Factors Influencing the Performance of German Food SME Formal Networks

Jivka Deiters, Esther Heuss, and Gerhard Schiefer
Research Group Food Chain Management, University of Bonn, Germany
Meckenheimer Allee 174, D-53115 Bonn, Germany
jivka.deiters@uni-bonn.de; esther.heuss@uni-bonn.de
schiefer@uni-bonn.de

Abstract

The food sector in Europe can be characterised as a complex, global and dynamically changing network of trade streams, food supply network relations and related product flows and offers a big spectrum for economic output and employment.

Innovation isimportant for the competitivenessof the food industry that is to a large extent comprised by small and medium sized enterprises (SMEs). Furthermore innovation has grown extremely subordinate to interaction in networks. Network initiatives that could provide appropriate support involve social interaction and knowledge exchange, learning and competence development, and coordination (organization) and management of implementation.

This paper was designed to assess the factors that affect the performance of German food SME formal networks. It also addressed the consequences at the network and macro level. The analysis was explored by using the laddering technique based on means-end chain theory.

These findings will help to build up a “network learning toolbox” that is adapted to the particular requirements of the different segments of the target group of SMEs, network managers and policy makers. The “network learning toolbox” should improve the network learning, which drives to raised innovation, economic growth and sustainable competitive advantage for food SMEs.

Key words: *Factors, performance, networks, food*

1 Introduction

The food sector in Europe can be characterised as a ”*complex, global and dynamically changing network of trade streams, food supply network relations and related product flows*” (Fritz and Schiefer, 2008) and offers a big spectrum for economic output and employment (Menrad, 2004 a).

In this context, innovation becomes important for maintaining and improving competitiveness (Grunert et al., 1997) and especially for the competitiveness of small and medium sized companies which represent the majority of enterprises in the sector (Deiters and Schiefer, 2012). In general, but specifically for small and medium sized enterprises, innovation ability is being supported by networking activities. (Netgrow DoW, 2010). Networking initiatives that could provide appropriate support involve social interaction and knowledge exchange, learning and competence development, and coordination (organization) and management of implementation (Deiters and Schiefer, 2012).

This paper is based on research within the European project NetGrow and the analysis of the suitability of the project’s tool for analyzing network performance in an industry environment.The toolbox is at the center of the project’s objectives which are being stated as

“… to effectively enhance the capacity of food SMEs, network organisations and policy makers in managing their network activities strategically, by:

- gaining insights in the success factors and barriers of network learning and the optimal design of networks based on segmentation of food SMEs reflecting their preferences for networking
- investigating how the insights can be translated into a practically applicable toolbox that can be used by SMEs, network managers and policy makers, and
- developing and testing of a toolbox which is tailored to the specific needs of the different segments of the target group of SMEs, network managers and policy makers. “

The paper was designed to assess the factors that affect the performance of German food SME formal networks. It also addressed the determinants and consequences of high network performance at the network and macro level. The analysis was explored by using the laddering technique based on means-end chain theory, which will be explained in chapter 3.

These findings will help to build up a "*NetGrow Network Learning Toolbox*" that is adapted to the particular requirements of the different segments of the target group of SMEs, network managers and policy makers. The "NetGrow *Network Learning Toolbox*" should improve the network learning, which drives to raised innovation, economic growth and sustainable competitive advantage for food SMEs. With the help of several tools, which are tailored to the specific needs of the stakeholders, the toolbox shall support all stakeholders of formal networks as well as SMEs searching for networking opportunities. SMEs can strongly benefit from the services networks provide, especially when it comes to innovation. Through knowledge exchange and infrastructure within the network, SMEs can be enabled to successfully conduct the innovation process and gain competitiveness through network learning.

The paper introduces into the subject by first presenting the theoretical background (Chapter 2). Chapter 3 describes the methodology that was used to analyze the factors influencing the performance of German food SME formal networks. Chapter 4 provides an overview on the data collection. First observations are presented in Chapter 5, while a summary of results and suggestions for future research conclude the paper.

2 Theoretical Background

A network can be defined as a set of interconnected exchange relationships between enterprises (Bernal et al., 2002). Formal networks can be described as voluntary arrangements between enterprises with the objective to provide a competitive advantage for its members (Coviello and Munro, 1995; Fuller-Love and Thomas, 2004). Members of formal networks share the goal of gaining competitive advantages through their participation in the network (Deiters et al. 2010, Coviello and Munro, 1995; Fuller-Love and Thomas, 2004). In addition the entrance to complex markets, resulting in saved time and costs, may be accomplished by the creation of networks (Deiters et al. 2010, Fuller-Love and Thomas, 2004). Depending on enterprises' understanding on how to use the opportunities and resources provided by the network, their performance can be influenced positively through the collaboration with and within a network (Deiters et al. 2010, Hakansson and Snehota, 1989). In formal networks relationships and communication between actors arise, whilst the intensity of the exchange can be controlled by the members themselves (Hollendsen, 1998).

The exchange of activities and resources enables the enterprises within the network to build up relationships and to develop a basis for cooperation and at best innovation (Fuller-Love and Thomas, 2004). Networks can provide assistance for social and knowledge exchange, learning, competence development, coordination and management (Deiters and Schiefer, 2013). In addition SME's smart under a lack of adaptability and influence on their environment (MacGregor, 2004) that can be compensated by the support of networks and reversed into competitive advantage, especially against larger enterprises. Furthermore, the pooling of resources and the exchange of expertise can unharness resources and expertise only large enterprises have at their disposal (Donckels and Lambrecht, 1995, MacGregor, 2004).

