Abstract (Scientific Paper)

Sub-theme: Systems innovations and innovative governance structures

Transparency in Food Supply Chains: Empirical Results from German Pig and Dairy Production

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Objective of the study

The objective of the paper is to identify the various determinants of transparency of agrifood chains and networks, integrate them into a measurement model that provides a basis for empirical research and present empirical results from a large-scale empirical study in German pig and dairy production.

Theory

Due to a number of crises in agribusiness and growing customer demand, transparency has gained much relevance in agrifood chains. As a consequence, new legislation has been passed by the European Union focusing on tracking and tracing agricultural and food products. Besides the focus on traceability, supply chain management research highlights different aspects of transparency, such as consumer trust (Kagerhuber & Kuehl, 2002), quality assurance (Engler et al., 2007), market orientation (Mohr & Nevin, 1990), and product and process innovations (Dyer & Singh, 1998). The view that transparency and related concepts, such as trust, deserve more attention in firm management is widely shared (Hanf & Hanf, 2007; Van Dijk et al., 2003; Fritz & Fischer, 2007).

Transparency is a multifaceted phenomenon that is referred to in a number of disciplines (Hofstede et al., 2004; Frentrup and Theuvsen, 2006). Sociologists, for instance, identify the demand for transparency as the most important motivational factor in human behavior. From an economic perspective, transparency is described as vital for market economies to function. From a psychological perspective, transparency supports a global consciousness of cause-effect relationships that enables human beings to orient themselves in a complex environment and to reach their targets under conditions of uncertainty.

Methodology

Based on the theoretical background described above, we present a theoretical framework underlying the empirical analysis of transparency in our study. The framework is based on the formative and the reflective formation of the latent construct 'transparency'. Therefore, it integrates the various structural and behavioral determinants of transparency, the effects of transparency on value chain performance (quality, safety and efficiency) and perceived transparency, i.e. the availability of relevant information as experienced by the addressees.

The theoretical framework served as a guideline for designing and carrying out a large-scale empirical study in German pig and dairy production. Between May and August 2007, 211

German pig and dairy farmers were surveyed. The survey included extensive face-to-face, questionnaire-based interviews.

Main Findings

The results provide in-depth insights into the determinants and effects of transparency as experienced by food supply chain members, in this case pig and dairy farmers.

Conclusions and Implications

The empirical result allow to identify the main drivers of transparency. This has interesting theoretical and managerial implications. From a theoretical perspective, the theoretical framework as well as the empirical results provide a more comprehensive understanding of the determinants and effects of transparency in agrifood chains and networks. From a managerial perspective, actions necessary for improving transparency in agrifood supply chains can be identified. Furthermore, the results allow to confront the professional understanding of transparency addressed in this paper with results from consumer studies about consumers' perception of the transparency of agrifood chains.

References

- Dyer, J.H., and H. Singh, 1998. The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage. Academy of Management Review, Vol. 23, pp. 660-679.
- Engler, A. et al., 2007. Actor Organization for QAS along Agro Supply Chains: The Case of Mycotoxins Reduction in Southern Cone Grains. In L. Theuvsen et al. (Eds.), Quality Management in Food Chains. Wageningen, pp. 475-488.
- Frentrup, M. and L. Theuvsen, 2006. Transparency in Supply Chains: Is Trust a Limiting Factor? In M. Fritz et al. (Eds.), Trust and Risk in Business Networks, Bonn, pp. 65-74.
- Fritz, M. and C. Fischer, 2007. The Role of Trust in European Food Chains: Theory and Empirical Findings. International Food and Agribusiness Management Review, Vol. 10, No. 2, pp. 141–163.
- Hanf, J. and C.-H. Hanf, 2007. Does Food Quality Create a Competitive Advantage? In L. Theuvsen et al. (Eds.), Quality Management in Food Chains. Wageningen, pp. 489-499.
- Hofstede, G.J., H. Schepers, L. Spaans-Dijkstra, J. Trienekens and A. Beulens (Eds.), 2004. Hide or Confide? The Dilemma of Transparency. 's Gravenhage: Reed Business Information.
- Kagerhuber, M. and R. Kuehl, 2002. Unterschiede und Gemeinsamkeiten vertikaler Prozessorganisationen im Bereich der integrierten tierischen Produktion und Vermarktung.
 In: Landwirtschaftliche Rentenbank (Ed.): Lebensmittelsicherheit und Produkthaftung. Frankfurt/M., pp. 7-42.
- Mohr, J. and J.R. Nevin, 1990. Communication Strategies in Marketing Channels: A Theoretical Perspective. Journal of Marketing, Vol. 54, No. 4, pp. 36-51.
- Van Dijk, S.J., G.M. Duysters and A.J.M. Beulens, 2003. Transparency Dilemmas in Strategic Alliances. Working Paper, s`Hertogenbosch: KLICT.