

The Food Economy: Global Issues and Challenges

Management summary

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Final Version

‘The Food Economy: Global Issues and Challenges’ conference was held on 18-19 October 2007. It was organized by the Netherlands Ministry of Agriculture, Nature Management and Food Quality in collaboration with the Agricultural Economics Research Institute (LEI) and the OECD. The aim of the conference was to identify the challenges that the changing global food economy presents for industry, society and governments.

The conference was structured so as to identify major changes that are underway in the food economy and to explore the emerging issues and paradoxes that are often linked to changing lifestyles and societal expectations.

The conference was attended by 110 persons from government bodies, academia, non-governmental organizations, the food industry and the retail sector from both OECD and non-OECD-countries.

The conference focused on three themes:

1. Value added creation and supply chain management in a globalizing world
2. Towards a new food policy: supply chain developments and interactive policy making
3. Transparency and social responsibility in an international context.

The presentations on these themes were complemented by general introductions and three special topics, namely the impact of biofuel production on food markets, high tech innovation programmes, and sustainability in the livestock sector.

Introduction

The director of the LEI, Jan Blom, gave an overview of the main current and future developments within the food economy. As a result of population and income growth, the share of developing countries in the world economy will grow continuously in the decades to come. This growth will lead to a sharp rise in the demand for luxury food items (meat, dairy, fruit and vegetables) rather than basic food items (cereals and rice), and this will have major implications for the demand for agricultural land. Throughout the world, the rise in consumer demand for luxury food items is coinciding with a rise in the demand for convenience, wellness, quality and variety. The demand for food quality and convenience is reinforced by changes in demographics (ageing), household composition, labour participation, *et cetera*.

International trade and investments in food will continue to grow with consumer demand, and will receive an additional impetus from the trade liberalization that is likely to unfold with a final agreement in the Doha Round. International trade is shifting to luxury food items, and internalization strategies other than trade – for example, foreign direct investments (FDI) – are becoming increasingly important.

The production of biofuels and other bio-based products is increasing rapidly, largely because the USA and the EU are stimulating the production of biofuels. In the USA, the recent boom in ethanol production stems from legal and liability requirements to have a minimum level of oxygen in petrol. Ethanol is merely used as an additive (Hertel 2007); at the moment, it is not a commercially viable substitute for petrol. At current ethanol and corn prices, further expansion of ethanol production is not likely. In the long run, biofuel will become commercially viable only if second- and third-generation crops and technologies become more efficient. Biofuel production causes substantial shifts in agricultural production, land use, trade and prices. There are important research questions with respect to biofuel production. The impact of biofuel production on food security in developing countries and on greenhouse gas emissions are among the most important policy questions. In order to get more insight into the quantitative effects of biofuel policies, there is a need for more detailed data (Hertel 2007).

Agriculture is one of the main contributors to the deterioration of the world's environment (Steinfeld 2007): it contributes to climate change, soil deterioration, water depletion and the loss of biodiversity, and may in fact endanger future food production in developing countries. It is a major challenge to make agricultural production sustainable, given the growth in food demand in developing countries. Changes in agricultural management and the pricing of externalities may contribute significantly to the sustainability challenge.

In this context, food supply chains face the challenge of reducing costs and prices while meeting consumer demand for variety, quality and convenience (Jacobs 2007). For this reason, the future supply chain will increasingly produce on demand, thereby reducing lead times and inventories throughout the supply chain. Costs may be reduced further through the flexible reallocation of inventories during the production and distribution process. The reorganization of the supply chain will be made possible by improvements in information technology and supply chain coordination. Food companies will meet consumer demand by involving consumers in the product development process and through the growth of the Internet as a distribution channel. The latter will enable retailers to tailor food supply and distribution services to individual consumers. The last mile will undergo a drastic reorganization in the decades to come, with possibly profound consequences for congestion in urban areas. Further study is required to assess the impact of these developments.