Developing interpersonal contacts and enhancing innovation through networks may lead to competitive advantages of various kind:

- Information is the basis of competition for SMEs, because of their disadvantaged position concerning gathering important technical information, due to their lack of financial resources and the complexity of information.
- Tacit knowledge is essential to aggravate innovation (Senker, 1995). It is characterized by the fact, that it is not possible to transfer it through written documents and is accumulated in the knowledge of technical and scientific employees. The facilitation of acquaintances through networks with the objective to exchange and locate information especially on complex technological issues enhances the enterprises' success (Malecki and Tootle, 1996).
- The realization of innovations depends strongly on the financial resources of an enterprise, whilst the outcomes are uncertain throughout the tedious innovation process. Therefore it is especially for SMEs

risky to be engaged and foster innovations. Through the support of formal networks SMEs gain the possibility to reduce their costs whilst they benefit from new knowledge, provided by the network.

For identifying the influence of networking on the growth and success of SMEs and their innovativeness it is crucial to specify the factors that determine the success of SME networks (Sherer, 2003). The growth of SMEs is influenced by traditional and nontraditional factors (Bordt et al. 2004). Research and development, business networks and alliances, competence in funding, intellectual property protection and market niche are traditional factors. Nontraditional factors are business advisers, formal organization and planning, innovation and adaptability. Since SMEs suffer from restricted resources the achievement of goals is difficult to realize by themselves. Therefore, joining a network might be a possibility for SMEs to receive the resources needed to achieve the objectives, which are crucial for their existence and success (Baird et al., 1993; Birley, 1985; Premaratne, 2001).

In this context, a "high performance" network describes a network, which fulfils the expectations of its members, its customers (Netgrow, 2013b). Important determinants of high network performance are the intentional handling of governance mechanisms and the relationship management mechanisms in a network which refer to tasks that are crucial for its success. They include

a) the maintenance of international links which is often a precondition for successful collaborations inside and beyond the network and the success of its members and

b) the quality of the network manager and/or the management team and its commitment to the network which is crucial for the satisfaction and trust of network members, and in consequence responsible for the high performance of a formal network (Netgrow Project, 2013b).

3 Methodology

The means-end chain theory propounds a hierarchical organization of consumer perceptions and product knowledge (Young and Feigin, 1975; Gutman, 1982). It was introduced by Gutman to marketing and consumer research and suggests that values are the driver of peoples' behavior in all aspects of their lives (DeBoer and McCarthy, 2005). The methodology links attributes with consequences of consumption which in turn are linked to personal values. It seeks to understand the purchase behavior of consumers as an instrument for satisfying their needs (Wansink, 2003). This approach merges various techniques utilized in interviewing consumers about their product choices. In data analysis the focus is on the interpretation of consumers' responses and the identification of links between the outcomes (Reynolds and Olson, 2001, p. 3; Bieke, 2011). On this basis, the consumer is supported in choosing a product because its attributes or means, that help him to achieve the desired consequences and fulfilling his values or ends (Reynolds & Jonathan Gutman, 1988; Bieke, 2011). The links between the different techniqies form a chain (see figure 1).

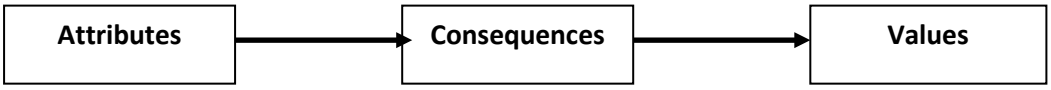


Figure 1. Structure of Means-End Chain model
Source: Gutman 1982

The laddering technique builds up on the means-end chain theory and can be useful to reveal insights about why consumers decide for a purchase and its equity (Reynolds and Gutman, 1988; Gutman, 1982; Wansink, 2000; Wansink, 2003). This method focuses on how attributes are linked to values for the consumer (Wansink, 2003). It is a one to one interviewing technique that helps to understand how consumers see the attributes of products for reaching certain values (DeBoer and McCarthy, 2005). Emotional associations of a person are an important component of a brand's equity (Keller, 1996) because they have a deeper and more profound impact on the relationship to the person's purchases (Bannister and Mair, 1968). With the help of the laddering technique the underlying reasons for the purchase of customers are investigated which could better explain why costumers buy what they buy (Wansink, 2003).

The utilization of progressive questions gives insights on how the attributes of a product, the consequences of using it and the personal values are linked together in a person's mind (Wansink, 2003). Nevertheless, the attributes are crucial for moving closer to the values of consumers' purchases. This is accomplished by asking probing questions, which help to examine consequences the consumer associates with the attributes. To reveal more about the abstract and emotional qualities the customer associates with a product it is essential to ask the question "why?". Thus thoughtful and personal reflections are gained that help to investigate personal values of a purchase such as core reasons the consumer is not even aware of (Rokeach, 1973; Wansink, 2003). Consequences specify the way a value is linked to an attribute of the product (Reynolds and Gengler, 1991).

Laddering includes an interviewing format, which uses primarily a series of probes through "Why is that important to you?" questions. As a result, a means-end chain, an A-C-V (Attributes-Consequences-Values) sample or a ladder can be created. The aim is to determine linkages between attributes (concrete or abstract product characteristics), consequences (functional or social results) and values that drive the consumers' decisions (DeBoer and McCarthy, 2005). To apply this method and gain significant results one has to invest approximately 30 to 40 minutes (Wansink, 2003).

