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Daniela Grudinschi

STRATEGIC MANAGEMENT OF VALUE NETWORKS: how to create value in cross-sector collaboration and partnerships

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ABSTRACT

Daniela Grudinschi
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Cross-sector collaboration and partnerships have become an emerging and desired strategy in addressing huge social and environmental challenges. Despite its popularity, cross-sector collaboration management has proven to be very challenging. Even though cross-sector collaboration and partnership management have been widely studied and discussed in recent years, their effectiveness as well as their ability to create value with respect to the problems they address has remained very challenging. There is little or no evidence of their ability to create value. Regarding all these challenges, this study aims to explore how to manage cross-sector collaborations and partnerships to be able to improve their effectiveness and to create more value for all partners involved in collaboration as well as for customers.

The thesis is divided into two parts. The first part comprises an overview of relevant literature (including strategic management, value networks and value creation theories), followed by presenting the results of the whole thesis and the contribution made by the study. The second part consists of six research publications, including both quantitative and qualitative studies. The chosen research strategy is triangulation, as the study includes four types of triangulation: (1) theoretical triangulation, (2) methodological triangulation, (3) data triangulation and (4) researcher triangulation. Two publications represent conceptual development, which are based on secondary data research. One publication is a quantitative study, carried out through a survey. The other three publications represent qualitative studies, based on case studies, where data was collected through interviews and workshops, with participation of managers from all three sectors: public, private and the third (nonprofit).

The study consolidates the field of “strategic management of value networks,” which is proposed to be applied in the context of cross-sector collaboration and partnerships, with the aim of increasing their effectiveness and the process of value creation. Furthermore, the study proposes a first definition for the strategic management of value networks. The study also proposes and develops two strategy tools that are recommended to be used for the strategic management of value networks in cross-sector collaboration and partnerships. Taking a step forward, the study

implements the strategy tools in practice, aiming to show and to demonstrate how new value can be created by using the developed strategy tools for the strategic management of value networks.

This study makes four main contributions. (1) First, it brings a theoretical contribution by providing new insights and consolidating the field of strategic management of value networks, also proposing a first definition for the strategic management of value networks. (2) Second, the study makes a methodical contribution by proposing and developing two strategy tools for value networks of cross-sector collaboration: (a) value network mapping, a method that allows us to assess the current and the potential value network and (b) the Value Network Scorecard, a method of performance measurement and performance prediction in cross-sector collaboration. (3) Third, the study has managerial implications, offering new solutions and empirical evidence on how to increase the effectiveness of cross-sector collaboration and also allow managers to understand how new value can be created in cross-sector partnerships and how to get the full potential of collaboration. (4) And fourth, the study also has practical implications, allowing managers to understand how to use in practice the strategy tools developed in this study, providing discussions on the limitations regarding the proposed tools as well as general limitations involved in the study.

Keywords: strategic management, value networks, strategy tool, value network mapping, conceptual framework, value creation, Value Network Scorecard, cross-sector collaboration, cross-sector partnership, performance measurement, performance prediction.

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Daniela Grudinschi

Lappeenranta

To my dear family

in Finland, Romania, Estonia and South Korea

FOOTPRINTS

One night, a woman had a dream. She dreamed she was walking along the beach with the LORD. Across the sky flashed scenes from her life. For each scene, she noticed two sets of footprints in the sand: one belonging to her, and the other to the LORD.

When the last scene of her life flashed before her, she looked back at the footprints in the sand. She noticed that many times along the path of her life there was only one set of footprints. She also noticed that it happened at the very lowest and saddest times in her life.

This really bothered her, and she asked the LORD about it. "LORD, you said that once I decided to follow you, you'd walk with me all the way. But I have noticed that during the most troublesome times in my life, there is only one set of footprints. I don't understand why, when I needed you most, you would leave me."

The LORD replied to her: "My precious child, I love you and would never leave you! During the times of trial and suffering, when you see only one set of footprints, it was then that I carried you."

- Unknown writer -

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PART II: PUBLICATIONS

1. Grudinschi, D., Kaljunen, L., Hokkanen, T., Hallikas, J. Sintonen, S. and Puustinen, A. (2013). **Management Challenges in Cross-Sector Collaboration: Elderly Care Case Study.** The Innovation Journal: The Public Sector Innovation Journal. Vol. 18, Issue 2, article 7.

2. Grudinschi, D., Hallikas, J. and Sintonen, S. (2014). **Relationship risk perception and determinants of the collaboration fluency of buyer-supplier relationships in public service procurement.** Journal of Purchasing and Supply Management, Vol. 20(2), pp. 82–91.

3. Grudinschi, D. Hallikas, J., Kaljunen, L., Puustinen, A. and Sinonen, S. (2015). **Creating value in networks: a value network mapping method to assess the current and the potential value network in cross-sector collaboration.** Accepted for publication in The Innovation Journal: The Public Sector Innovation Journal.

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6. Grudinschi, D., Kaljunen, L., Hallikas, J. and Sintonen, S. (2013). **A new method for measuring and predicting performance in partnerships' value networks: case elderly care.** Paper presented at Global Conference on Business and Finance, January 2–5, 2013, Las Vegas, Nevada, USA.

The contribution of Daniela Grudinschi to the publications:

1. Made the research plan and coordinated the writing of the paper. Collected and analyzed the qualitative data. Wrote most of the paper. Was mainly responsible for revising the paper during the journal review process.

2. Made the research plan and coordinated the writing of the paper. Wrote most of the paper, except the empirical part. Was mainly responsible for revising the paper during the journal review process.

3. Made the research plan and coordinated the writing of the paper. Developed the conceptual framework. Collected and analyzed the qualitative data. Wrote most of the paper. Was mainly responsible for revising the old version of the conference paper for submission to the journal for review process.

4. Made the research plan and coordinated the writing of the paper. Collected and analyzed the qualitative data in collaboration with co-authors. Wrote most of the paper.

5. Made the research plan and coordinated the writing of the paper. Developed the conceptual framework. Wrote most of the paper. Was mainly responsible for revising the old version of the conference paper for submission to the journal for review process.

6. Made the research plan and coordinated the writing of the paper. Collected and analyzed the qualitative data. Wrote most of the paper.

PART I: OVERVIEW OF THE DISSERTATION

1. INTRODUCTION

1.1. Research background and motivation

Cross-sector collaboration and partnerships have been emerging issues, especially in the social and health care domains (Koschmann, Kuhn and Pfarrer, 2012). In order to solve huge challenges that exist in those domains, there is a need for collaboration with people from many domains who have expertise from different areas. No single person can have such great expertise to be able to solve these complex problems (Kirby, 2014). Furthermore, the recent global financial and economic crises have advanced even more the need for cross-sector collaboration (Stuckler et al., 2010), due to the global challenges involved.

Although a lot of cross-sector collaboration initiatives and partnerships have occurred in the social domain, for addressing complex social problems, their effectiveness and the impact of collaboration is still lacking. Their ability to create value with respect to the problems they address is very challenging (Koschmann, Kuhn and Pfarrer, 2012). More value should be created through collaboration. In many cases, in the public sector, speaking about partnerships is just policy-driven rhetoric, but in reality, the collaboration is poorly managed (Carnwell and Buchanan, 2008). To be able to increase the effectiveness of cross-sector collaboration, there is a need to manage it strategically through partnerships. Strategy tools are also needed that can help partnership managers when implementing the strategies (Jarzabkowski and Kaplan, 2014).

A value network is a concept used in collaboration and partnerships. It describes the exchange of value between partners while collaborating (Allee, 2008). When people from different domains and different organizations collaborate, they offer some kind of value to each other, or in other words, they derive different kinds of benefits from their partners through collaboration. The motivation to collaborate increases if greater benefits are received during collaboration and new value is created for all partners this way (Grudinschi, 2011). In order to create new value in networks, there is a need for the strategic management of value networks. This study focuses on the strategic management of value networks, investigating how new value can be created in cross-sector partnerships.

1.2. Research context: cross-sector collaboration and partnerships in social and health care domains

Firstly, it is necessary to clarify two main concepts used in this study: collaboration and partnership. Although collaboration and partnership are important topics in the social and healthcare domains, the use of these terms still causes confusion. Often they are used interchangeably (Glazer, Alexandre and Reid Ponte, 2008; Carnwell and Buchanan, 2008), but in fact, they are two distinct concepts, with collaboration being a component of a complete partnership. Cahill (1996) describes the collaborative relationship as a pyramid, in which the partnership is the top of the pyramid. Collaborative relationships evolve gradually in this order: (1) involvement, (2) collaboration, (3) participation and (4) partnership (Cahill, 1996). Therefore, partnership can be described as the highest level of a collaborative relationship. It has been proven that in many cases, collaboration and partnerships, especially in the public domain, are merely rhetorical and policy-driven and are far from the real aim of partnership (Carnwell and Buchanan, 2008).

Collaboration implies informal relationships, which do not ensure equality among the parties involved (Gardner, 2005). Collaboration is about sharing information between stakeholders (Lindeke and Sieckert, 2005). Unlike collaboration, partnerships imply formal and structured relationships between equal partners. Equality makes reference to power, responsibilities, privileges, and mutual decision-making regarding common goals and objectives (Feenstra et al., 2006). A true and solid partnership requires effective management to ensure the effectiveness of collaboration and to maintain successful relationships (Glazer, Alexandre, and Reid Ponte, 2008).

Cross-sector collaboration and partnerships in the social domain have been studied widely in recent years (McCann, 1983; Gray, 1989; Waddock, 1991; Huxham and Macdonald, 1992; Huxham, 1993; Austin, 2000; Wymer and Samu, 2003; Warner and Sullivan, 2004; Selsky and Parker, 2005; Galaskiewicz and Colman, 2006; Seitanidi, Koufopoulos and Palmer, 2010). Cross-sector partnerships, collaboration and alliances are formed between organizations from

public, private and third (nonprofit) sectors. There are four types of cross-sector partnerships: (1) public-private partnership (PPP), i.e., the partnership between government organizations and business; (2) public-nonprofit partnership; (3) private-nonprofit partnership and (4) public-private-nonprofit partnership, i.e., a partnership where all three sectors work together on a social issue (Seitanidi, Koufopoulos and Palmer, 2010). This study focuses on the collaboration and value network between all three sectors: public, private and third (nonprofit). The studied domains are health care and social issues in Finland.

When different organizations engage in collaboration, a common goal brings them together (Allee, 2008). In cross-sector collaborations for the health care and social issues investigated in the case studies from this research, the common goals were as follows: providing better health care and welfare services for the elderly (Grudinschi et al., 2013), increasing the effectiveness of hospice services, providing better child welfare foster care services (Grudinschi, Sintonen and Hallikas, 2014) and increasing the effectiveness of public services procurement from the health care and social domains. Besides the common goal, every partner has its own goals when engaging in collaboration. Cross-sector collaborations are usually characterized by contradictions and conflicts between partners due to the incompatible goals, objectives and values that every sector has (Shaffer and Hilman, 2000).