Globalization is also a challenge for small and medium enterprises (SMEs), as the global economy can now reach any city or rural area in the world. In theory, farmers and food processors in any part of the world can replace their counterparts in any other part of the world. However, this also provides an opportunity for SMEs, especially because production processes have become modular (Blom 2007; De Noronha Vaz et al. 2006). The challenge faced by SMEs is to be competitive in just a tiny part of the supply chain. In order to remain competitive, SMEs have to innovate continuously. Because SMEs have few resources, it is important that they embed their innovation process in a network of resources. Governments should ask themselves whether the public research infrastructure is able to meet the needs of SMEs in this respect.

Food Economy Research at the OECD

Over the last 15 years, the OECD has developed a small research agenda on the food economy. The main research themes are the balance of power in the food supply chain and the role of private

standards in the shaping of the agro-food system. In a recent study, the OECD found that there is no evidence of the abuse of market power in the meat supply chain of four case countries, namely Canada, the Czech Republic, Japan and the Netherlands. The OECD's Competition Policy Committee argues that there is no need for special monopsony legislation to deal with the alleged buyer power of retailers. With respect to private standards, the OECD has addressed, for example, the impact on market access for small producers in developing countries. Exporters and governments play an important role in implementing private standards in developing countries. The OECD has also dealt with the relation between public and private standards.

Globalization and market structure

As pointed out by Arjen van Witteloostuijn, globalization is a misunderstood concept. This is because there are many types of globalization, such as cultural, institutional and economic globalization. Developments in these types of globalization may but do not necessarily concur. Moreover, with respect to economic globalization, there is major misunderstanding caused by the fact that media, observers and politicians stress changes in the 'competitive advantage' of nation-states. However, comparative advantage is the relevant concept for nation-states.

Van Witteloostuijn stressed that market liberalization processes are likely to influence future market structures throughout the world. Two observations matter when deriving hypotheses with respect to future market structures: (1) food and agricultural markets are still highly protected, implying that the impact of market liberalization on market structures may be large, and (2) concentration within food processing tends to be low. There is scope for both large multinationals and SMEs. Multinationals are likely to reap economies of scale and scope, to grow and to concentrate when markets are opened up. On the demand side, globalization will increase taste convergence *and* demand for variety. The growing demand for variety will benefit both existing and new SMEs. Van Witteloostuijn stated that he expects that, on net, SMEs rather than multinationals will benefit from globalization. The US beer market is developing in this direction.

Market structures in food processing will be shaped by investment and trade patterns. Investments may take many forms, for example mergers, acquisitions, strategic alliances and greenfield investments. To analyse the patterns that are observed in the food industry, detailed and fine-grained information is needed for different markets and segments of the food industry.

Value added creation and supply chain management

Food processors and retailers address trends in consumer demand by meeting the demand for such consumer trends as wellness (health and diet), convenience (ready-to-eat meals and other food solutions) and pleasure. Consumers also demand animal and environment friendly and socially responsible products. Food retailers take account of this demand in their sourcing strategies and in their communication strategies towards consumers. Information provision is becoming more important, because the share of developing countries in the world's food supply will continue to grow, as a consequence of which also the distance between suppliers and the western consumer will continue to grow. Food safety issues are addressed in the Global Food Safety Initiative, which was established to promote an international standard for the safety certification of food. The representative of AHOLD indicated that food safety is not part of the company's product differentiation strategy. Food safety mechanisms are used to minimize risks as far as possible. However, the implementation of traceability remains

difficult, as traceability involves substantial learning. It should be noted that while food processors and retailers manage their processing and sourcing activities globally, they focus their marketing strategies on local consumer preferences (Korver 2007).

The workshop on supply chain management arrived at the following conclusions:

Mass production versus mass individualization. Products will be increasingly customized to consumer demands. However, this does not imply that mass production is outmoded. Concentration in food processing will continue. Food components will be produced on a mass scale. Moreover, retail demand for private brands will remain important in the decade to come. This implies a demand for scale, low costs and uniformity. On the other hand, differentiation in end products will be larger than ever. In this respect, it is important to make a distinction between customers and consumers, and to make clear which level in the supply chain is being analysed. Agriculture has a long way to go before it is able to switch to mass individualization. The organization of the food industry is also influenced by the digitalization of the economy. Digitalization may enable the organization of new platforms in the supply chain, for example a new type of cooperative. Digitalization also plays a role in rearranging the equilibria between supply and demand, and may give rise to new business concepts.