A hierarchial value map (HVM) build up of attributes, consequences and values is used to visualize the results of laddering studies (Grunert et al. 1995; Wansink, 2003). The HVM is a graphical description of a laddering interview and is used to recognize the relationships between attributes, consequences and values. In the HVM each component is identified through sequentially asking questions which are always based on the previous responses. This allows the interviewer to "climb the ladder" and gain knowledge about the real reason for a purchase decision (Wansink, 2003).

The means-end theory framework is beneficial to this research because:

1. The laddering technique could assist to identify additional performance metrics (which could assist in refining and improving upon the prototype assessment tool)?
2. The production of hierarchical value maps (HVMs) for different stakeholders could reveal the extent of (mis)alignment in the stakeholder expectations. This could provide indications of the suitability of network level and/or stakeholder-centric performance metrics.
3. The basis for communication strategies for increasing SME/stakeholder participation in networks can be identified with the assistance of the laddering technique. Since this technique has been used traditionally in the marketing communication and advertising domain it could potentially be the fundament for a tool in the NetGrow toolbox (Netgrow Project, 2013a).

The laddering technique was applied for the first time in organizational research, aiming at the identification of consequences of organizational alternatives in the context of performance metrics. In this research, the methodology is used for investigating the factors that affect high network performance in SME networks in Germany and to identify the consequences at the network and macro level. Interview results were included into the hierarchical value map (HVM). With the help of the HVM the strength and direction of relationships between attributes, consequences and values of network performance can be illustrated. This facilitates the delineation of stakeholders with positive consequences derived from high network performance.

4 Overview on Data Collection

In total, sixteen individual interviews were carried out with four types of networkstakeholders.

All interviews were held in Germany in the period from January till April 2013. Potential respondents were identified with the assistance of local experts and network organisations as important contributors to networks. The networks were from the food sector and could be classified as formal networks. An interview guide developed by TEAG (Teagasc Food Research Centre, Ireland) supported in analyzing the consequences of four dimensions of high performance as presented in table 1:

Table 1.
Overview of the conducted interviews

	SMEs	Network Organisation	Policymakers	Knowledge Providers
No. respondents	4	4	4	4
Length of network experience (yrs)	10yrs+	10yrs+	10yrs+	10yrs+
Level of network experience (n)	1-10	3-20	10-20	30
Breadth of network experience[1]	Representative associations	Regional and/or national food sector networks, umbrella and trade associations	Trade and representative associations (food and non-food)	Producer groups, associations, foundations
Extent of involvement in networks	Participating members	Participation on committees, representation role, manage activities	Participation on committees, passive or active overseer in network	Network member, participation in comittees

The interviews were conducted mainly at the interviewee's place of work. The interviews were recorded where possible, and lasted approximately 45 to 60 minutes. A supplementary questionnaire was outlined to respondents at the end of each study to gather background information on their network/networking experience.

Following each interview, all available recordings were content analyzed to extract the relevant means-end chain data, which were then transcribed and pre-coded in order to generate a set of terms that characterised/defined each attribute, consequence and value associated with the four dimensions of network performance. The analysis followed a four step approach:

Step 1: Identification of attributes

Based on results of earlier investigations within the NetGrow project two attributes of high performance, their consequences, and their values were dealt with: (1) goal attainment and (2) collaboration. The selected attributes were used by the interviewer as a basis to probe further up the ladder to elicit all consequences and values associated with each particular attribute.

Step 2: Coding of interviews

Coding of interviews followed the analysis of the laddering technique. Therefore we developed a set of codes able to comprehend all the concepts included in these attributes, consequences and values.

The authors of this paper coded the interview data and revised all 330 elements to 42 codes in total. Afterwards all interviews' transcripts were revised based on the the coded data.

Step 3: Analysis of laddering data

(). All attributes, consequences, and values were entered into a Laddermap (provided by a laddering analysis system; http://www.ladderux.org/) with their appropriate code. The analysis of laddering data starts with a standard content analysis procedure in which a summary is made of the product attributes, consequences and values obtained. This is followed by a summary table which was constructed for representing the number of connections between these elements (i.e. the implication matrix). Connections were then graphically

represented in a tree diagram, termed a Hierarchical Value Map (HVM). In a HVM the thickness of the lines connecting the attributes, consequences and values represents the frequency of association. In order to obtain a balance between quantitative validity and aesthetic of the map, we decided to use a cut-off level 3. This cut-off level produced a hierarchical value map representing the 'most important' links between elements that are at least listed three times.

5 Results

Separate maps (Hierarchical Value Maps / HVM) were elaborated for each stakeholder of the network.

The main results for the **SME food manufacturers are highlighted** in figure 2. It shows that especially the element "facilitating and enabling sustainable and efficient business" is from the SMEs' point of view crucial for the high performance of formal networks. The detailed HVM for the **SMEs** is presented in appendix 2**.** Four respondents generated 44 ladders, each representing a sequence from attribute to consequence to value. The attribute goal attainment is closely linked to the functional consequence "exchange of information". Therefore it is crucial for network members to get information about political developments, research results and to learn through benchmarking and the experiences of other companies. The exchange of information is linked to the psycho-social consequence "shared perspective" which leads to a stronger position of the network members and therefore to bearable solutions evolving from political decisions for the network members. The most important value for SME food manufacturers concerning the high performance of a network organisation is the preservation and facilitation of a "sustainable business" for the members companies. A "shared perspective" contributes to another important value for the SME, namely "efficiency". The reduction of costs through bearable solutions for the sector derived by political decisions in favour of the members' goals is crucial for being competitive in the long run. For SME food manufacturers the internal collaboration, meaning the collaboration within the network, is the most important consequence to find a shared perspective and generate sustainability and efficiency within their businesses. In addition they expect active and miscellaneous support provided by the network to attain their goals, which is as well dependant on being informed and able to react on important issues at the right time, even though this consequence does not lead to a value.