The incompatibility of partners' goals in cross-sector collaboration is due to the huge differences that exist between the mission and values of public, private and nonprofit organizations. The fundamental difference between public and private organizations is the context in which they operate. Private organizations are profit-driven, where fees are paid directly by customers (Boyne, 2002). Their main objective is to increase profit, and their main constraints are imposed by the economic system (Dahl and Lindblom, 1953). On the other hand, public organizations are funded largely through taxation, and they are controlled by the political system. While private organizations have one main goal (to increase profit), public organizations are driven by many different and complex goals (which relate mostly to the efficient use of funds and minimizing costs). Public organizations are pushed and pulled in different directions by different policies and political objectives. For that reason, the goals of public organizations are usually vaguer than those of their partners from the private sector (Boyne, 2002).

Alternatively, nonprofit organizations are driven mostly by moral values: cheerfulness (light-heartedness), altruism (a desire to work for the welfare of others), or forgiveness (willingness to pardon others) (Lyons, Duxbury and Higgins, 2006). Their goals are quite different from those of public and private organizations. Moreover, the motives for engaging in cross-sector collaboration are directly related to every organization's own goals. Everyone must get some benefits from collaboration to be motivated to engage in collaboration and to be committed in collaborative activities (Grudinschi et al., 2013). Otherwise, the motivation to collaborate decreases or even disappears.

The benefits partners get from collaboration result from the value network. A value network is any group of people or organizations that work together and exchange tangible or intangible value (Allee, 2008). Due to the fact that the organizations from public, private and nonprofit sectors have quite different goals, as well as expectations of what they can get from collaboration (Boyne, 2002), the value (benefit) they get from collaboration is very different as well. A value network not only takes into account the economic value that is increased through collaboration (i.e., tangible value, like new contracts), but the intangible value (knowledge and intangible benefits, like increasing brand recognition or reputation) that is created through collaboration has much more impact on the organizations (Allee, 2008). When developing a value network strategy, it is very important to understand the shared goals and the values of the network (Allee, 2008). Furthermore, to be able to create more value through collaboration, there is a need for the strategic management of value networks in cross-sector collaboration.

1.3. Research gaps and research objectives

The concept of a value network was introduced in the business domain since companies do not operate in the traditional way anymore, the aim being to increase their competitive advantage (Porter, 1985). Today, to be competitive and to operate efficiently in their fields of activity, companies are often organized more like business networks. A company that has few employees may have a value network that includes a huge number of suppliers and other members they collaborate with (Allee, 2002). There has been an increasing interest in the network perspective,

as people are willing to capture value by adopting new ways of doing business while increasing their business relationships as well (Allee, 2008).

Early discussions on value networks were focused on supply chains. Different kinds of frameworks, scorecards and supply chain models were used to describe the supply chain networks (Parolini, 1999; Bovet and Martha, 2000). Later on, Benkler (2006) advanced the concept of value networks, introducing the value analysis approach. His value analysis focused mainly on internet-based social production models. A closer value network question was drawn by Zuboff (2002) with the discussion of intangibles and their role in federated support networks. Thereafter, a deeper value network analysis (VNA) was introduced by Allee (2008), linking value creating networks to financial and nonfinancial scorecards. Furthermore, Allee's value network analysis provides understanding of value creating roles and relationships, explaining how to realize value more effectively and how to utilize tangible and intangible assets to create value.

However, the *strategic management of value networks is an unexplored academic field*. Only a few studies (e.g., Biem and Caswell, 2008) approach value network analysis from the perspective of strategic management (by linking the analysis with organization strategy). Moreover, the term "strategic management of value networks" was not used earlier in the academic literature. The value network approach was discussed in a limited way in the context of cross-sector collaboration. Only a few studies touch the subject of value network or value creation in cross-sector collaboration (e.g., Sagawa and Segal, 2000; Bryson, Crosby and Stone, 2006; Crosby and Bryson, 2010; Koschmann, Kuhn and Pfarrer, 2012). Generally, strategic management refers to the actions taken by general managers with the aim of improving the performance of the organizations they lead (Nag, Hambrick, and Chen, 2007). In a value network, the collaboration performance increases when new value can be created. But to create value in networks, *there is a need for the strategic management of value networks.* The aim of this study is to focus on this uncovered and challenging issue and also to propose a first definition for strategic management of value networks in partnerships.

Additionally, *cross-sector partnerships management is challenging and ineffective*, and there is little evidence of the ability of cross-sector partnerships to create value in the social domain (Koschmann, Kuhn and Pfarrer, 2012). *Strategy management visual tools are needed* to help managers to implement strategies and to create value (Meyer, 2013). As Jarzabkowski and Kaplan (2014) argue, visual analysis will be a crucial topic of future research on strategy tools, because *visual research methods are not yet established in management*. There is a need for visual tools when developing strategies together with people who come from different sectors of activity and different "worlds" (Dougherty, 1992). They must find a way and a "common language" to overcome interpretative barriers that exist between different sectors of activity (Stenfors et al., 2007; Spee and Jarzabkowski, 2009; Jarzabkowski and Kaplan, 2014).

Furthermore, as collaboration and partnerships have become strategic issues for organizations in order to compete in a dynamic environment, new tools are needed to cope with the challenges that occur in these circumstances (Jarzabkowski and Kaplan, 2014). Network characteristics have to be considered in the strategy tools used for these special modes of interaction. New strategy tools for networked organizations have been introduced in the last few years (e.g., the Network Scorecard framework; Varamäki, 2008). However, *strategy tools for cross-sector collaboration have not been developed yet.*

In trying to fill the research gaps discussed above, the main objective of this study is to investigate how cross-sector collaboration in the social and health care domains can be more effective and how to create new value in such collaboration. The objective of the study can be divided into two:

- **Objective 1**: The study aims to *consolidate the field of "strategic management of value networks,"* more specifically in the context of cross-sector collaboration and partnerships in the health care and social domains, showing that new value can be created through the strategic management of value networks. Starting by identifying the challenges that exist in the management of cross-sector collaboration (*Publication 1*), the study explains and demonstrates how cross-sector collaboration can be enhanced (*Publication 2*) as well as showing the need for the strategic management of

cross-sector partnerships through the value networks involved in them. Moreover, the study aims to *propose a first definition for the strategic management of value networks* in partnerships.

- **Objective 2**: In order to understand better how new value can be created in cross-sector collaboration and partnerships, the study aims to propose and *develop two visual tools for the strategic management of value networks* in cross-sector partnerships. The first tool enables managers to assess the current and the potential value network, if the collaboration is properly managed (*Publication 3*). The second tool, namely, the Value Network Scorecard, is a visual strategy tool, which has its roots in the strategy maps and organization's Balance Scorecard (Kaplan and Norton, 1992), extending the concept to networked organizations and value networks (*Publication 5*). To be able to understand how the proposed tools must be used in practice by managers, concrete examples and case studies are offered (from *Publication 4* through *Publication 6*), where the applicability of the tools in practice is explained step by step.

1.4. Research questions

In this study, the main research question to be answered is, how can the value networks of cross-sector collaboration and partnerships be strategically managed in order to create value?

The main research question can be divided into four sub-questions, as follows (table 1):

Table 1: The research questions and the problem of the study

Main research question: **HOW CAN VALUE NETWORKS OF CROSS-SECTOR COLLABORATION AND PARTNERSHIPS BE STRATEGICALLY MANAGED IN ORDER TO CREATE VALUE?**			
1st sub-question: ***RQ1*** **What are the management challenges in cross-sector collaboration?**	***2nd sub-question:*** ***RQ2*** **How can cross-sector collaboration be enhanced?**	***3rd sub-question:*** ***RQ3*** **How can new value be created in cross-sector collaboration and partnerships?**	***4th sub-question:*** ***RQ4*** **How can partnerships' value networks be strategically managed?**

In order to understand how research questions lead to reach the overall research objectives, Figure 1 outlines the link between research questions and outputs of the study.

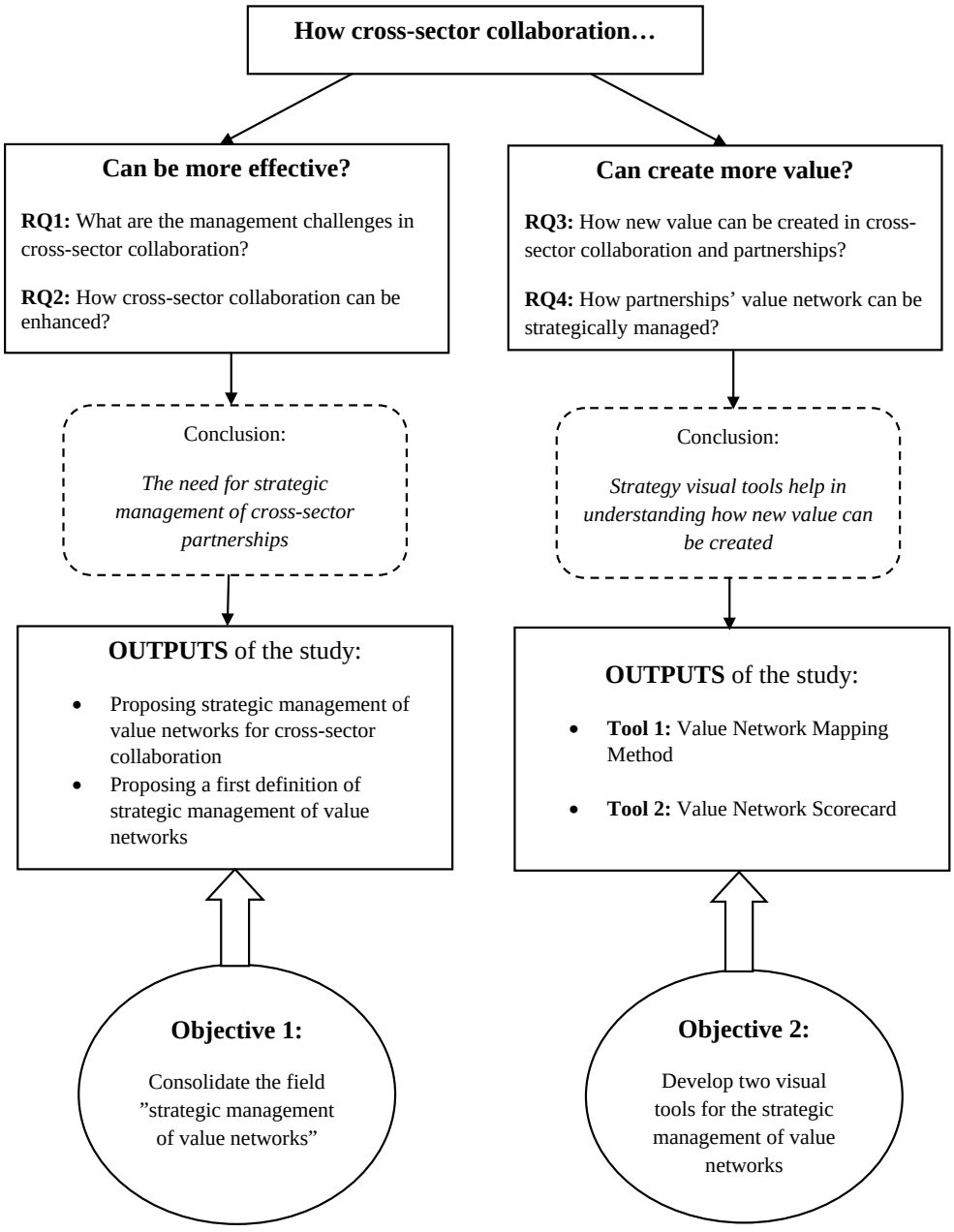

Figure.1. The link between research questions and research objectives

1.5. Outline of the study and the linkages of the publications with the research questions

This thesis consists of two distinct parts. In the introductory part of the thesis (Part I), the research objectives and research questions are first presented. Thereafter, a theoretical background to the study is introduced, which integrates three major theoretical fields: strategic management, value networks and value creation theories. Then the methodology, research strategy and research design are presented. The research strategy used in this study is triangulation, which includes four types of triangulation: theoretical, methodological, data and researcher triangulation.