ICT and buying patterns. The Internet is likely to become a more important distribution channel in the decades to come. This holds in particular for repeat purchases (milk, cola, potatoes), and less so for fresh commodities. Food service is also likely to become more important in the coming decades. This may lead to growth in the number of food service outlets at the cost of the number of supermarkets. However, supermarkets are increasingly providing food service by introducing salad bars and by selling an increasing variety of ready-to-eat meals.

Firm size and innovativeness. In order to discuss the relative advantage of large enterprises versus SMEs in terms of product differentiation, it is important to make a distinction between types of product differentiation. Large companies have an advantage over SMEs when it comes to technology driven quality aspects, while SMEs perform better than large corporations as regards gourmet types of quality and variety. The biggest asset that SMEs have is flexibility.

Value added creation and supply chain coordination. With respect to supply chain coordination, a distinction is made between cost efficiency and value added creation. Supply chain coordination succeeds as far as the former is concerned, but not the latter. Food retail and food processors are not able to agree upon the division of the value to be generated. This is the main reason why category management has failed. Possibly, category management works fine in simple supply chains such as the supply chain for fresh produce, where logistics and packaging are the only elements to consider.

Transparency and social responsibility in an international context

Both public and private actors increasingly address non-trade concerns in their international policies and strategies. Public and private standards play an important role in this. Irma Keijzer (Netherlands Ministry of Economic Affairs) stressed that governments must address non-trade concerns in one way or the other in order to uphold the support for free trade. Governments can enhance sustainability through international treaties and agreements, the organization of round tables on corporate social responsibility (CSR) and the incorporation of

CSR requirements in, for example, procurement and subsidy criteria. Sander van Bennekom (Oxfam Novib) stressed that private standards are not fair. Private standards would be fair *if* they met the interests of the developing world. One of the key problems with respect to private standards is that actors in developed countries set those standards and third world suppliers have no influence on them. Current standards are OECD centric rather than the outcome of negotiations between producers and western retailers. This holds for trade rules in general, according to van Bennekom.

In the subsequent workshop discussion, the participants shared their worry that actors in OECD countries have a predominant influence on the public and private standards that are set worldwide, and that this has consequences for public policies in OECD countries as well as the international policy context. Some people proposed that standards should be made country specific. There is also discussion on the question whether the WTO applies to private standards, because for example standards are set by retail coalitions rather than individual retailers.¹

The conference also addressed two empirical studies that analysed the performance of private standards. The first study compared the impact of private labels on consumer buying behaviour with the impact of three other information mechanisms, namely CSR reports, consumer guides and traditional marketing. The comparison was carried out for four product categories, that is, fish, cut flowers, textiles and cosmetics. Product labelling as endorsed by retail organizations is primarily driven by reputation building. Labelling plays an important role in differentiating retailers from one another, but not in differentiating specific products from one another. In fact, most certification activities have a business-to-business nature rather than the business-to-consumer nature analysed by Barbara Fliess. The impact of all four information mechanisms on consumer demand is limited, because for example information processing by consumers requires education and time. Moreover, there is a large gap between society's demand for social responsibility and consumer behaviour. Fliess suggested that the provision of information on non-trade concerns to consumers may be improved. The information mechanisms chosen differ from one product category to another. Apart from some obvious reasons, there is no explanation for the differences found. Further research is required to find out more exactly how information provision may influence consumer behaviour.

The second study concerned the establishment of private standard schemes for food safety in developing countries (Pepijn van de Port). According to EC Regulation 178/2002, food companies must have in place all the systems that are necessary to guarantee food safety. The EU and its Member States monitor whether this is the case in the EU. The EU expects exporting countries to have equivalent food safety requirements and monitoring mechanisms for food of animal origin. More in particular, the EU expects governments of exporting countries to accredit the certification bodies in their countries. This a major challenge for developing countries. In Indonesia, for instance, 80 per cent of the shrimp production is fully HACCP compliant, but the other 20 per cent is not. Because the Indonesian government is not able to control this 20 per cent, and for political reasons is unwilling to exclude it, it is likely that the import of Indonesian shrimps will soon be banned by the EU.