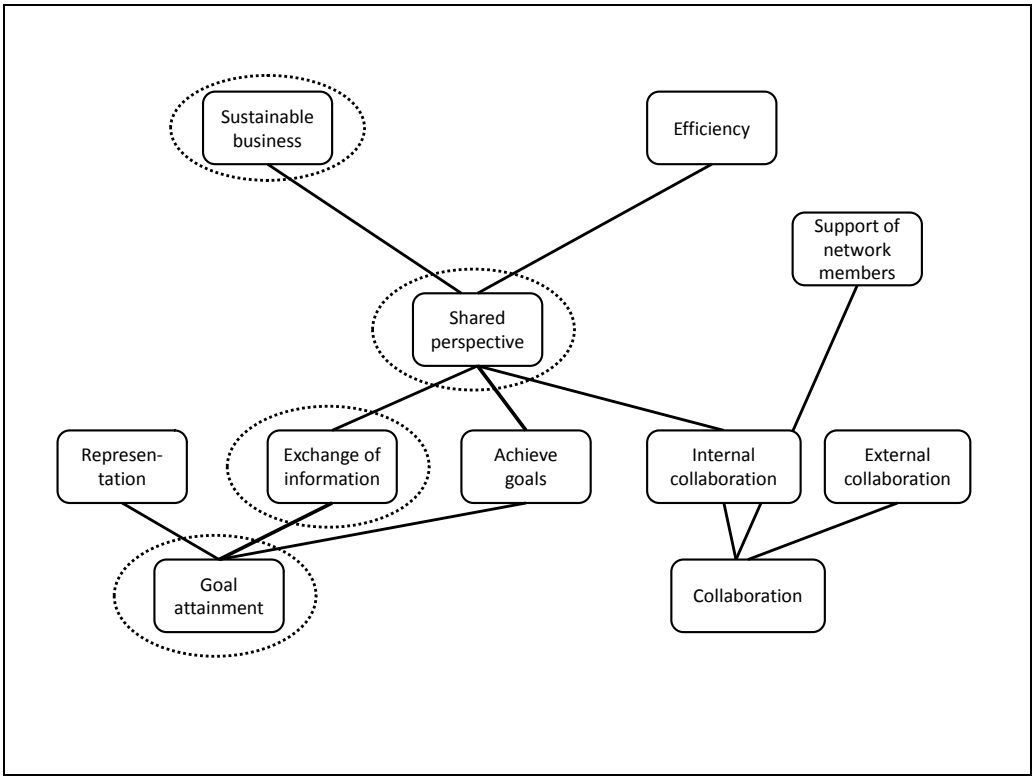


Figure 2. Extract of Hierarchical Value Map "SMEs"

The key results for the **network management** in figure 3 highlight that for the network as a whole “trust and maintaining traditions” is crucial for itshigh performance and itssuccess in representing a whole sector. The detailed HVM for the **network managers** is presented in appendix 1. In total 65 ladders were generated by 4 respondents. From the figure it is clearly recognisable that “goal attainment” is the most important and most frequently mentioned attribute. The network has to represent the network members to public bodies and especially solve problems successfully. A very strongly link is between the consequences “achieve goals for network members” and “support of network members”, which leads to the most significant value “customer satisfaction”. Additionally the consequences “increase the political influence”, “shared perspective” are linked to the values “build and increase trust” and “keep traditions” to strengthen their position and achieve the goals set by the network members. From the networks management point of view the efficiency, meaning reduction of time through collaborative projects done within the network organisation is another important value.