Quantitative and qualitative approaches were used, collecting data through survey, interviews and workshops. For the conceptual development, literature reviews were done. In the end of the first part, the summary and the results of the publications are briefly presented, followed by the conclusion and discussions of the study. The contribution of the study and the future research are underlined in the last chapter. In more detail, the structure of the first part of the study is presented in figure 2.

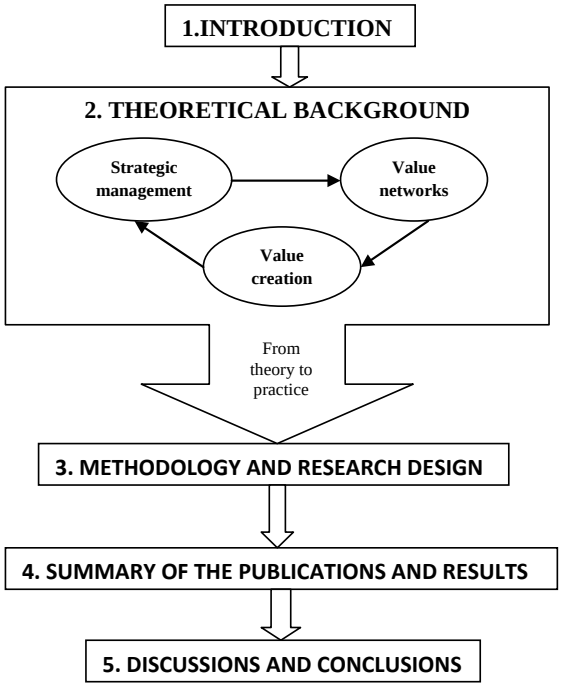

Figure 2. Outline of the study

The second part of the study (Part II) consists of six separate publications. Each publication addresses a distinct sub-question, presented in the introductory part of the study. Figure 3 presents the linkage of the publications with the sub-questions of the study.

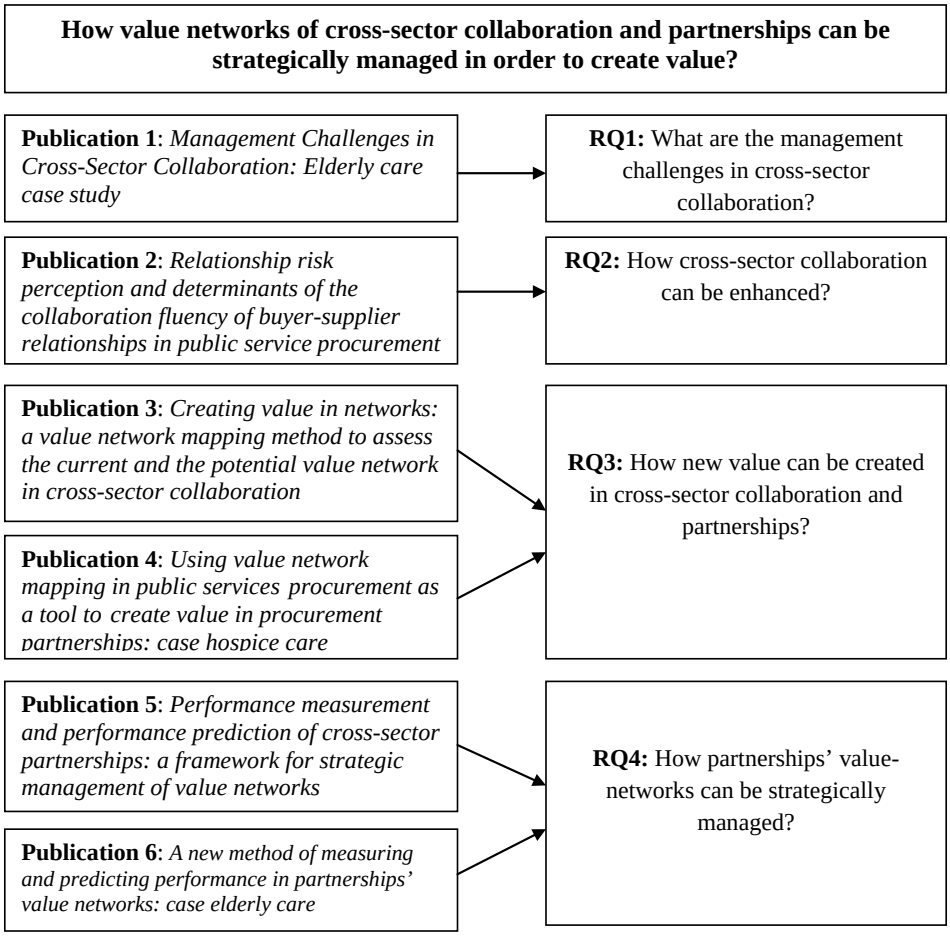

Figure 3. The linkage of publications with research questions

1.6. Definitions of the key terms

Strategic management: *"The field of strategic management deals with the major intended and emergent initiatives taken by general managers on behalf of owners, including utilizations of resources, to enhance the performance of firms in their extended environments"* (Nag, Hambrick, and Chen, 2007, p.944).

Value network: *"Any web of relationships that generates tangible and intangible value through complex dynamic exchanges between two or more individuals, groups, or organizations"* (Allee, 2002, p.6).

Collaboration: *"The linking or sharing of information, resources, activities, and capabilities by organizations to achieve jointly an outcome that could not be achieved by the organizations separately"* (Bryson et al., 2009, p.6).

Cross-sector partnership: *"People and organizations from some combination of public, business and civil constituencies (non-profits) who engage in voluntary, mutual beneficial, innovative relationships to address common societal aims through combining their resources and competencies"* (Gribben, Pennington and Wilson, 2001, p.8).

2. THEORETICAL BACKGROUND

2.1. Strategic management field and strategy tools

The field of strategic management has evolved since 1979, when Schendel and Hofer (1979) proposed and introduced a new paradigm, centered on the concept of strategy, instead of the earlier used concept, business policy (Learned et al., 1965). Historical progression and analysis of the intellectual progression of the strategic management field were conducted in some studies (Summer et al., 1990; Rasmos-Rodrigues and Ruiz-Navarro, 2004).

Having a significant impact on the field of strategic management were works that introduced new concepts like competitive advantage (Porter, 1985), a resource-based view of the firm (Wernerfelt, 1984), transaction-cost economics (Williamson, 1975, 1985), core competence (Prahalad and Hamel, 1990) or knowledge assets (Teece, 2000). Traditionally, the strategy of the firm concentrates on the organization's own resources and competences; Thomson (1967) was the first one who introduced the concept of cooperative strategies, through strategic alliances and networks in the field of strategic management.

Beside the variety of concepts present in the strategic management field, quite varied definitions of strategic management have also been offered in the scientific literature over the years (Nag, Hambrick and Chen, 2007). Some definitions refer to the importance of organizational success and performance (Schendel and Hofer, 1979; Rumelt et al., 1994; Bowman et al., 2002), and others refer to external environments or to internal resources (e.g., Bracker, 1980; Jemison, 1981), while others refer to strategy implementation (Van Cauwenbergh and Cool, 1982). Nag, Hambrick and Chen (2007), in their study about the definitions of strategic management, introduced a holistic definition of strategic management that contains all the perspectives presented in earlier definitions.

When designing and implementing a strategy across multiple managerial functions and organization boundaries, a "common language" is needed (Jarzabkowski and Kaplan, 2014). Many studies have underlined the importance of a "common language" when fostering

conversation across different managerial levels (Floyd and Lane, 2000; Mantere and Vaara, 2008; Jarzabkowski and Balogun, 2009). Some scholars proposed that strategy tools play the role of the "common language" in strategic management conversation (Stenfors et al., 2007: Spee and Jarzabkowski, 2009).

Strategy tools enable managers to engage in strategy making; this does not mean that tools affect right or wrong decisions of managers (Jarzabkowski and Kaplan, 2014), but rather that they allow them to interact and negotiate on their different interests (Kaplan, 2008). Additionally, strategy tools offer a clear visual representation of an organization's objectives (Jarzabkowski and Kaplan, 2014). Strategy tools can have a positive effect on performance (Wooldridge and Floyd, 1990); they can also be used for the realignment of resources or for mapping the interests of different actors who have important roles in strategy implementation (Denis et al., 2006).

Many strategy tools have been developed over years, and some of them have been widely adopted by many organizations. Some tools, like the Strengths, Weaknesses, Opportunities, Threats (SWOT) framework (Andrews, 1971), Porter's Five Forces (1980) or the Balanced Scorecard (Kaplan and Norton, 1992), are among the widely accepted and used strategy tools. As collaboration and partnerships have become strategic issues for organizations in order to compete in the dynamic environment, new tools are needed to cope with the challenges that occur in these circumstances (Jarzabkowski and Kaplan, 2014).

2.2. Value network

The network view of economy was introduced by Hakanson and Johanson (1992) in their work about industrial network perspectives. In their view, an industrial network is a complex network that consists of processes, interorganizational relationships and positions in the network (Easton, 1992). Due to the complexity and dynamics that exist in the industry, it was assumed that the network is unmanageable (Hakanson and Johanson, 1992). There are also theoretical perspectives that view the networks as manageable entities (Normann and Ramirez, 1993; Gulati, 1998; Stabell and Fjeldstad, 1998), called "strategic networks." In this view, the success of a strategic network can be achieved through the flexibility of management and a high degree of

trust and information exchange between network actors as well as through conflict management (Gulati, 1998).

More concrete concepts on value networks were proposed by another line of researchers (Allee, 2002). They introduced the notion of value creating systems, focusing on what is being exchanged in the network. Many organizations join together into purposeful networks to support the achievement of specific tasks or goals and to create economic and social value. A value network is defined as any web of relationships with people that have specific roles in the network, who exchange tangible and intangible value during their interactions (Allee, 2002). Allee's concept of the value network is derived from the knowledge-based view of the firm, emphasizing the role that intangible assets play in value creation. Moreover, Benkler (2006) advanced the concept of value networks, introducing a value analysis approach.