In the last decade, various private food safety standards have been developed by food operators in order to meet legal requirements. Public bodies reject responsibility for privately

¹ Non-governmental standard setting bodies fall under the SPS + BT WTO agreement.

developed standards. However, one should recognize that private standards depend on a system of public standards and requirements set up by international and national government bodies. One might say that, to some extent, private standards are privatized public standards.

Towards a new food policy

Elements of a new food policy were discussed throughout the conference. Some presenters discussed such new elements of food policy as innovation policy (Bruce Lee), obesity (Laure Souliac), regional products (Christine Avelin) and food security (Rainer Giessübel). Others discussed new frameworks for agricultural policy (Tulay Yildirim) or new ways of addressing supply chain issues (Janice Vansicle).

- The Australian government is stimulating the development and introduction of high tech innovations by setting up substantive innovation programmes for important and promising economic sectors. The food supply chain is one of these sectors. The research programmes are meant to promote the competitiveness of the Australian food supply chain and to improve the quality of life by, for example, investing in healthy food. The innovation programmes involve collaboration between research institutes, businesses and governments. Examples are breed engineering (beef and aquaculture), the development of biosensors (wine) and consumer research (GMOs).
- The French government is encouraging the production and consumption of high quality food by designating the quality and origin of regional food products. The policy is aimed at products that are linked to a certain region (*terroir*) and have traditional characteristics and a strong identity, whose production is limited and requires traditional know-how, and that do not have a close substitute. Examples of designated labels are Appellation d'Origine Contrôlée, Label Rouge and Agriculture Biologique. Government support for regional products is deemed necessary to deal with the competition from globally operating firms. The government does not provide financial aid, but supports the development of labels and the organization of regional networks. The workshop participants agreed that this is a good approach.
- The French government is attempting to combat obesity through information provision and education. The Ministry of Agriculture and Fisheries developed a programme together with other ministries, supply chain actors and research organizations. The programme comprises information campaigns, surveillance programmes, research into consumption behaviour, measures targeted at specific groups and an evaluation mechanism. The first evaluation results are due in December 2007.
- The German government has focused its current food policy on a limited number of consumer-related issues. Rainer Giessübel stressed his view that consumer and health policies and sustainability issues throughout the entire food supply chain should be the core elements of a food policy. Food policy should be aligned to the international policy framework laid down in the standards, rules and guidelines of the WTO, the Codex Alimentarius and the EU. Since the turn of the new millennium, the German Federal Ministry of Food, Agriculture and Consumer Protection has focused its policies on food security. The integration of policy areas has been achieved by integrating agricultural policy, nutrition policy and consumer policy in one ministry. The Ministry has also taken initiatives to improve cooperation with regional governments and the supply chain.

- In order to deal with the challenges resulting from technological change, the emergence of low-cost competitors, changes in consumer demand and the increasing use of non-tariff barriers, the Canadian government introduced a new Agricultural Policy Framework in 2002 (Tulay Yildirim). The framework rests on five pillars: food safety and quality; the environments; small farm assistance; science and innovation; and business risk management. The policies pursued with respect to these five issues involve technical farm assistance, the development of voluntary and mandatory standards, research, education, network formation, and income stabilization and insurance programmes.
- The Canadian government is stimulating the development of Value Chain Round Tables in order to identify the challenges faced by the food supply chain and to promote their solution (Janice Vansickle). At these round tables, which are subsidized by the Canadian government, the key players in a certain supply chain discuss the issues they face. The round tables strengthen supply chain relationships, although time is needed to overcome differences in perspectives resulting from differences in interests.

The workshop on food policy discussed the following.

Issues to be covered by future food policies. A wide range of issues need to be covered by a future food policy, particularly such consumer and social issues as food security, food safety, the environment, animal welfare, health, and fair trade conditions. However, the workshop participants argued that other issues also need to be addressed, such as producer issues.