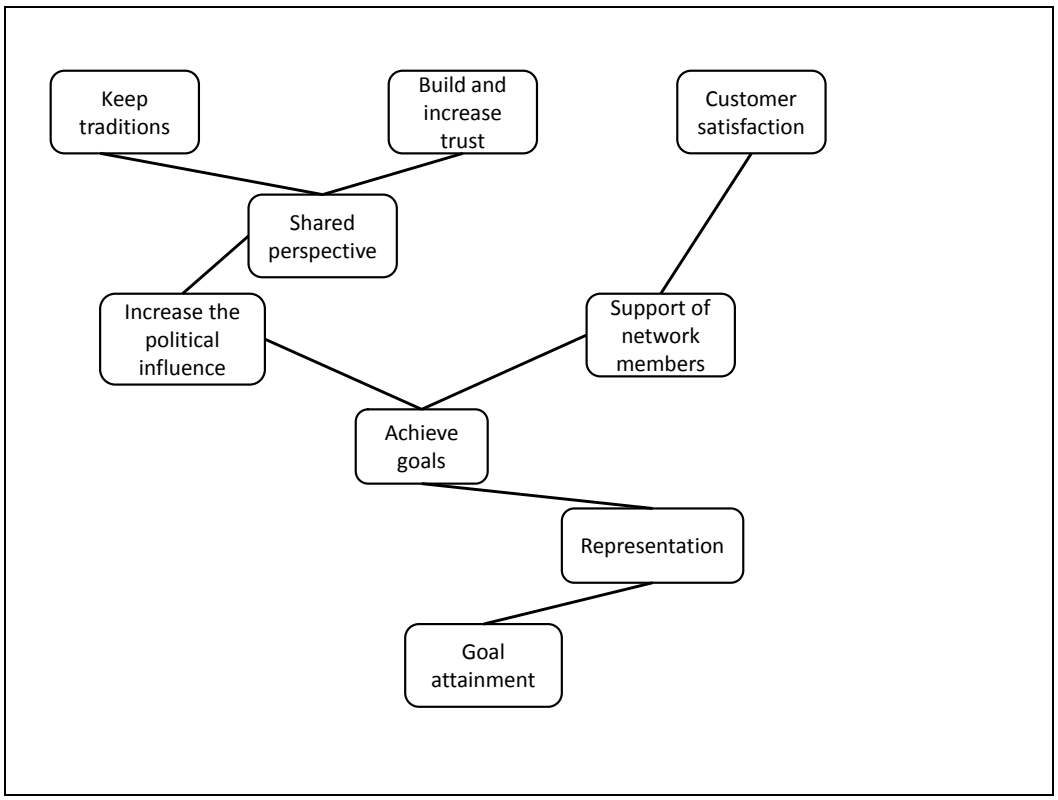


Figure 3. Extract of Hierarchical Value Map “Network Managers”

Figure 4 presents the most important ladder of the HVM of the **knowledge providers.** The whole overview of the HVM is given in appendix 2. In total 96 ladders were generated by 4 respondents. The attribute “collaboration” is more important than the attribute “goal attainment” and is linked very strongly to the “external collaboration”. The “external collaboration” is closely related to the “representation of network members to the public bodies” which leads to the consequence “enhance industry capabilities”. Furthermore one important ladder is clearly recognisable from the “achieve goals for network members” to “support of network members”, “shared perspective” and “satisfy network members”. It means that these consequences are very often mentioned as important determinants for the success of the network’s performance.

In total six terms are recognised as values from the knowledge provider’s perspective (see appendix 2 also). As a very important value and very often linked to the consequences one canname the “build and increase trust”, “productivity”, meaning reduction of costs and “sustanaible business”. For knowledge providers it is crucial that networks are able to balance the demands of the industry and the consumer and find a concensus as well as their role in the process in creating legislation due to their representation of their members interests.

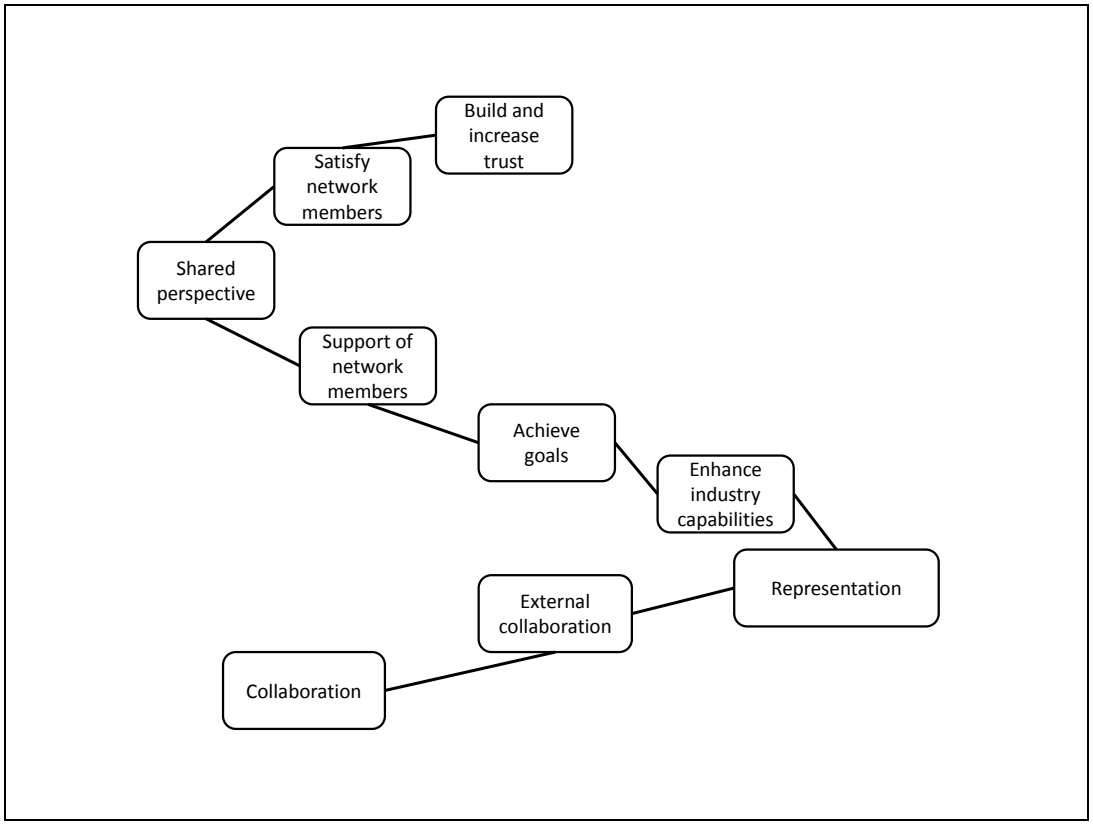


Figure 4. Extract of Hierarchical Value Map "Knowledge Providers"

Figure 5 shows an extraction of the HVM derived from the **policy makers'** point of view collected by using the laddering technique. The visualization of all ladders within the HVM can be taken from the appendix 3. In total 45 ladders were generated in 4 interviews. The most important attribute for policy makers is "goal attainment". The link between the attribute "goal attainment" and the functional consequence "representation of network members to public bodies" is very strong and leads to "sustainable food production" which strongly depends on the "exchange of information". If information is exchanged and the network members receive important information concerning political developments, the network does strengthen the position through a "shared perspective" of its members and therefore the political influence can be increased. The "customer satisfaction" is the key value of this ladder. A "shared perspective", meaning bundling the interests of the networks members, is on the one hand crucial to meet the members' goals and achieve the value "customer satisfaction". On the other hand a competitive advantage can be accomplished for the SMEs resulting in the terminal value of high performing networks "build and increase trust".