A more in-depth value network question was drawn by Zuboff (2002) with the discussion of intangibles and their role in federated support networks. Thereafter, a deeper value network analysis (VNA) was introduced by Allee (2008), linking value creating networks to financial and nonfinancial scorecards. Allee also underlines the importance of intangible assets in the process of value creation, because, she argues, intangibles are at the heart of all human activity.

Value is created through the interaction of people. An individual or a group of people cannot manage the activity of the whole network. But people can and must be skilled enough to analyze the value they receive through collaboration as well as the value they offer to other network partners during the collaboration process (Allee, 2002). Value network analysis can be used in describing the dynamics of value creation within business networks, group works and organizations. In the analysis, a clear distinction is made between tangible and intangible value exchanges and the way they support the achievement of outcomes.

The value network analysis can be done in two directions: for value *inputs* and for value *outputs.* The impact of value inputs can be analyzed, allowing people to be aware of the tangible and intangible value they receive from collaboration. Being aware of the positive effect of collaboration can motivate people to be fully committed in the collaboration activity

(Grudinschi, 2011). Similarly, if a partner feels that they do not receive any value from collaboration, they are quite likely to withdraw (Allee, 2002). On the other hand, when analyzing the output value, a partner may find out that he doesn't bring any value to the network. This can result in his probable isolation or even expulsion from the network. The analysis of output value can help people to increase their contribution to the network, allowing them to strengthen the relationships with their network partners (Allee, 2002). The analysis of a value network is therefore a powerful way of creating more value in the network.

In order to be able to do the value network analysis, value network mapping should first be done. Mapping the value network is visualizing the exchange of value between network partners. As a strategic visual tool, value network mapping is a powerful mechanism that helps in predicting and influencing performance (Value Networks, 2009) by monitoring the network and creating new value. Visual strategic maps were introduced by Kaplan and Norton (2000), aiming to improve an organization's performance by analyzing how intangible assets can be converted into tangible outcomes.

The value network mapping technique inherits elements from the traditional business process mapping, but it focuses on identifying the flow of intangible assets of participants in the network (Allee, 2006; 2008). Allee (2006) introduced a value network mapping technique that uses three basic elements:

(1) Roles: who the participants (partners) in the network are and what their distinct functions are in the collaborative activity. The roles are represented in the map using *ovals*.

(2) Transactions: network participants (roles in the map) execute transactions while they collaborate. Transactions are represented on the map using *arrows* that connect the roles. Transactions are flows of tangibles and intangibles, represented as arrows between roles. The transactions, expressed as solid green lines, represent tangible flows, while red dashed lines represent intangible flows (figure 4).

(3) Deliverables: represent the actual "thing" that roles exchange while collaborating. The deliverables can be physical (e.g., documents) or nonphysical (e.g., verbal messages or specific types of knowledge, information or advice).

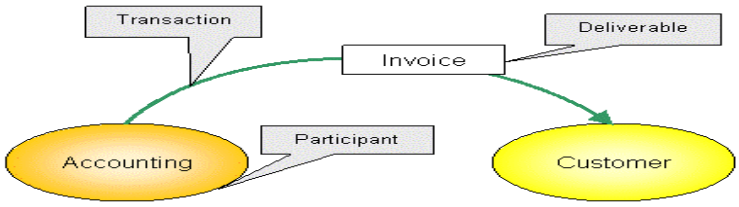

Figure 4. The basic elements used when mapping the value network (Allee, 2006)

Figure 5, below, presents a concrete example of a value network map for the collaboration between public, private and third sectors (as participants/partners/roles in the network). From the map it can easily be seen that the flow of value between the public and the third sector is rich (there are many transactions/arrows between them). The third sector offers to the public sector tangible values such as “Specific services” and “Free labor” (solid lines in figure 5), and it also offers intangible values, “Consulting” and “Experience through projects” (dashed arrows in figure 5). Similarly, the public sector offers to the third sector, as intangible values, “Law expertise” and “Service need expertise.”

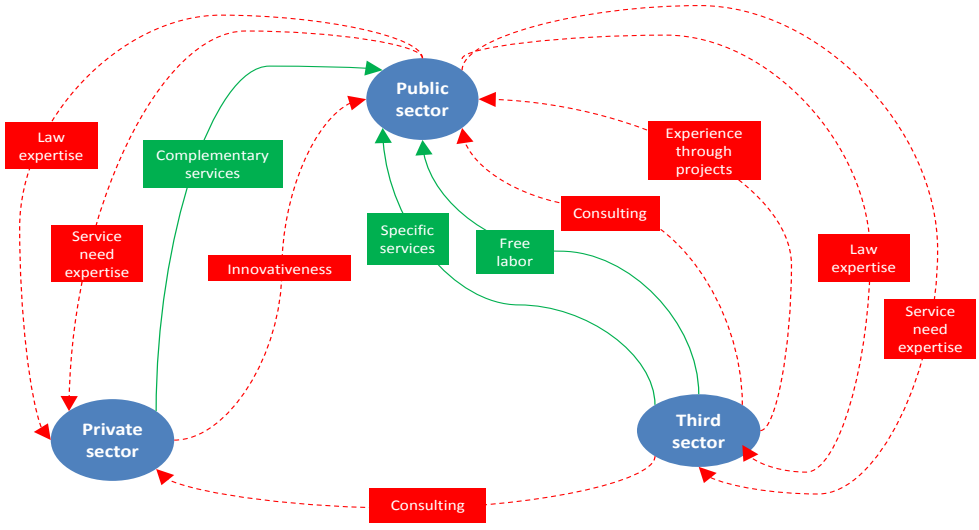

Figure 5. An example of a value network map for the collaboration between public, private and third sectors (Grudinschi, 2011)

From the value network map it can also be observed that the flow of value between the private and third sectors is very poor. There is only one deliverable between them; the third sector offers "Consulting" to the private sector, while the private sector doesn't deliver any value to the third sector. The equilibrium in the flow of value between public and private sectors can also be observed from the map. The public sector offers "Law expertise" and "Service need expertise" to the private sector, and the private sector brings "Complementary services" and "Innovativeness" as value attributes to the public sector while they collaborate.

2.3. Value creation - the core of strategic management of value networks in cross-sector collaboration

Value is not created by individuals that act in isolation but through the collaboration and cooperation among different peoples and factors (Freeman et al., 2004). In value networks, value is created through the interaction of people during the collaboration process. Generally, the main purpose of strategic planning is to create value (Moore, 2000). Similarly, the main goal of strategic management of value networks is to find ways of creating more value for all network partners as well as for customers.

In cross-sector collaboration for social and health care issues, creating value for customers means creating social value (Brickson, 2007; Bryson, 2011). Social value is created while advancing the social interests at a reasonable cost. At a very general level, creating value means enhancing the quality of life as well as the pursuit of happiness for all citizens. More specifically, creating social value, means producing a high quality of public services or producing policies, enterprises, projects and programs as well as social, political, cultural or technological infrastructure (Bryson, 2011). Creating social value has become a strategic objective not only in the public sector but in the private sector as well, striving to balance profit and the public good. New economic and business models that leverage cross-sector collaboration have evolved, aiming to create value by solving different kinds of economic, social or environmental problems.

Similarly, in value networks, creating value for all participants means enhancing the level of satisfaction for all partners as an output of the collaboration process. All network participants must get enough benefits from the collaboration; otherwise, the motivation to collaborate may decrease or even disappear (Grudinschi et al., 2013). Benefits for every participant mean the created and captured value during collaboration (either tangible or intangible value). Some scholars view value creation (especially social value) as the responsibility of individuals, groups, organizations or even the entire community (Bryson, 2011). Other perspectives on value creation put this responsibility on managers (Moore, 2000). Value is created in collaboration through the ability of combining the resources and capabilities of partners in some unique and efficient way (Ritvala et. al, 2014). These combinations can be achieved through the strategic management of value networks.

The following will discuss in more detail what the "*value*" concept means in the context of value networks and what kind of value can be created in value networks. Furthermore, "*key resources*" are introduced and discussed, because they are key concepts used in the process of value creation in strategic partnerships and value networks (Austin, 2000, b).

2.3.1. Tangible and intangible value

In the strategic management of value networks view that is highlighted in this thesis, the main goal is to create more value and to maximize value for all network participants. Maximizing value for all partners seemed an impossible task when the concept of value was limited to economic value. In collaboration and network settings, value is a much broader concept. Argandona (2003) identified six different types of "value" that organizations can gain: (1) *economic extrinsic value*, which is created through the employees' collaboration; (2) *intangible extrinsic value* (e.g., recognition, training); (3) *psychological intrinsic value* (such as satisfaction); (4) *intrinsic value* (in the form of acquisition of knowledge and capabilities); (5) *transcendent value* (consisting of acquisitions of virtues or vices) and (6) *value which consists of positive or negative externalities*, that is, value that is felt by external agents (e.g., the relationship between employees and the company may generate knowledge that spills over to

other people). When the aim is to create value in the network, all types of value have to be considered.

For more simplicity, in value networks, the value is classified into two types: tangible and intangible (Allee, 2008). In value network analysis, the easiest way to distinguish between a tangible and intangible transaction is not just simply based on the deliverable's physical nature but is based just on its *contractual* nature. Tangible value derives from a contractual transaction. Transactions that are not based on a contract are simply classified as intangibles. Thus, an intangible value is the result of a transaction that does not involve any contract between partners.

Tangible value is expressed on a value network map as a tangible exchange between partners. Tangible exchanges involve contractual goods, services and revenue. Additionally, this type of value may include other forms of contractual exchanges like invoices, receipts of orders, request for proposals, confirmations and payments (Allee, 2008). Knowledge products and services that generate revenue through a contractual agreement (e.g., reports) are also considered tangible exchanges. Similarly, knowledge and information exchange that supports the core product or service, but which is not contractual, is considered intangible exchange.

Intangible value, on the other hand, is expressed in the value network either as intangible knowledge or as an intangible benefit (Allee, 2008). Intangible knowledge includes strategic information, process knowledge, collaborative design work, technical know-how, joint planning activity or policy development. This kind of knowledge exchange builds the relationships between partners; the exchanges are not part of a contract, and they are rarely deliberately negotiated. Intangible benefits arise from the relationships with partners when a partner offers a "free service" or offers an advantage to the other partner with the expectation of gaining back another benefit. For example, a research organization can ask an expert for volunteer time in evaluating a project. Both the research organization and the expert gain some intangible benefit from their collaboration; the research organization got the unpaid expert work, while the expert may get prestige by affiliation with the organization.

2.3.2. Key resources: tangible assets, intangible assets and core capabilities

In value network literature and theoretical approaches to value creation, when discussing organizational resources, different types of resources can be identified. In the resource-based view, it is underlined that resources and capabilities are the basics of competitive advantage development and value creation (Penrose, 1959; Nelson and Winter, 1982; Wernerfelt, 1984; Barney, 1986, 1991; Teece et al., 1997). From the perspective of value creation, knowledge is the most strategically significant resource, but it is also the most problematic one, because of its intangibility (Spender and Scherer, 2007). In his discussion about individual and social knowledge, Spender (1994, 1996, and 2005) underlines the differences between organizational and individual resources. Individual resources point to resources embodied in individuals' knowledge (or core capabilities), while organizational resources include physical goods and specific assets (e.g., business model).