The importance of policy coherence was stressed during the discussion. Policies increasingly address a range of issues that affect a range of sectors. Policy coherence can be promoted by the development of a holistic food law. However, it might be wise to focus the attention of policy makers and to develop programmes for specific issues one by one. Germany, for instance, focuses on food safety, organic production and health. Holistic laws and holistic programmes are unlikely to work because there is a lack of focus.

At this stage, there is little experience with respect to multi-sectoral and multi-topic approaches. In the years to come, it may be good to follow these approaches and to see how the cooperation with other ministries works out. As long as there are different policies for different issues, it is important to address policy coherence and to decide who is responsible for the respective issues: the government (and if so, which ministry or level of government) or private parties.

Ethics. Ethical considerations will play a key role in the political debate on food production and consumption in the coming decade. There is even a call to introduce ethics and ethical criteria in international policy platforms on, for example, trade. The discussants pointed out some problems related to debating ethical arguments. For example, how do you ‘organize’ a debate on ethics? How does one come to a position based on ethical arguments? And how do you debate, listen to each other and accept the conclusions arrived at? Society’s poor performance in dealing with ethical issues may be a result of the lack of scientific evidence on ethics.

Such stakeholders as businesses, non-governmental organizations (NGOs) and consumers are playing an ever larger role in bringing ethical considerations forward and dealing with them. In France, for instance, the ethics of GMO production is a political issue brought forward by NGOs and consumer reactions. There are several examples of initiatives taken by businesses

or businesses and NGOs to deal with ethical considerations. Governments are slow in taking up ethical considerations; businesses are faster and more flexible at doing so. However, according to the participants, the government has a role as gatekeeper: there remain 'sensitive' issues.

The policy mix. Governments are increasingly looking for instruments other than regulation and agricultural subsidies. There is a shift in the policy mix towards information provision, education and pricing externalities. However, just like such classic policy instruments as regulation, the new policy instruments do not necessarily generate the desired policy outcomes. Both producer and consumer behaviour may be very inflexible. One of the discussants pointed out that the impact of information provision and education can be observed only in the long run. The effectiveness of pricing strategies can very well be low as a result of the low price elasticity of demand for food. For this reason, the effectiveness of fat, sugar and meat taxes is likely to be low. Moreover, in contrast to cigarettes, fat and sugar taxes are unfair in the sense that you also tax people who are not fat. There is no unhealthy food; it is certain food patterns and lifestyles that are unhealthy. Moreover, there are other ways to influence food prices. Sugar and dairy are still subsidized in many OECD countries.

Conclusions

The conference president, Gerard Viatte, drew the following overall conclusions from the proceedings.

A. The conference validated the holistic food economy approach because of:

- 1) the impact of globalization on the whole system (food supply chain) and not just one level of the supply chain;
- 2) changing relations among the various public and private actors of the supply chain;
- 3) new societal concerns as major drivers of the new food economy (health, environment);
- 4) the position of developing countries.

B. As a consequence, it is justified to think in terms of food policy in order to:

- 1) improve the consistency among policy measures;
- 2) optimize the linkages with other relevant policies such as competition policy.

In order to make these approaches more operational and more concrete, the following recommendations can be made:

- 1) more research and education – in particular, more multidisciplinary and action- and policy-oriented research and education – to better inform the various actors, including consumers, and to help them in their decision making;
- 2) more collaborative efforts among the various actors (e.g. through round tables);
- 3) more attention to policy instruments (e.g. internalization), also to specific programmes (nutrition);
- 4) more attention to changes in the institutional framework (e.g. cooperation between ministries).

On behalf of the LEI, Jan Blom identified three elements warranting further attention and study:

- Interactive policy making
- The cultural-historical background of food consumption and production
- Research issues
 - o New institutional arrangements
 - o Consumer trends
 - o Consumer and micro-level data

On behalf of the OECD, Loek Boonekamp identified the following issues:

- as the legal status of private standards are a sensitive issue in the WTO, the OECD may be used as a platform to discuss how private standards should be dealt with;
- public-private partnerships (what are the areas of application, how are responsibilities distributed over public and private parties?);
- globalization and climate (what is the impact on relative prices?);
- food policy (how to enhance consistency and coherence, in particular for food, nutrition and health?).