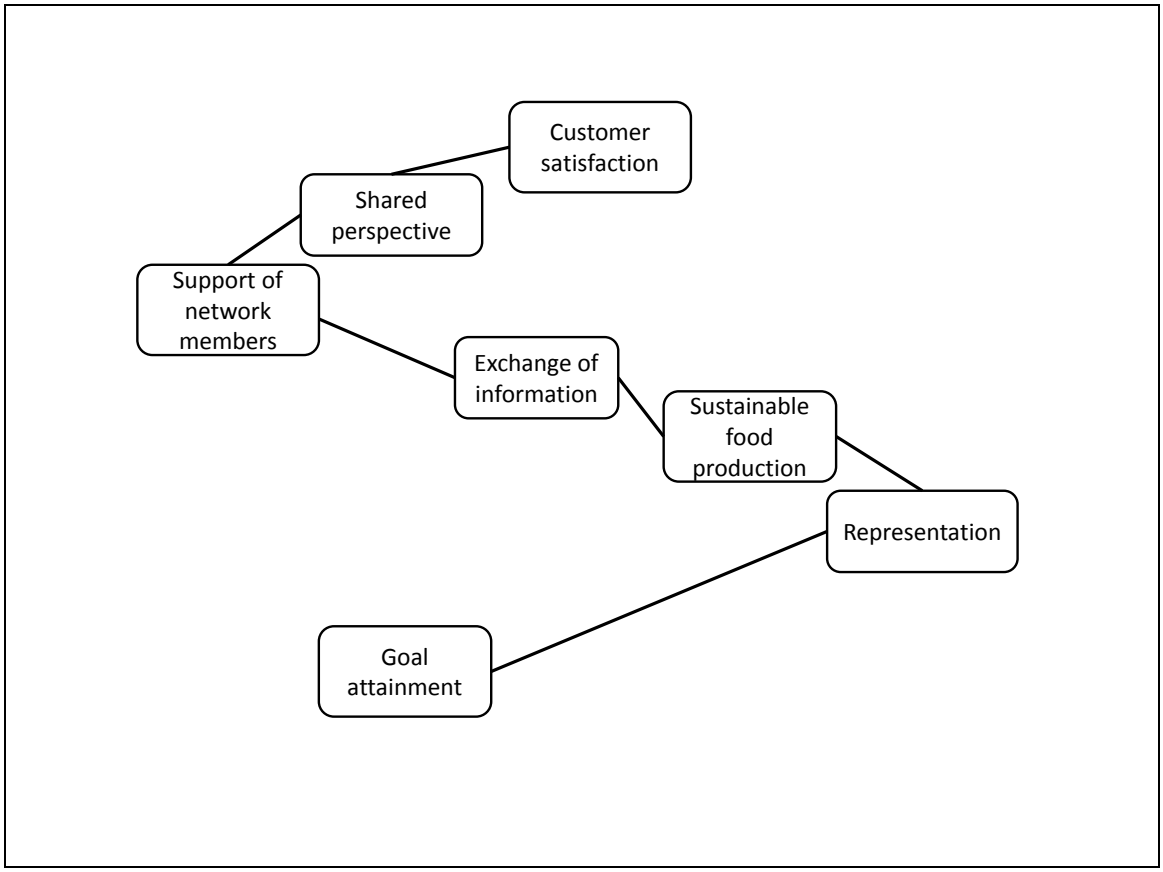


Figure 5. Extract of Hierarchical Value Map "Policy Makers"

6 Conclusions

From the ladder interviews and the means-end chain analysis of the research some conclusions can be drawn:

The high levels of collaboration and goal attainment in formal networks are associated with bringing politics and industry together for facilitating the exchange and communication between network members and the public authorities.The combined interests and information of members is strengthening the members' position and helps the network to achieve the members' goals. In addition, communication and exchange of the network with public authorities is the key for improvingthe members' image and helps to show the industries real work and problems. Representation and advocacy of the members' interests and opinions towards the public authorities gives the industry the chance to be heard. The network raises awareness for the network members and sensitizes as well the public for the industries work and challenges. Even if not often mentioned directly another important consequence for the high level of performance is he members trust in the networks work.

These consequences are linked to specific values deriving of the high performance of network organisations such as the facilitation of the members work. For the members of a network organisation it is crucial that the performance of the network organisation reduces costs and time in their everyday work. In addition a network organisation should help to maintain a positive image of the sector they are representing and that the traditions of one sector are kept alive through knowledge transfer to the public and within one sector. Therefore the production of high quality food should be fostered by enabling the SMEs to realise the wishes of the consumer in a sustainable and productive manner.

The laddering technique is a helpful instrument to expose key determinants influencing the performance of networks in their work with the SME food manufacturers. The results of the HVMs show clear values in the work of formal networks for the different stakeholders. It is interesting, that each stakeholder shows different values or rather balance them differently. Especially the SMEs perspective can be helpful for the management of formal networks, so their activities can be optimised in favour of their customers. As an example, activities,

which have no value, can be questioned and if necessary abandoned. Therefore the insights gained within this investigation provide a helpful contribution to successful network organization and management

Acknowledgement

This paper draws from experience in the FP7 project 'NetGrow'. The authors gratefully acknowledge the involved individuals and companies for their support as well as the European Community for financial participation under the Seventh Framework Programme.

