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## Barriers and Drivers of Innovation in Traditional Food Networks

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### 1. Introduction

In the European Union the awareness to retain cultural heritage within the different European regions is rising. An important element of the cultural heritage is the production of traditional food products. Few published studies are related to traditional food products and even less to innovation in this specific food sector. Taking into consideration the increasing demand for traditional food products and the importance of innovation to gain competitive advantage, there is a great need to carry out research in this field.

In the frame of this research a traditional food network is understood as the network of traditional food firms, research centers and stakeholders of this sector. A traditional food firm (TFF) is comprehended as a manufacturer of traditional food products, with special attention to small and medium sized TFFs. Hereby, a new definition of traditional food products has been developed. This definition states that the key production steps of a traditional food product must be performed in a certain area, which can be national, regional or local. The traditional food product must have an authentic recipe (mix of ingredients), and/or an authentic origin of raw material, and/or an authentic production process. Furthermore, it must be commercially available for the public in stores or restaurants for at least 50 years and it must be part of the gastronomic heritage, which can be described in a one-page story (Gellynck et al., 2006a).

In the literature, it is emphasized that a network, rather than a single firm determines the potential for innovation (Pittaway et al., 2004; Powell et al., 1996). Innovation involves changes in an organization (Damanpour, 1991). On the one hand, it is a response to changes of the firm's internal or external environment and a preventive step to anticipate changes in the firm's environment on the other. The implementation of organizational innovation contributes to the performance and effectiveness of TFFs and their networks (Damanpour, 1991; Gellynck et al., 2006c). Therefore, innovation is regarded as an important strategic tool to obtain competitive advantage (Avermaete et al., 2004a; Gellynck et al., 2006b). However, not all TFFs develop and implement organizational innovation through their network. Therefore, the aim of the present paper is to construct a conceptual framework for the investigation of barriers and drivers of organizational innovation developed by TFFs in traditional food networks.

## 2. Innovation and Network

Innovation can be defined as an ongoing process of learning, searching and exploring resulting in new products, new techniques, new forms of organization and new markets (Lundvall, 1995). Organizational innovation is the development and/or adoption of a system, policy, process, product or external relation that is new to the organization (Damanpour, 1991; Murphy, 2002).

In traditional food firms (TFFs) the focus is mainly on innovation that improves products and processes and which reduces the costs (Scozzi et al., 2005), but seldom on organizational innovation (Humphreys et al., 2005). Although, organizational strength in a firm is encouraging the innovation process (Ussman et al., 1999) and increasing the firm's competitive advantage (Murphy, 2002). Innovation in TFFs is often achieved through the improvement of networking (Avermaete and Viaene, 2002). Therefore, TFFs need an environment that stimulates innovation and improves networking activities. The creation of such an environment can be supported by government, for instance by improving the infrastructure for networking (Scozzi et al., 2005; Ussman et al., 1999). However, evidence shows that TFFs are mainly not aware of the importance of being innovative and often face difficulties to gain access to institutions, such as research centers, and government (Avermaete et al., 2003; Ussman et al., 1999). Nevertheless, innovation should be a major concern to achieve competitive advantage.

Research on organizational innovation is usually focusing on how a firm's management can be improved. In this paper, a broader approach is issued, investigating the network's role in organizational innovation. Studies indicate that the place of innovation is not anymore the individual firm alone but increasingly the network in which the firm is embedded (Pittaway et al., 2004; Powell et al., 1996). Thereby, innovation is a result of combined transformation of the firm's external and internal resources through the network (Gellynck et al., 2006c).

A network can be described as the place where actors within one or between several related industrial sectors interact and cooperate to add value for the customer (Omta, 2004). Networks are formed because they offer opportunities for new relationships, links or markets and allow access to new or complementary competencies and technologies (Lazzarini et al., 2001; Pittaway et al., 2004). Therefore, to advance the innovation process, it is very important to integrate suppliers, customers and third parties (e.g. government, research centers etc.) into the food network. They will support the innovation process and reduce the risk of innovation, e.g. by joint cost management (Omta, 2002; Pittaway et al., 2004). Since networks increase the flow of information, they play an important role for the diffusion and adoption of innovation (Pittaway et al., 2004).