In value network analysis, Allee (2008) also distinguishes two types of exchanges between organizational resources: tangible and intangible assets. Tangible assets include physical goods and services or different types of contracts, while intangible assets include knowledge and information and other types of benefits, like reputation. Other perspectives on organizational resources classify resources into tangible assets and key resources (which include intangible assets and capabilities) (Barry et al., 2005). However, some scholars underline that there cannot be a unique and universal way of categorizing an organization's resources (Penrose, 1959/1995; Mahoney, 1995).

In the categorization of resources, some overlap can be observed. For example, in Spender's (1994, 1996, 2005) categorization, organizational resources consist of tangible assets and also organizational knowledge (e.g., business model), while individual knowledge is seen as an intangible asset embodied in individuals. Alternatively, Allee's view about intangible assets includes both individual knowledge and organizational knowledge (e.g., business model). To overcome this overlapping, in this thesis, the key resources of an organization are classified into three different types: *(1) tangible assets* (e.g., buildings), *(2) intangible assets* (e.g., reputation) and *(3) core capabilities* (e.g., know-how). All three types of resources are considered, because

in the process and mechanisms of value creation, they may have different and distinct roles due to their specific natures. Below, a concrete example explains how different types of resources may have different roles in value creation mechanisms.

When people engage in collaboration with other organizations, they are motivated by some goals. Everyone wants to get some benefits from collaboration. For example, organization A is a small company with a great innovation potential and technology know-how (which represents a core capability key resource), while organization B is a big company that has a good reputation in corporate social responsibility (which represents an intangible asset). Both companies want to collaborate with each other in order to get some benefits and to create and capture value. As equal partners, through a collaboration process, organization A can get a good reputation in corporate social responsibility, while organization B can access the needed technology know-how for a product development from organization A. An exchange of key resources between organization A and B is realized this way, and each organization creates value through collaboration. The following will discuss in more detail what the difference is between the three types of key resources considered in this thesis.

Tangible assets are those assets that have a physical form. Their value recognition can be found in the organization's balance sheet (Barry et al., 2005). They include buildings, land, machinery, physical goods, inventory or anything that has a long-term physical existence. Tangible assets contribute to the organization's current market value. However, the value of tangible assets decreases over time. Tangible assets can also be easily destroyed by environmental factors like natural disasters, fire or accidents. But tangible assets can more easily be sold to raise cash for the firm in cases of emergency. Nonetheless, the latest surveys confirm that in today's knowledge economy, only 6% to 30% of companies' value is obtained from tangible assets (Volkov and Garanina, 2007).

Intangible assets, by definition, are nonmonetary resources that have no physical substance but which can be identified (IAS 38). In the category of intangible assets can be included corporate reputation, brands, goodwill, business relationships, social capital, culture, values, social responsibility or sustainable business practices (Allee, 2008). Some intangible assets have a

limited life (such as goodwill, copyrights), while others have an unlimited life (e.g., trademarks). Unlike tangible assets, intangible assets cannot be destroyed by environmental factors, but some intangible assets (e.g., goodwill and reputation) can be destroyed by carelessness or in cases of business failure, as a side effect. Additionally, intangible assets and core capabilities can be used in rebuilding tangible assets when these have been destroyed.

Core capabilities (or intellectual assets) are embodied in the individuals of an organization. By definition, a core capability is a unique competence that an organization has that cannot be easily imitated and that can be reused in many production or business processes (Prahalad and Hamel, 1990). Core capabilities are the most important strengths that an organization has, and they provide the fundamental basis for value creation and added value. Core capabilities reflect the organization's collective learning, which involves communication and collaboration across organizational boundaries, coordination and integration of multiple skills, and streams of technologies. Core capabilities include technology know-how, business models and good relationships with customers and learning capacity or innovation capacity. One of the main goals of any organization is to build core competences, allowing the organization to get a competitive advantage or to be able to solve huge challenges and to create innovations. Capability building is also an outcome of strategic management, which requires high management skills (Draulans et al., 2003).

2.4. Theoretical approaches to value creation

This study is based on four core theories: (1) a resource-based view, (2) the stakeholder theory and the common good, (3) the knowledge accessing theory of strategic alliances and (4) economic governance, the organization of cooperation. The motivation in choosing these theoretical streams for the investigation of this study was that they support the examination in answering the research question of the study. The main rationale for choosing these theories is that they focus on collaboration as a strategy for value creation. Furthermore when the subject of the study includes complex issues, the recommendation is to combine and incorporate multiple relevant viewpoints to get a broader overview of the topic (Williamson, 1985; Ritala, 2010).

Value networks of cross-sector collaboration include very complex issues regarding value creation and require a broad analysis from multiple perspectives.

There are different theories that approach the process of value creation. Among the most popular theories are transaction cost economics (Coase, 1937; Williamson, 1985), game theory (Saloner, 1991; Brandenburger and Nalebuff, 1995), the resource-based theory of the firm (Penrose, 1959; Wernerfelt, 1984; Das and Teng, 2000b), the knowledge-based theory (Kogut and Zander, 1992; Grant, 1996; Spender, 1996; Teece et al., 1997, Teece, 2000), the dynamic capabilities view (Eisenhardt and Martin, 2000; Teece et al., 1997; Winter, 2003), stakeholder theory (Freeman, 1984) and the knowledge accessing theory of strategic alliances (Grant and Baden-Fuller, 2004). All these theories deal with different perspectives on value creation mechanisms, and some theories are the basis of the next developed theory on value creation (e.g., the knowledge-based view is the basis of the knowledge accessing theory for strategic alliances).

Focusing explicitly on these four theories in this study entails the exclusion of other potentially suitable theories. Many theories approach the mechanisms of value creation in the context of coopetition (collaboration and competition) (e.g., game theory, transaction cost economics), while other approaches to business networks examine business relationships between organizations (Håkansson, 1982; Turnbull et al., 1996; Ritter and Gemünden, 2003). However, some theories may overlap different approaches. The rationale of choosing all of these four theories (the resource-based view, the stakeholder theory, the knowledge accessing theory of strategic alliances and economic governance—the organization of cooperation) as the basis of this thesis, lies also in the different value creation mechanisms suitable for the context of cross-sector collaboration.

The resource-based view is seen in this study as a theoretical umbrella that incorporates knowledge and capabilities as the most important resources for value creation. There are different studies where linkages are suggested between core competencies and resource-based perspectives (Conner and Prahalad, 1996; Helfat and Peteraf, 2003; Peteraf and Bergen, 2003; Acedo et al., 2006). This study focuses on managing value creation and value creation

mechanisms. For these reasons, the resource-based theory is chosen as a theoretical basis for this study.

The logic of choosing stakeholder theory (Freeman, 1984) and its applicability to the common good (Argandona, 1998) is that the value network approach (the main topic of this study) emphasizes not only the process of value creation but also the important fact that every partner must gain value through the collaboration. In a similar vein, the stakeholder theory emphasizes the process of value distribution to all of an organization's stakeholders. In a value network, the participants are motivated to collaborate if they get some benefits (or, in other words, they absorb value) from other network participants, but in the same way, they must offer value to other partners. The value is dynamically created and exchanged in value networks, and equilibrium between absorbed and offered value is desired in the value network. A common goal also brings partners together in the collaboration process (Hansen, 2013). In cross-sector collaboration for social issues, the common goal is linked to the common good, the aim to create value.

In line with these issues, stakeholder theory addresses morals and ethics of organization management, underlying the notion that an organization should create and distribute value to all its stakeholders (including customers and competitors) (Freeman, 1984) and not only to its shareholders (owners), as in the neoclassical approach (Friedman, 1970). Additionally, this study involves the concept of the common good, because the context of the study is value networks of cross-sector collaboration in the social and health care domains. The common good, in this context, concerns a common social goal that must be achieved by the partners involved in cross-sector collaboration. With respect to this logic, stakeholder theory and the common good was chosen as one of the theories upon which this study is based.

The knowledge accessing theory of strategic alliance (Grant and Baden-Fuller, 2004) was seen as a suitable theory for this study because it focuses on alliances and partnerships. The theory underlines the importance of accessing the partners' knowledge in the process of value creation. Cross-sector collaboration in the social and health care domains involves very complex issues that require broad knowledge from many different domains in order to manage them. No one

single organization is able to have such broad expertise from many different domains. For this reason, collaboration with organizations and experts from different sectors is very important, in order to access the knowledge needed. The knowledge accessing theory of strategic alliances offers the informational basis for this study, which focuses on value creation in cross-sector collaborations and partnerships.

Similarly, the concept of economic governance was seen as suitable for this study because it emphasizes the importance of collaboration in the management of the common good (Ostrom, 2009) and for complex and nonstandard transactions (Williamson, 2009). With the same logic explained earlier, cross-sector collaboration deals with nonstandard and complex issues related to common social goals (seen as a "common good" in this study). For example, cross-sector collaboration for the public procurement of elder care services is a quite complex and nonstandard issue which requires broad knowledge and multi-level negotiations. Understanding the ways to collaborate, the rules that must be applied in such situations and how the partners' specific assets can be combined plays an important role in the process of value creation. Below, all of these theories will be presented in more detail.

2.4.1. Resource-based view

The resource-based view of the firm has become one of the most cited and influential works in the strategic management field (Kraaijenbrink et al., 2010). It aspires to explain how a firm's internal resources can contribute to value creation by its getting a sustainable competitive advantage over its rivals. Differences in firms' profits are based on the heterogeneity of resources and capabilities and the management's ability to use them efficiently (Penrose, 1959; Nelson and Winter, 1982; Wernerfelt, 1984; Barney, 1986, 1991; Teece et al., 1997). Resources and capabilities are embodied in individuals, the stakeholders of the firm, who can create and generate value (Garcia-Castro and Aguilera, 2014) if they are directed by rational and competent managers (Bromiley & Papenhausen, 2003; Leiblein, 2003).

The development of the resource-based theory started in 1984 with Wernerfelt's article published in the *Strategic Management Journal*. After that, contributions to the development of the theory

were made by many scholars: Rumelt (1984), Barney (1986a, 1986b, 1991a), Dierickx and Cool (1989), Conner (1991), Castanias and Helfat, (1991), Kogut and Zander (1992), Amit and Schoemaker (1993), Peteraf (1993), Conner and Prahalad, (1996), Teece et al., (1997) and Helfat and Lieberman (2002). The resource-based view was also the basis and starting point of several sub-branches and developments in the field, including the knowledge-based view (Grant, 1996; Kogut and Zander, 1992; Spender, 1996) and the dynamic capabilities view (Teece et al., 1997; Eisenhardt and Martin, 2000; Winter, 2003).

It must be noted that even if the resource-based view is considered to be a theory of the firm, there have been many critiques that argue that the theory doesn't explain the boundary of the firm (Peteraf and Barney, 2003; Barney, 2005; Barney & Clark, 2007; Kraaijenbrink et al., 2010). The resource-based view focuses on strategic collaboration with other organizations. In a dynamic and complex environment, an individual organization is not able to acquire all of the knowledge needed to develop advanced products and services. Interorganizational collaboration has often been proven to be a cost-efficient solution when it aims to find innovative solutions and to improve its performance in terms of organizing production (Grant, 1996; Grant and Baden-Fuller, 2004). Organizations need to reach outside their boundaries to find suitable partners in order to access and acquire the complementary and supplementary resources and capabilities needed for their performance development (Das and Teng, 2000b; Gulati et al., 2000; Grant and Baden-Fuller, 2004).