References

Baird, I.S., Lyles, M. A., and Orris, J. B. (1993). Alliances and Networks: Cooperative strategies for Small Business, Available Mai 2012 at: http://digitalcommons.butler.edu/cgi/viewcontent.cgi?article=1030&context=cob_papers

Bannister, D. and Mair, J.M. (1968). The Evaluation of Personal Constructs, Academic Press, London.

Bernal, S. M. H., Burr, C., and Johnsen, R. E. (2002). Competitor networks: international competitiveness through collaboration. International Journal of Entrepreneurial Behaviour and Research. Vol. 8, No. 5: pp. 239-253.

Birley, S. (1985). The role of networks in the entrepreneurial process. Journal of Business Venturing, Vol. 1, No.1, pp. 107-117.

Bordt, M., Earl, L., Lonmo, C., and Joseph, R. (2004). Characteristics of firms that grow from small to medium size: growth factors-Interviews and measurability. Science, Innovation and Electronic Information Division. Canada: Ministry of Industry.

Coviello, N. and Munro, H. (1995). Growing the entrepreneurial firm. European Journal of Marketing, Vol. 29, No.7, pp. 49-61.

De Boer, M. a. M., M. (2005). Means-End Chain theory applied to Irish convenience food consumers."Options Mediterraneennes. Vol. 64, No. (2005/01), 59-73.

Deiters, J. and Schiefer, G. (2012). Network Learning and Innovation in SME Formal Networks. Special Issue International Journal on Food System Dynamics, Vol 3, No 3, 2012, p. 201-213. ISSN: 1869-6945.

Donckels, R. and Lambrecht, J. (1995). Network and small business growth: an explanatory model. Small Business Economics, Vol. 7, No.4, pp. 273-289.

Fritz, M. and Schiefer, G. (2008). Food chain management for sustainable food system development: A European research agenda. Agribusiness. An International Journal 24 (4): 440-452.

Fuller-Love, N. and Thomas, E. (2004). Networks in small manufacturing firms. Journal of Small Business and Enterprise Development, Vol. 11, No.2, pp. 244-253.

Grunert, K.G., Grunert, S.C., Sørensen E., (1995). Means-end chains and laddering: an inventory of problems and an agenda for research. Mapp, The Aarhus School of Business, working paper no. 34.

Grunert, K.G., Harmsen H., Meulenberg M., Kuiper E., Ottowitz T., Declerck F., Traill B., Göransson G. (1997). A framework for analysing innovation in the food sector. In: Product and Process Innovation in the food industry (Eds.): Traill, B. and Grunert K.G. (Blackie Academic and Professional, London).

Gutman, J. (1982). A Means-End Chain Model Based on Consumer Categorization Processes.Journal of Marketing 46, Vol. 2, pp. 60—72.

Hakansson, H. and Snehota, I. (1989). No business is an island: the network concept of business strategy. Scandinavian Journal of Management, Vol. 4, No.3, pp. 187-200.

Hollendsen, S. (1998). The network model. From Global Marketing: A market-responsive approach. Prentice Hall Europe, pp. 49-51.

Keller, K.L. (1996). Building Brand Equity, Irwin, Chicago, IL.

MacGregor, R. C. (2004). Factors associated with formal networking in regional small business: some findings from a study of Swedish SMEs. Journal of Small Business and Enterprise Development, Vol. 11, No.1, pp. 60-74.

Malecki, E. J. and Tootle, D. M. (1996). The role of networks in small firm competitiveness. International Journal of Technology Management, Vol. 11, pp. 43-57.

Menrad, K. (2004 a). Innovations in the food industry in Germany. Research Policy 33, 845-878.

Netgrow DoW (2010). Description of Work "Netgrow project". Internal document.

Netgrow Project (2013a). Deliverable D6.3, Guideline Documents and Transcripts of Qualitative Data Collection. Prepared by TEAG.

Netgrow Project, (2013b). Deliverable D7.1a. Report: 'Analysis of the research results from the business perspective. Prepared by FV.

Premaratne, S. P. (2001). Networks. resources and small business growth: the experience in Sri Lanka. Journal of Small Business Management. Vol.39, No. 4, pp. 363-371.

Reynolds, T. J. and Gutman, J. (1988). Laddering theory, method, analysis, and Interpretation. Journal of Advertising Research, Vol. 28, 11-31.

Reynolds, T. J., and Olson, J. C. (2001). Understanding consumer decision making: The means-end approach to marketing and advertising strategy. Mahwah, NJ: Lawrence Erlbaum.

Reynolds, T.J., Gengler, C.E. and Howard, D.J. (1995). The means-end analysis of brand persuasion through advertising. International Journal of Research in Marketing, May, pp. 257-266.

Rokeach, M.J. (1973). The Nature of Human Values, Free Press, New York, NY.

Senker, J. (1995). Networks tacit knowledge in innovation. Economies et Sociétés, Vol. 29, No. 9, 99-118.

Sherer, S. A. (2003). Critical Success Factors for Manufacturing Networks as Perceived by Network Coordinators. Journal of Small Business Management, Vol. 41, No. 4, pp. 325-345.