## 3. Research objectives

The innovation capacity of a network is depending on the innovation capacity of the participating firms. TFFs are more innovative when they are able to join, cooperate and manage interactions in networks (Gellynck et al., 2006c). Consequently, this leads to an increased innovation capacity of the network. However, the development and adoption of innovations through networking is often hampered by lacking resources for the formation and participation in networks (Pittaway et al., 2004).

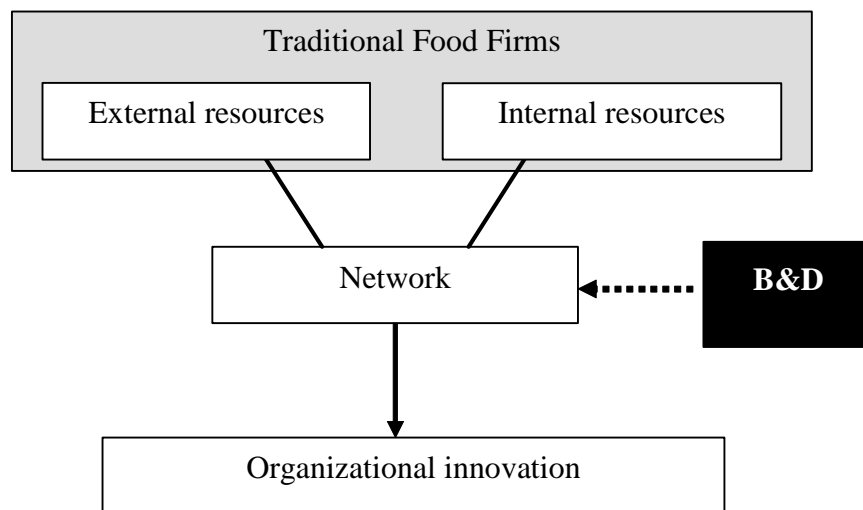
Therefore, the objective of the present paper is to build and discuss a framework for identifying barriers and drivers of organizational innovation in traditional food networks (see Figure 1).

#### 4. Conceptual Framework

In the process of developing innovation competences in a TFF the network plays an important role. It is the place where the internal and external resources of a firm are combined and transformed into innovation (Gellynck et al., 2006c). This results in a new product, process, way of organization or market choice (Lundvall, 1995). In this research the focus is on how TFFs use internal and external resources in a network to achieve organizational innovation and by which factors the achievement of organizational innovation is stimulated or hampered. The conceptual framework is presented in Figure 1.

External resources belong to the firm's strategic environment and include the potential of business-to-business relationships, available infrastructure for networking, and access and support to/from research centers and government (Avermaete and Viaene, 2002; Scozzi et al., 2005; Ussman et al., 1999). Internal resources contain a large number of firm characteristics, such as the R&D structure, financial structure, firm's size, and qualified staff (Diederer et al., 2000; Grünert et al., 1997).

The innovation competence of a TFF is dependent on the present internal resources but in addition external sources of information and other external inputs are essential as well (Avermaete et al., 2004b). Therefore the firm needs to combine internal with external resources in the network. Through the optimal use of both internal and external resources in the network, a TFF can become innovative and able to achieve competitive advantage (Cassiman and Veugelers, 2002; Lengnick-Hall, 1992).



**Figure1.** Conceptual Framework for investigation of barriers and drivers (B&D) of innovation in traditional food networks, adapted from Gellynck, Vermeire and Viaene, 2006

Drivers and barriers for organizational innovation in high and low performing TFFs are explored on the network level (see Figure 1: Conceptual framework for investigation of barriers and drivers (B&D) of innovation in traditional food networks, adapted from Gellynck, Vermeire &

Viaene, 2006<sup>1</sup>). The investigation of barriers and drivers is done in three European Countries, which represents different European regions and hereby different cultural heritages – Northern Europe (Belgium), Southern Europe (Italy) and Central Europe (Hungary<sup>1</sup>).