Additionally, the resource-based view underlines that management capabilities play an important role in the process of value creation. Even if the complementary and supplementary resources and capabilities are accessed and acquired during the process of collaboration, the bundling of resources and capabilities has a major impact (Dyer and Singh, 1998; Das and Teng, 2000b). The way in which acquired resources and capabilities are integrated and combined with the organization's own resources dictates the performance and the amount of value created (Hamel, 1991; Cassiman and Veugelers, 1998; Knudsen, 2007). Because the knowledge resources and capabilities are embodied in individuals (the stakeholders of the firm) (Garcia-Castro and Aguilera, 2014), the manager's capability to bundle in an efficient way all their resources affects

the process of value creation (Bromiley & Papenhausen, 2003; Leiblein, 2003). The next chapter will discuss in detail how the stakeholder view is presented in the context of value creation.

2.4.2. Stakeholder theory and the common good

Stakeholder theory was developed by Freeman (1984), and it was prized for overcoming the narrow, classical view (Friedman, 1970), which says that a company must be managed to fulfill the objectives of its shareholders by maximizing their economic value (Freeman, 2008b). Freeman argues that Friedman's view is a mistake and that it is not ethical that the profit of a company is distributed only among its shareholders. The profit of a company is the result of all the company's stakeholders' activity (including employees, clients and suppliers), and the objectives of the company should meet all the stakeholders' needs. The company must accept the challenge to take into account all its stakeholder needs. A company can succeed only if it aims to meet the needs of all its stakeholders, Freeman argues, because all stakeholders are impacted by the company's decisions and its activity.

But who are the stakeholders of a company? Freeman (1984) specifies that stakeholders are any group or individuals who are involved in the obtaining of a company's goals; they may either be affected by company decisions, or they may affect the company's goal achievement. A company has internal stakeholders (which include managers, owners and employees) and also may have a wide range of external stakeholders (customers, suppliers, creditors, society, government, and the local community, groups of interests, competitors and so on). When designing the strategy of the company, all stakeholders as well as their needs must be identified, and they must be taken into account in the decision making process. The value creation process should consider every single stakeholder, so that everyone is satisfied with the decisions made by the company regarding the distribution of value. Without stakeholders, the companies go bankrupt.

Argandoña (1998) linked the stakeholder theory to the theory of the common good, arguing that stakeholder theory could be founded on the common good concept. The common good is everything that is common to all and is good for more than one person. A common good is a good of society but at the same time is the good of its members. In a broader view, the common

good includes the law, or the institutions, such as army, health care, social welfare, education, culture etc. The common good can also be seen as the aid the society gives to its members to allow them to achieve their goals (e.g., the law that assures the rights of people). Any individual can contribute to the common good of society by collaborating with others for that purpose.

Going back to stakeholder theory, it must be remarked that the main duty of each stakeholder in a company is to do his or her job in achieving the company's goals. Or, in other words, each stakeholder has to contribute in achieving the common good of the company. The concept of the common good, linked with the stakeholder view, puts in the light the duties that a company has toward its stakeholders as well as the duties of stakeholders toward the company. When speaking about duties, the aim is not to draw up a list of duties everybody is responsible for (such as to create new jobs, to avoid pollution or to inform civil society). The important thing is to take into account what kinds of social relations the company maintains with its internal and external stakeholders to be able to identify together the common good of society, and based on that, to identify every party's duties for achieving the common good (Argandoña, 1998).

Stakeholder theory underlines that a company must be managed so that it creates value for all its stakeholders, trying to maximize each stakeholder value (Post et al., 2002; Freeman, 2007; 2008; Harrison et al., 2010). This seemed an impossible task when the concept of value was limited to economic value (Argandoña, 2011). In a value network, the value concept is much broader, and in the context of the common good, the total value created by a company for its stakeholders represents the social value (Jensen, 2008). Examples of value that can be created for stakeholders are job satisfaction, good salary, knowledge acquisition, recognition, building of relationships, acquisition of virtues and so on (Bruni and Zamagni, 2007; Frey and Nekermann, 2009; Donati, 2010; Argandoña, 2008; 2011). It must also be noted that value is not created by individuals working in isolation but by collaboration among stakeholders (Argandoña, 2011). The management task is therefore to consider how new value can be created for each stakeholder and how all stakeholders can collaborate in the most effective way.

2.4.3. Knowledge accessing theory of strategic alliances

Collaboration is also seen as a key issue for value creation in the knowledge accessing theory of strategic alliances (Grand and Baden-Fuller, 2004). In order to engage in new activities and to access resources that reside outside their boundaries, organizations form strategic alliances. According to the definition, a strategic alliance is characterized by the agreement between two or more firms to reach a common goal, which involves the pooling of their resources and activities (Teece, 1992). The parties involved in strategic alliances are bilaterally dependent to a "non-trivial degree," but they maintain their autonomy during their collaboration (Williamson, 1991).

In today's dynamic and knowledge-based economy (Porter, 1998), accessing and acquiring new knowledge has become a strategic issue. Accessing, acquiring and integrating new knowledge is costly for a firm, because it is highly inefficient for individuals to combine their knowledge. To increase the efficiency of knowledge accessing and its integration requires modes of coordination in specialized forms, which implies supplementary costs for the organization (Demsetz, 1991). There are two main mechanisms for knowledge integration in a firm: (1) direction (which is a low-cost mechanism, when a specialist communicates new knowledge to a large number of persons) and (2) organizational routine (a high-cost mechanism, which implies knowledge specialization through complex coordination patterns between different specialists, with the aim of integrating their knowledge for the production of new goods or services) (Grant and Baden-Fuller, 2004).

Strategic alliances are initiated by firms in order to avoid the high costs associated with knowledge transactions across markets, fostering investments in trust building (Gulati, 1995; Ring and Van de Ven, 1992; Teece, 1992; Simonin, 1997; Blomqvist, 2002). According to the knowledge accessing theory of alliances (Grant and Baden-Fuller, 2004), the firms form alliances, either with the aim of accessing new knowledge or for new knowledge acquisition, by exchanging knowledge and learning with their partners. Knowledge accessing can contribute to a long-term collaboration between partners, if the alliance is successfully established; the impact on value creation is higher in that case. Alternatively, knowledge acquisition (or knowledge exchange) causes a broadening of each firm's knowledge base, and alliances become less stable

as each partner absorbs knowledge from the other. In this case, the value creation through an alliance is not substantial (Grant and Baden-Fuller, 2004).

2.4.4. Economic governance: the organization of cooperation

Economic governance has been established as a research field since 2009, by the works of that year's laureates of the Nobel Prize for economy, Elinor Ostrom and Oliver Williamson. Both scholars' works enhance the understanding of nonmarket institutions, which are based on collaboration and relationships. Williamson developed a theory that clarifies why some transactions occur inside a firm and not in the market. Ostrom provides evidence on how to govern successfully the common property, offering mechanisms that sustain collaboration in human society.

In his theory, Williamson (2002) provides an understanding of why a large amount of economic activity currently takes place inside boundaries of the firms. His approach starts from the perspective of conflict resolution in markets, firms, agencies, associations or even between householders (Williamson, 1985). He argues that hierarchical organizations dominate the markets sometimes, because conflict resolution is cheaper in hierarchies. If, for example, two employees are in conflict regarding the allocation of tasks, the chief executive is entitled to solve the conflict. The cost of conflict resolution is minimized in this case. On the other hand, in the market, the conflict between two parties has to be negotiated until both parties agree, causing substantial haggling costs and time, with no efficiency guaranty (Collins, 1990). Williamson suggests that hierarchical organizations emerge for nonstandard and complex transactions when parties are mutually dependent. Mutual dependency in that case refers to the fact that parties have assets (either tangible or intangible) that are valuable only inside a relationship.

Ostrom's theory deals with the governance of the commons by the active collaboration of their users (Ostrom and Walker, 1991). Natural resources such as forests, lakes or fish stokes are managed as common property by associations of people (Andersson et al., 2006; Ostrom et al., 2002). The classical view suggests that common ownership implies the excessive utilization of resources (Schlager, 1994). For that reason, it is advisable to reduce their utilization through

government regulations (such as taxes) or by privatizing the resources. Ostrom brings empirical evidence which demonstrates that often the common property is surprisingly well managed. Successful self-governance of common property requires rules and enforcement mechanisms that evolve over long periods of time (Ostrom and Gardner, 1993).

There are also key features that are necessarily required for successful self-governance (Ostrom et al., 1992; 1994). The first important key feature is the active and collaborative participation of the users in creating and enforcing rules. Rules that are imposed by powerful inside forces or by outsiders are more likely to be violated. The second key feature is that the monitoring and enforcement mechanisms must also be conducted by insiders, not by outsiders (Ostrom and Walker, 1991) as the classical view suggests. The only concern is the willingness of individual users to voluntarily engage in monitoring and sanctioning actions, due to the modest reward they get from these actions. But an important finding of Ostrom's studies is that many users are willing to invest time and incur personal costs for sanctioning free riders.

2.5. Value creation mechanisms – a synthesis of theoretical approaches to value creation in cross-sector value network context

In strategic partnerships, value is created by accessing, exchanging or combining partners' key resources and their core competences. This implies that the partners' key resources and competencies must be identified first, and then it is necessary to investigate what kind of combinations of resources and competences can create value (Austin, 2000b; Bititci et al., 2004). The nature of the resources available and the ability to combine resources in the most efficient way determines the magnitude of value that can be created. This is a management task that should be analyzed carefully in partnerships.

2.5.1. Accessing key resources

Accessing key resources is among the motives for organizations to engage in collaboration and strategic partnerships (Classen et al., 2012). Following the logic of the resource-based view, (Das and Teng 2000; Eisenhardt and Schoonhoven 1996), partnerships are initiated and developed

with the aim of creating value by accessing and leveraging key external resources, either other organizations' tangible and intangible assets or their core competences and expertise in specific fields. For example, in a cross-sector partnership, the third sector (voluntary and nonprofit organizations) may enter into a partnership with the public sector, aiming to access funds (a *tangible asset*) that are critical for continuing and developing their activity.

Similarly, a private sector organization may aim to increase its reputation. In order to gain this goal, it may enter into a partnership with a nonprofit organization that has a good reputation in social responsibility (an *intangible asset*). This way, the private sector organization accesses a key resource of the third sector's organization, which contributes to value creation for the private sector organization. By the same token, the public sector might enter into a partnership with the private sector, aiming to access the private sector's technology expertise (a *core competence*), which represents a key resource for the public sector in order to develop their information systems.

All the organizations from the public, private and third sectors can create new value this way, by accessing key resources of other organizations through their partnership. But by aiming only to access other organizations' key resources, every organization aims to create value for itself. From a partnership value network perspective, this is not a "healthy" way of creating value, because if the resources are not exchanged from one organization to another, and one partner feels that he offers more than he receives from the collaboration, the motivation to collaborate may decrease or even disappear (Grudinschi, 2011).

