures, particularly among Italians, and to some major retail chains, particularly in the UK. In all three countries, the distrust also extended to consumers of organic food, who were sometimes seen as constituting a strange or deviant group, or as having been duped into paying premium prices by a fad of the food industry.

On this basis it can be said that quality, price, availability and assortment constitute barriers to demand at the household level and that market factors also appear to constitute the main barriers to increasing future demand in all user groups. Lack of trust in other stakeholders in the organic market, or lack of interest in their goals, however, also constitutes a barrier that cannot be overcome merely by means of traditional marketing measures.

## 3.2. Potential market development

Relevant variables for the scenario analysis were provided by 129 factors identified by experts on the basis of semi-structured interviews. A first factor reduction was undertaken by two independent coders on the basis of descriptions and assessments of uncertainty and impact provided by the experts, with a view to grouping similar factors under a common label. Thirty-eight of these factors emerged as being uncertain (had been scored: medium to very high) and were listed as *uncertainties*. Ninety-one had received low scores and were listed as *predetermined trends*. The full list of uncertainties and trends was circulated among the experts one week before the workshop took place.

During the workshop, the experts were asked to cluster these factors into groups that shared a higher-level concept. Consensus was reached by group discussion, yielding 12 labelled clusters, each of which was deemed to have a high level of internal consistency and to be clearly differentiated from others. These were: (1) communication of organic distinctiveness, (2) labelling, (3) global socio-economic conditions and resource availability, (4) organic substitutes demand/organic distinctiveness, (5) awareness and consumer recognition of organic products, (6) availability of organic products, (7) commitment and co-operation in the organic chain, (8) relative competitiveness of organic and conventional farming, (9) relative sustainability, (10) policy favourability, (11) food scandals in both organic and conventional farming (safety and integrity), and (12) quality aspects (relative).

With the aim of determining key areas of critical uncertainty that had a great impact on the organic market, the group of experts was asked to rank these clusters by both criteria, taking into account the original ratings of the clustered factors. Two clusters clearly emerged as having the relatively highest levels of uncertainty and, at the same time, the relatively greatest level of impact on the organic market. These were (1) global socio-economic conditions and resource availability and (2) relative competitiveness of organic and conventional farming. By assigning polar outcomes to each of these clustered factors, they formed the reference grid for the development of four contrasting scenarios (Fig. 1). Having differentiated four reference scenarios, the experts were asked to develop a consistent narrative account of each scenario by applying backward inferences and causal reasoning, indicating paths of influence in the form of graphic diagrams. Only factors that can promote a stable growth scenario are briefly outlined here. (For further details, see

A general positive economic environment – even in times of global crisis – tends to support the development of the organic market, especially by increasing the number of 'new' occasional users of organic food. Even in times of crisis, however, consumers are seen as being willing to spend more on food as they become more involved with health issues and tend to seek a reconnection with food as a source of health and a 'slow' and happier quality of life. Regular users will tend to increase their spending because for them organic foods are not perceived as 'luxury' goods, but simply as ordinary food of a good and 'safe' kind.

Food prices are seen as tending to increase substantially, but the price differential between organic and conventional food is also seen as tending to fall. Organic prices are envisaged as growing at a slower rate due to public and private investment in the sector, a positive policy environment, changes in input prices that favour organic farming, and economies of scale arising within the sector.

Consumer demands with reference to quality and safety of products are envisaged as being met, minimizing the risk of organic food scandals. Main market substitutes for organic food (ethical, fair trade, local and 'slow') tend to merge with the organic concept as they increasingly feature organic certification.

The organic sector exhibits enhanced integrity and enforcement of inspection and certification procedures. As a consequence, the risk of organic food scandals is minimized. Increasing input costs, which favour organic as compared to conventional production, will make conventional 'low-input' foods (e.g., from integrated farming) less appealing due to a reduction in price differentials.

Public authorities are envisaged as increasing their support for the organic sector, and synergy is taking place in research and development between public and private sectors. Finally, policy support for organic farming is envisaged as mainly taking the form of rural-development measures, whereas direct economic support is mainly given for conversion rather than maintenance, thus minimizing conversion risks.

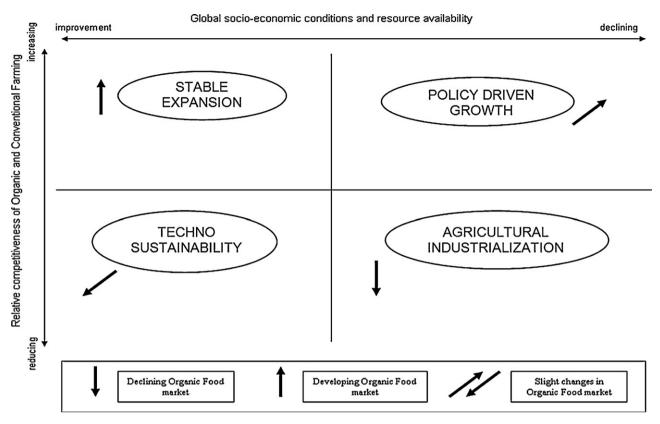


Fig. 1. Reference grid for development of four contrasting scenarios (based on own data).

Our study confirms observed trends towards increasing demand for organic foods at the aggregate level of national European markets, and strongly indicates the potential for increasing demand in future. Despite cultural and social differences between organic markets at different levels of maturity, surprising uniformity was identified within similar consumer segments on each market. Barriers to demand among 'regular' and some 'occasional' users are attributed to market developments, and further development of the market is also seen as providing the key to stable and increasing demand for organic products among consumers. Differentiated strategies are called for with respect to 'regular' users compared with 'occasional' or 'non-users' within the European region.

It is not clear to what extent 'occasional' consumers will gradually become 'regular' users in the future, as they have done in the past. If the content of the 'organic concept' remains unchanged, it would seem likely that many 'occasional' users will not change their current status. At the same time, the need to develop and strengthen the 'organic concept' is one of the main concerns among those who are currently 'regular' consumers.

Brand switching behaviour occurs very frequently in the organic market, since very few well-established organic brands exist. Organic consumers – both 'regular' and 'occasional' – appear to want stronger product-consumer relationships. In the organic market, however, only few national logos (e.g., The Swiss Bud, the Danish logo), few private certification labels (e.g., *Demeter*) and few private brands (e.g., *Rapunzel*) currently provide enough equity to foster loyalty.

Although changes in the market and market environment may also affect some 'non-users', followers never exhibit the same behaviour as innovators or early adopters, even if their attitudes tend to evolve in a similar way. The barrier of distrust, moreover, cannot be removed by marketing measures as such.

One way to achieve market development and increase loyalty is to enhance the 'value' content of organic food. This could be

achieved by adding extra 'meanings' to the concept of organic food, such as that of local origin (insofar as local origin minimizes transportation and pollution), ethical values (such as improved animal welfare, fair prices to producers and consumers, farming based on the principle of care), careful and minimal processing (particularly regarding the use of traditional methods and limited use of additives), and additional benefits for human health and quality of life (thus far precluded as claims for organic foods). The reconciliation of organic values with other potentially relevant values will tend to reduce product substitution and increase loyalty and trust.

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