## 5. Hypotheses

Innovation literature about small and medium sized TFFs indicates that the innovation competence of TFFs is low and that numerous barriers hinder the innovation process. Those barriers are both related to the internal and external resources of a firm, including the participation in and the organization of a network.

Nevertheless, few drivers of innovative TFFs are described in the literature. These TFFs are using the possibilities for collaboration with suppliers, retailers, customers and third party institutions, such as government and research centers (Avermaete et al., 2004a; Janzen and de Vlieger, 1999). The use of such networks allow high performing TFFs to achieve access to new ideas, information and advice (Pittaway et al., 2004) and to achieve competitive advantage (Gellynck et al., 2006c).

Based on the conceptual framework and the above mentioned reasoning it is hypothesised that:

- (1) The development and adoption of organizational innovation in TFFs is positively correlated with higher network activities.
- (2) The development and adoption of organizational innovation in TFFs is positively correlated with the intensity of participation in a network.

## 6. Conclusions and Future research steps

Participation in traditional food networks is enhancing the innovation capacity of TFFs (Gellynck et al., 2006c). The development and implementation of organizational innovation can increase the performance and competitiveness of TFFs (Murphy, 2002). However, TFFs often face barriers to join networks (Pittaway et al., 2004) and, furthermore, they focus mainly on other than organizational innovation (Humphreys et al., 2005; Scozzi et al., 2005). Consequently, the investigation of organizational innovation in traditional food networks is challenging. The present paper contributes to the research of traditional food firms and innovation in that specific food sector by proposing a framework to investigate barriers and drivers of organizational innovation developed by TFFs in traditional food networks.

In the future research steps it is necessary to investigate the dynamics between network and organizational innovation. Therefore, the factors for organizational innovation are identified in high and low performing TFFs through qualitative research. Furthermore, the networking activities/-intensity of TFFs and the thereby used external and internal resources for successful organizational innovation are explored by qualitative research as well. The results will then be verified through quantitative research.

These research steps should lead to the identification and investigation of barriers and drivers for organizational innovation developed by TFFs in traditional food networks. As a result, a strategy will be developed to enhance the development and implementation of organizational

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1. The underlying research is carried out in the frame of the TRUEFOOD (Traditional United Europe Food) integrated project (6th Framework Programme).

innovation in TFFs to improve their performance and competitive advantage.

1. Summarized the future research steps are:
2. Investigation of the dynamics between network and organizational innovation.
3. Identification of high and low performing TFFs regarding their organizational innovativeness;
4. Exploration of TFFs' networking activities and external and internal resources used for successful organizational innovation;
5. Exploration of the intensity of participation in networks;
6. Investigation of barriers and drivers from high and low performing TFFs.