2.5.2. Exchanging key resources

Exchanging key resources between organizations is another source of value creation (Austin, 2000b; Harrison et al., 2001). The amount of created value in a partnership or a collaborative network is usually determined by the core competencies of the partner organizations (Kothandaraman and Wilson, 2001). When key resources are exchanged through collaboration, every partner creates value for the other partner, and in return, it will get an amount of value

from the other partner. The motivation to collaborate as well as the commitment in the collaboration process will increase this way (Grudinschi, 2011).

As in the previous example for the case of cross-sector collaboration, if the third sector wants to access funds (*tangible asset*) from the public sector, the third sector should think beforehand of what kind of value they could offer to the public sector in order to enter into a "healthy" and solid partnership. The third sector could, for example, offer free labor (volunteer workers—which also represent a *tangible asset*) in some common projects. Or they could offer valuable knowledge about customers, because the third sector has a closed relationship with customers (which represent a *core competence*). Whatever the case, when making a value network analysis, it is very important to find an equilibrium between the flows of value from one partner to another. If one partner offers more than it receives from the collaboration, the motivation to collaborate may also decrease.

The exchange of core competences is the organization's capability to generate benefits for its partners through collaboration. These exchange flows have great potential to create value, because every organization is leveraging its special competencies. For example, in cross-sector collaboration, the public sector might provide funds to the nonprofit sector for a project that aims to enhance services for elderly people; the nonprofit sector provides volunteers (free labor) for friendship services for elderly people. By exchanging their resources, new value is created for each sector.

From the value network perspective, value is dynamically exchanged between partners (Allee, 2008). In the knowledge-accessing theory of strategic alliances (Grant and Baden-Fuller, 2004) it is argued that exchanging or acquiring knowledge from partners broadens the knowledge base of the organization, causing the decline of the alliance. In order to avoid the decline of the alliance, the strategic view of the value network should be applied. Solutions must be found to dynamically exchange key resources, to continuously create new value for every partner as the relationships evolve. In a dynamic environment, new challenges and problems occur continuously in a partnership. Finding solutions to solve the challenges determines new value creation for every partner. So in the long run, if the strategic objectives are well identified

together by all partners, value can be dynamically created for all stakeholders (partners and customers as well).

2.5.3. Combining key resources

On the other hand, combining key resources has been proven to be a high source of value creation in collaboration and partnerships, because it is unique and nonreplicable (Ritvala et. al, 2014). Partner organizations can capture synergies that derive from the complementarities of the other organizations' intangible assets (Allee, 2008). In his empirical study on the resource-based view of the firm, Newbert (2007) demonstrates that resource combination is more likely to explain performance and value creation than single resources. Combining and integrating key resources is a managerial capability and represents the most important mechanism of value creation (Grant, 1996a; Kraaijenbrink and Wijnhoven, 2008).

In the classical work of the theory of growth of the firm, Penrose (1959) explains how new value can be created based on resource combination. He argues that firms that have similar resources can produce radically different products if the resources are combined in innovative ways. Combining the resources in different and innovative ways is a management ability, he argues. Similar views on value creation based on the ability to combine resources are present in other works as well (Wernerfelt, 1984; Barney, 1991; Prahalad and Hammond, 2002; Mair and Marti, 2009; Seelos et al., 2011; Ritvala et al., 2014). Value creation through resource combination requires creativity, social skills and a tolerance for ambiguity, setbacks and messiness (Baker and Nelson, 2005).

In cross-sector collaboration and partnerships, the ability to combine resources can create both economic and social value (Hayek, 1945; Mair and Marti, 2009; Zahra et al., 2009; Ritvala et al., 2014). The concept of combining the key resources (used often in the academic literature with the term "bricolage") in cross-sector collaboration for social issues has increasingly gained recognition for the process of value creation (Prahalad and Hammond, 2002; Mair and Marti, 2009; Seelos et al., 2011; Ritvala et al., 2014). Di Dominico et al. (2010) introduced three novel concepts of bricolage (combining resources): social value creation, stakeholder participation and

persuasion. Understanding these three concepts makes it easier to understand the process of social value creation, which may have a huge impact on cross-sector collaboration management. For that reason, in this thesis it is argued that value creation in cross-sector collaboration is a strategic management issue. Without strategic managerial actions, resources themselves cannot generate value.

2.6. Conceptual framework of the thesis

The motivation of this study started from the challenges that exist in cross-sector collaboration management regarding the effectiveness of cross-collaboration and the ability to create value for the addressed problems. Even though a lot of research has been done in the past years with the aim of improving management practices or finding better management tools in this field, cross-sector collaboration effectiveness still remains a challenging issue (Koschmann, Kuhn and Pfarrer, 2012).

Concerning the management challenges involved in increasing the performance of cross-sector collaboration, a need was seen to address the study from the perspective of strategic management. For this reason, strategic management was chosen as one of the theoretical foundations of this study. Regarding the second challenge involved in cross-sector collaboration (finding mechanisms for value creation), the investigation of value creation-related theories was seen as a suitable theoretical foundation for this study. Furthermore, because the study involves collaboration and value creation, value network analysis (which investigates how value is created in collaborative networks) has been considered as the approach that best fits these circumstances. This was the logic in choosing the three theoretical foundations of this study: strategic management, value networks and value creation theories.

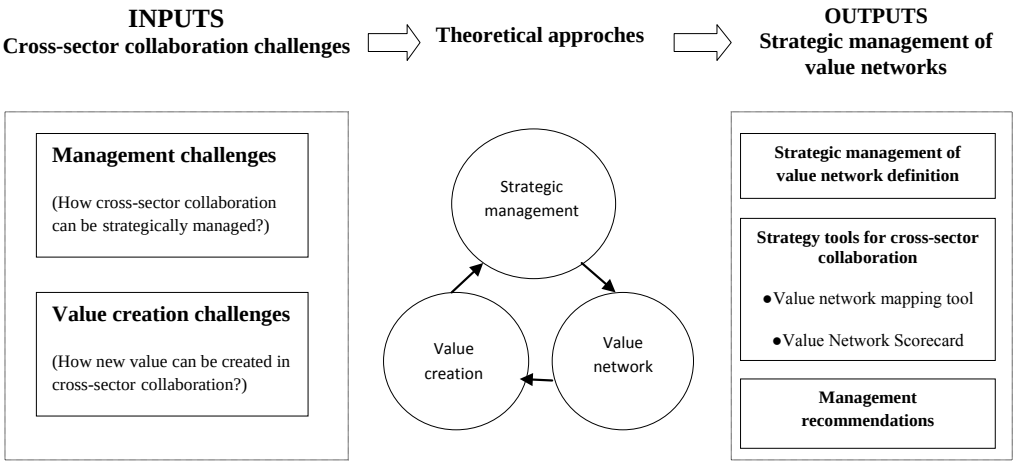

Figure 6. Conceptual framework of the thesis

Earlier studies have often investigated cross-sector collaboration management through the lens of a single theory. This study represents a holistic approach, investigating the problem through many theoretical lenses, aiming to find out how combining all these theoretical perspectives will contribute to improve the effectiveness of cross-sector collaboration management and to enhance the process of value creation. The outputs of the study propose a strategic management of value networks approach for the management of cross-sector collaboration, also consolidating the field of "strategic management of value networks," which has been examined very little in earlier studies. As parts of the field of "strategic management of value networks," the study proposes a first definition for this field of science and two strategy tools for the strategic management of value networks in cross-sector collaboration. Furthermore, recommendations for cross-sector collaboration management are offered as outputs of the study. Figure 6 presents an overview of the conceptual framework of the study.

3. METHODOLOGY AND RESEARCH DESIGN

This chapter describes the methodology used in this study as well as the research design. It begins by presenting the research strategy used in the study. Then it continues with the research design, where the methodological choices are explained, followed by the data collection and analysis procedure employed in the study.

3.1. Research strategy: triangulation

The research strategy adopted in this study is triangulation. Method triangulation refers to the use of multiple methods or viewpoints which reflect: (1) multiple theories (theoretical triangulation), (2) multiple methods (methodological triangulation), (3) multiple datasets (data triangulation) and (4) multiple researchers (researcher triangulation) (Rothbauer, 2008). A clear picture of what the triangulation method contains is presented in figure 7, below.

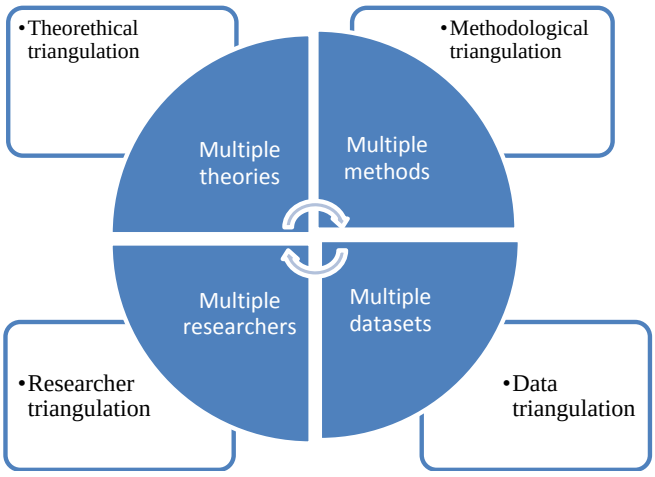

Figure 7. Triangulation method

Using the triangulation method, where multiple perspectives are presented, allows an in-depth understanding of complex social phenomena (Greene and Cracelli, 1997) and of a research

phenomenon in general (Denzin and Lincoln, 2000). For situations where it is difficult to get an extensive understanding, the triangulation method brings its own value to the quality of the research (Eskola and Suoranta, 1998), also increasing the validity of the research findings (Mathison, 1988; Yin, 2003) and the generalizability of the research.

The triangulation method represents a golden mean between a positivist quantitative method (e.g., Gage, 1989; Datta, 1994; Guba and Lincoln, 1994) and phenomenological or constructivist qualitative research methods (e.g., Cherryholmes, 1992, Guba and Lincoln, 1994). In the so-called "paradigm wars," the confrontation of scholars regarding the superiority of one or another paradigm led to the adoption of mixed research methods in social sciences research (Maxwell and Loomis, 2003). In the social and behavioral sciences, triangulation is a widely used and accepted research method (Tashakkori and Teddlie, 1998). For these reasons, the triangulation method was chosen as a research strategy for this study. All four types of triangulation were used in the study, and they are described below.

3.1.1. Theoretical triangulation

Theoretical triangulation refers to the use of multiple theoretical streams and multiple theories when trying to understand the research phenomena approached in the study (Rothbauer, 2008). In this study, three research streams were combined and used: strategic management, value networks and value creation. Figure 8, below, illustrates the research streams used in the study.

