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Food scenarios 2025: Drivers of change between global and regional

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ABSTRACT

This article presents the results of a future study of the food sector. Two scenarios have been developed using a combination of: 1) a summary of the relevant scientific knowledge, 2) systematic scenario writing, 3) an expert-based Delphi technique, and 4) an expert seminar assessment. The two scenarios present possible futures at global, national (Denmark) and regional (Zealand, Denmark) levels. The main scenario is called 'Food for ordinary days and celebrations' (a combination of 'High-technological food production – The functional society' and 'High-gastronomic food – The experience society'). A less likely scenario is called 'The reappearance of the sea – The aquarial society'. The purpose of the scenario writing has been to provide strategic tools for societal actors who to create economic growth and jobs, particularly regional governments and firms. Suggestions concerning regional industrial policy and firm actions are included in the article.

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1. Introduction

1.1. The scope of the article

This article presents a future study of the food sector. The development of two scenarios for the sector is described. The article thus provides new knowledge about two scientific issues. One concerns how the food sector as a business sector might develop by 2025; systematic scenarios are presented. The other is the methodological issue of how to develop plausible future scenarios using a combination of four techniques: 1) a summary of scientific knowledge, 2) systematic scenario writing, 3) an expert-based Delphi technique, and 4) an expert seminar assessment.

The scenarios were developed as part of a research and development project called [GRO \(2014\)](#). The project investigated the potentials for growth in the food sector and creating innovation activities in food firms in one region, namely Region Zealand of Denmark. While, the scenarios emphasize developments in that particular region, national, Danish, and global developments were also included in the study. These broader developments are important for understanding regional possibilities because they define the future market for regional products and food services. Thus the scenarios can also be used to inform us about future international trends that are relevant to industrial policy and firm development in any country – which also will be dependent on the global food market and production trends. The scenarios were created in 2013.

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1.2. Aim of the study

The goal for this study (as part of the GRO development project) was to provide one or several alternative scenarios for the future development of the food sector. Such scenarios should not be presented as predictions (Bas & Guillo, 2012; Ono & Wedemeyer, 1994; Popcorn, 1997), but as probable situations based on actual tendencies. Forecasting is difficult; however, the attempt to forecast can be a useful strategic instrument (Amer, Daim, & Jetter, 2013; Jantsch, 1967; Ono & Wedemeyer, 1994; Popcorn, 1997). The food scenarios are not intended to express a desirable future but a realistic one that has a strong probability of occurring. The scenarios are thought of as strategic tools for societal actors that aim to create economic growth and jobs. These actors are, for example, firms within food-related businesses that look for new market trends and governments, regions, and municipalities that form industrial policy. The scenarios can be used as tools to identify sub-areas and market trends that have growth potential within the food sector. Firms, political authorities, and other relevant actors can thereby identify areas they could support and promote innovations and factors (such as training and investment, and improving public frameworks, such as physical infrastructure, export agencies, and research) that help generate growth.

The project was action-oriented and has included experiments relating to the development of innovation and business plans in firms (cf. Sørensen, Sundbo, & Mattsson, 2013). The research group has further combined the scenarios with concrete suggestions for policies and interventions and with suggestions concerning market actions for firms. The suggestions, in addition to the scenarios, are based on the GRO project's investigation of food firms' innovation activities (Sundbo, Sundbo, & Jacobsen, 2013) and development of new business models (Osterwalder & Pigneur, 2010). The suggestions are detailed and will only be presented in a compressed form in this article.

1.3. The region and food production

Region Zealand was created in 2007 as part of a municipal reform and covers most of the island of Zealand (excluding the capital, Copenhagen, and north Zealand) and some minor islands south of Zealand. Historically, the region has been farmland and has some of the most fertile soil in Denmark. However, farming has diminished in economic importance, and hence jobs, during the last century. Industrialized farming and manufacturing have moved farther away to more peripheral regions. Despite its proximity to Copenhagen, the region is both economically and socially the least developed Danish region as revealed by several indicators (Monsson, 2014). The region is to a large degree a commuter and service-providing region to Copenhagen. As a response to this situation, the regional government is seeking to create new food production, not only in primary industries such as farming, fishing and gardening, but also in related food industries and service business (such as restaurants, distribution etc.). This is in accordance with Danish industrial policy that attempts to develop Danish farming, fishing and food industry (Vækstteam Foedeverer, 2013). Danish farming is very industrialized and the food industry is standardized and food products account for about 17% of the country's exports. However, some new forms of more gastronomic food production and food and services have also come onto the agenda, primarily triggered by the internationally successful New Nordic Cuisine movement (Sundbo et al., 2013).

Thus food scenarios are relevant both for Region Zealand's and national industrial and labour market policy. In addition, there is a growing national interest in peoples' health and gastronomic experiences as part of peoples' quality of life (e.g. Jacobsen, 2008; Petrini, 2001).

1.4. Structure of the article

The article begins with a definition and discussion of what is understood as the food sector. This is followed by a description of the research methods employed. Finally, the impact of the study will be discussed. Highlights regarding basis-scenarios and questions to experts in a Delphi investigation are listed in [Appendix A](#).

2. The food sector

The food sector as presented here is defined broadly. It includes agriculture and fishery (primary business activities), the food industry and mass distribution system, such as supermarket chains. All these are parts of the traditional food sector. Such an industrial supply chain approach (Bozarth & Hanfield, 2013) does not cover all the future possibilities related to food. The food sector also includes the gastronomic or experience aspects of food (Jacobsen, 2008; Sundbo et al., 2013; Svejnova, Mazza, & Planellas, 2007). In accordance with experience economy theory (Boswijk, Thijssen, & Peelen, 2007; Pine & Gilmore, 1999; Sundbo & Darmer, 2008; Sundbo & Sørensen, 2013), this area of the food sector has high value for customers who demand experience or gastronomy based food products and activities and are willing to pay a high price for these. According to experience economy theory, the experience defines future growth areas.

The field dealt with in this article could, more precisely, be called the food and meal sector. This sector is also understood from a consumer and societal perspective and not only from a production perspective.

Other aspects of importance to people as citizens and consumers are also included in the food sector as defined here. These encompass health and ethical issues (animal welfare, the environment and climate change) and are taken into account in the scenarios.

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