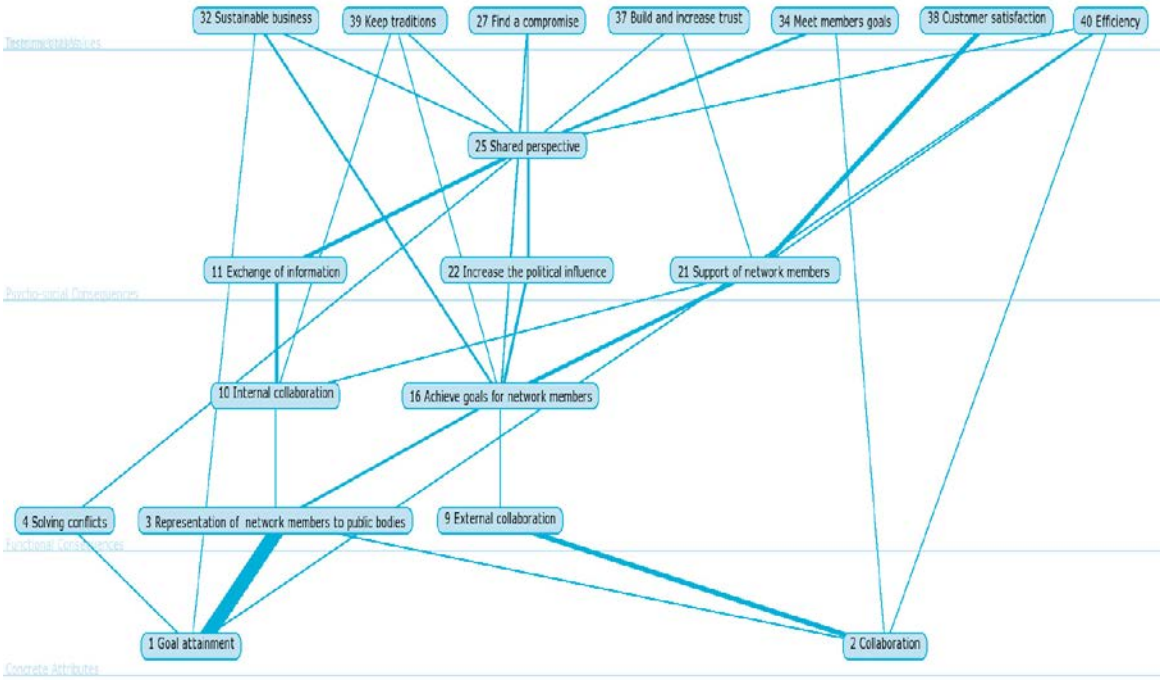
Wansink, B. (2000). New techniques to generate key marketing insights. Journal of Marketing Research, Vol. 12, No. 2, 28-36.

Wansink, B. (2003). Using laddering to understand and leverage a brand's equity. Qualitative Market Research. An International Journal, Vol. 6, No. 2, pp.111 – 118

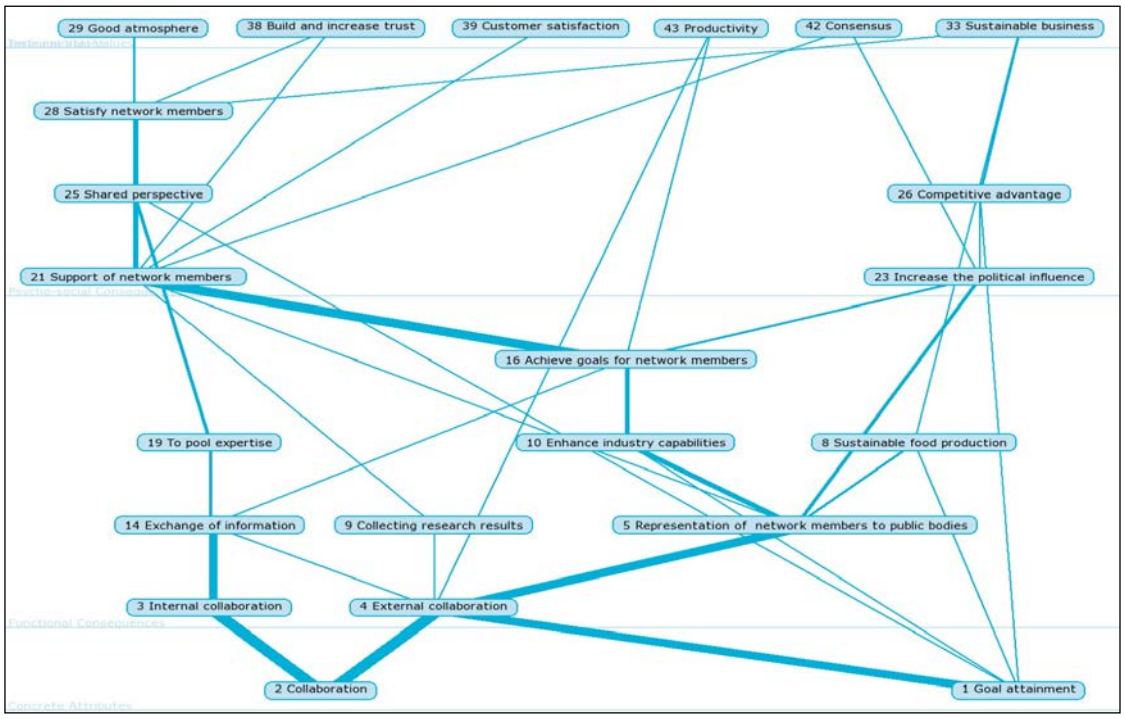
Young, S., Feigin, B. (1975). Using the Benefit Chain for Improved Strategy Formulation. Journal of Marketing, Vol. 39, No. July, 72-74.

Appendixes

Appendix 1: Hierarchical Value Map “Network managers”



Appendix 2: Hierarchical Value Map “Knowledge providers”



Appendix 3: Hierarchical Value Map “Policy Makers”