## 7. References

- Avermaete, T. and J. Viaene (2002). *On Innovation and Meeting Regulation - the Case of the Belgian Food Industry*. DRUID Summer Conference on "Industrial Dynamics of the New and Old Economy - who is embracing whom?" 6-8 June 2002, Copenhagen/Elsinore.
- Avermaete, T., J. Viaene, E. J. Morgan and N. Crawford. (2003). *Determinants of innovation in small food firms*. European Journal of Innovation Management, 6(1), 8-17.
- Avermaete, T., J. Viaene, E. J. Morgan and N. Crawford (2004a). *The impact of firm characteristics and macroeconomic performance on innovation in small food firms: Case study from Belgium, Ireland and UK*. IN: Innovation in Small Firms and Dynamics of Local Development. Eds.: T. de Noronha Vaz, J. Viaene and M. Wigier. Warsaw: Scholar Publishing House.
- Avermaete, T., J. Viaene, E. J. Morgan, E. Pitts, N. Crawford and D. Mahon. (2004b). *Determinants of product and process innovation in small food manufacturing firms*. Trends in Food Science & Technology, 15(10), 474-483.
- Cassiman, B. and R. Veugelers. (2002). *Complementarity in the innovation strategy: internal R&D, external technology acquisition, and cooperation in R&D*. IESE Research Division, 1-32.
- Damanpour, F. (1991). *Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators*. Academy of Management Journal, 34(3), 555-590.
- Diederer, P., H. Van Meijl and A. Wolters. (2000). *Eureka! Innovatieprocessen en innovatiebeleid in de land- en tuinbouw*. LEI. Den Haag. 89.
- Gellynck, X., B. Kühne, A. Molnár, A. Sebok, A. Hegyi, M. Contel and V. Piana. (2006a). *Summary report on selected and described traditional food supply chains and bottlenecks and success factors for Belgium, Italy and Hungary*. TRUEFOOD - Traditional United Europe Food.
- Gellynck, X., B. Vermeire and J. Viaene. (2006b). *Innovation in food firms: contribution of regional networks within the international business context*. Entrepreneurship & Regional Development, (accepted for publication).
- Gellynck, X., B. Vermeire and J. Viaene. (2006c). *Innovation in the Food Sector: Regional Networks and Internationalisation*. Journal on Chain and Network Science, 6(1), 21-30.

- Grünert, K., H. Harmsen, M. Meulenberg, E. Kuiper, T. Ottowitz, F. Declerck, B. Traill and G. Göransson (1997). *A framework for analysing innovation in the food sector*. IN: Product and process innovation in the food sector. Eds.: B. Traill and K. G. Grünert. Suffolk: Chapman & Hall, pp1-33.
- Humphreys, P., R. McAdam and J. Leckey. (2005). *Longitudinal evaluation of innovation implementation in SMEs*. European Journal of Innovation Management, 8(3), 283-304.
- Janzen, R. and J. J. de Vlieger. (1999). *Ketenonderzoek streekproducten*. LEI. Den Haag.
- Lazzarini, S. G., F. R. Chaddad and M. L. Cook. (2001). *Integrating supply chain and network analyses: The study of netchains*. Chain and network science, 1(1), 7-22.
- Lengnick-Hall, C. A. (1992). *Innovation and Competitive Advantage: What we know and what we need to learn*. Journal of Management, 18(2), 399-429.
- Lundvall, B. (1995). *National systems of innovation: towards a theory of innovation and interactive learning*. London, Biddles Ltd.
- Murphy, M. (2002). *Organisational Change and Firm Performance*. OECD Science - Technology and Industry Working Papers, 2002(14), doi:10.1787/615168153531.
- Omta, O. (2004). *Management of Innovation in Chains and Networks*. IN: The Emerging World of Chains and Networks. Eds.: T. Camps, P. Diederer, G. J. Hofstede and B. Vos. 's-Gravenhage: Elsevier Juridisch (Reed Business Information bv).
- Omta, O. S. W. F. (2002). *Innovation in chains and networks*. Journal on Chain and Network Science, 2(2), 73-80.
- Pittaway, L., M. Robertson, K. Munir, D. Denyer and A. Neely. (2004). *Networking and innovation: a systematic review of the evidence*. International Journal of Management Reviews, 5-6(3-4), 137-168.
- Powell, W. W., K. W. Koput and L. Smith-Doerr. (1996). *Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in Biotechnology*. Administrative Science Quarterly, 41(1), 116-145.
- Scozzi, B., C. Garavelli and K. Crowston. (2005). *Methods for modeling and supporting innovation processes in SMEs*. European Journal of Innovation Management, 8(1), 120-137.
- Ussman, A., M. Franco, L. Mendes and A. Almeida (1999). *Are SMEs Really Innovative? A Study Regarding the Main Difficulties in Portuguese SMEs*. Conference of the International Council for Small Business (ICSB), Naples / Italy.