In the case of the value creation research stream, four different value creation theories were used as the starting points of study: the resource-based theory, the stakeholder theory and the common good, the knowledge accessing theory of strategic alliances, and economic governance—the organization of cooperation. Using different theories allowed a better understanding of the process of value creation, from different perspectives, trying to combine the knowledge presented in all theories. Based on that, it was easy to summarize the value creation mechanisms, adapting them for the purpose of this study.

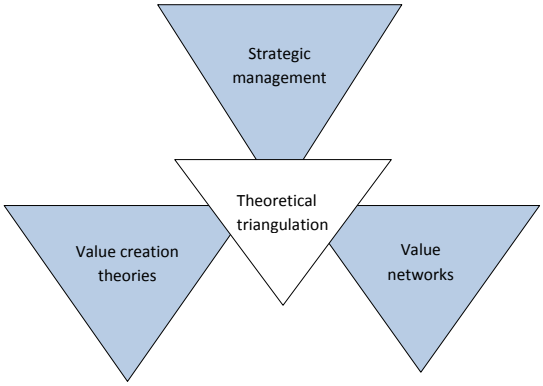

Figure 8: Theoretical triangulation

3.1.2. Methodological triangulation

Methodological triangulation refers to the use of different methods in the same study (Creswell, and Miller, 2000; Creswell, 2008). Three different methods were used to collect and analyze the data in this study: a literature review (theoretical study) and quantitative and qualitative methods. In figure 9, below, the methods used in this study are illustrated.

For the conceptual development in publications P3 and P5, a literature review was done, collecting data from different scientific articles relevant to the topic of the study. Two conceptual frameworks (strategic tools) were developed in these two publications. A theoretical study was done in these cases. A quantitative study was approached in publication P2, aiming to find out what the factors are that influence collaboration fluency and how collaboration can be enhanced. Then the qualitative study approach was used in publications P1, P3, P4 and P6.

The reason for choosing the qualitative method in these publications was that there was a need for a deep understanding of some complex issues (Creswell, 2008; Savin-Baden and Major, 2013): what the management challenges are for cross-sector collaboration, in publication P1; what the challenges are for the elderly, how those challenges can be solved, what the value is that every partner brings into the collaboration and how new value can be created in cross-sector

collaboration (investigated in publications P3 and P6); and what the public procurement challenges are in hospice services and in cross-sector collaboration, in general, and how new value can be created while trying to solve the challenges.

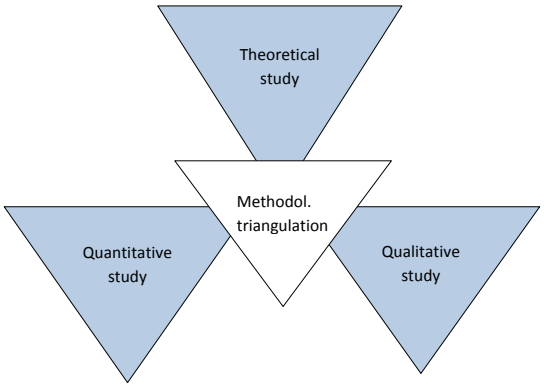

Figure 9. Methodological triangulation

3.1.3. Data triangulation

Data triangulation tells us about the use of data from different sources (Bishop, 2007). For the conceptual development in this study (publications P3 and P5), secondary data was used. Prior academic research was investigated and analyzed to be able to develop new concepts having a strong theoretical base. For the first conceptual framework developed in publication P1 (where a value network mapping method was the output of the study), theoretical perspectives related to the value network mapping approach were investigated. Aiming to develop a performance measurement and performance prediction method in the second conceptual framework (publication P5), theoretical approaches related to this topic were investigated and analyzed.

The rest of the publications (P1, P2, P4 and P6) used primary data as data sources. Primary data allows the collection of information for the specific purpose of the study (Moore, 2006). Interviews and workshops from case studies were used to collect the primary data in this study. Executive managers from institutions belonging to all three sectors (three managers/sector) were interviewed in the case study related to elder care services development, Furthermore, for the

same case study, a workshop with eight top managers, representative of all sectors, was organized. For the case study related to cross-sector collaboration in the public procurement of hospice services, two experts in the domain were interviewed, with the aim of evaluating the method proposed in publication P4. An illustrative picture of data triangulation is presented in figure 10, below.

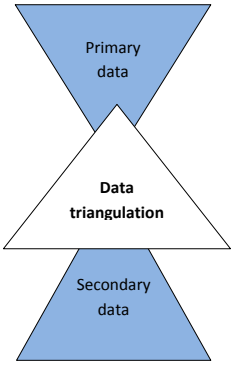

Figure 10: Data triangulation

3.1.4. Researcher triangulation

Researcher triangulation is the fourth type of triangulation used in this study. It refers to the use of different researchers' perspectives when designing the research or collecting and analyzing data (Rothbauer, 2008.) All the publications were done in the context of two research projects, where a team of researchers collaborated for the best outcomes of the research. The researchers who participated in the projects have a wide range of expertise; some of them are experts in using and analyzing quantitative data, while others have strong analyzing skills in qualitative research. Furthermore, it must be mentioned that some researchers are experts in business administration, while others are experts in social science. As the study was related to the health care and social domains, the participation of researchers from the social sciences brought valuable insights in analyzing the data in the present study.

3.2. Research design

This study consists of six publications, each focusing on different issues related to this study, which helped to answer the research questions. Figure 11 summarizes the research design used in this study, in terms of the research methods and data sources used in every publication.

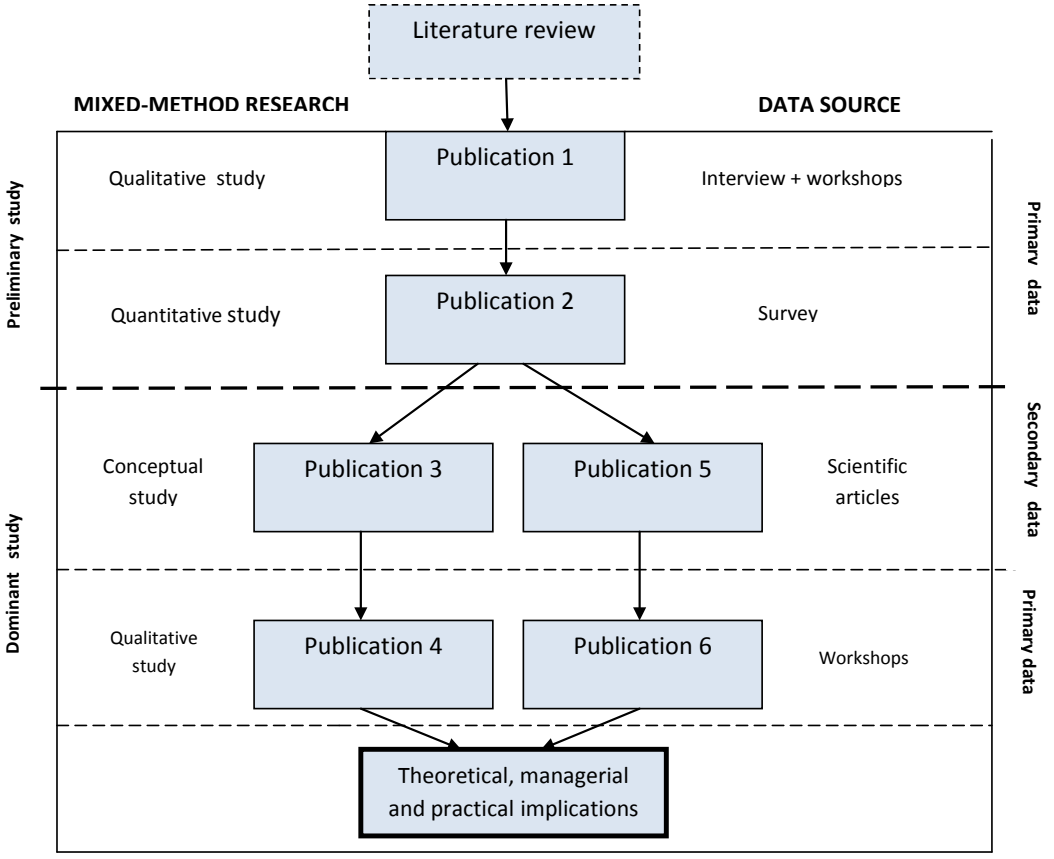

Figure 11: Research design

3.3. Data collection and analysis

This study was carried out through two different research projects at the Technology Business Research Center (TBRC) in Lappeenranta University of Technology in Finland. The first project, "From the welfare needs of the elderly to renewal of service structure," was held during 2010–2012 and the second one, "Value-driven innovative public procurement in social and healthcare," was held during 2012–2014. Both projects involved collaboration between the public, private and third (nonprofit) sectors, and one main aim of these studies was also to improve cross-sector collaboration in order to provide better services for elderly people and to increase the customer value of public services from the social and health care domains.

The qualitative study comprises two case studies, both aiming to enhance cross-sector collaboration (1) for the case of elder care and (2) for the procurement of hospice services. For the qualitative research conducted in this study, the data was collected through these two case studies. For the quantitative research conducted in the study, two data sets were used: one for cross-sector collaboration in elder care and the second one for collaboration in child welfare services.

For the conceptual development used in this study, the data was collected from literature reviews, using relevant scientific articles. The empirical data was collected through case studies, where cross-sector collaboration in the social and health care domains was relevant for the present research. The data was collected using a survey (in publication P2), interviews (in publications P1, P3 and P4) and workshops (in publications P1, P3, P5 and P6).

Case study research is recommended to be used for situations where little prior knowledge about the studied phenomenon is available (Geertz, 1973) and when the aim is to understand a complex phenomenon, or for theory development. Case studies allow understanding of the phenomenon in its real-life context (Easton, 1995; Halinen and Törnroos, 2005) by identifying the factors and characteristics that influence a phenomenon in a specific context (Eisenhardt and Graebner, 2007; Yin, 2008).

The case studies used in this research were selected from the health care and social domains in Finland, where cross-sector collaboration is extensively adopted as a strategy to solve complex social challenges, to create social value and to increase the customer value in public services (Grudinschi et al., 2012; 2013; Sintonen et al., 2014). The case study of cross-sector collaboration for enhancing services for elderly people was chosen in publications P1, P3, P5 and P6. In publication P4, a case study was used of cross-sector collaboration for public procurement in hospice services. For publication P2 (the quantitative study), the questioner was sent to organizations that have experience in cross-sector collaboration in elder care and child welfare services.

3.3.1. Literature review

Given that the academic literature on the strategic management of value networks and its application in cross-sector collaboration is scarce, this study addresses the research question through an exploratory field study (Shields and Rangarjan, 2013). An exploratory study is used when the research topic is new or nonexistent and when it is difficult to find and collect relevant data. In the case of the present study, the field of strategic management of value networks does not exist; this was the reason for using an exploratory study. Furthermore, for the conceptual development in this study (the two strategic tools developed here), the literature review allowed a valuable theoretical background.

Exploratory studies often rely on secondary data. A literature review is a specific data source for exploratory research, because reviewing existing literature allows the identification of the research field, its main features and its specificities (Shields and Rangarjan, 2013). The literature review was specifically used in publications P3 and P5, whose outputs were conceptual frameworks, two strategy tools that can be used in the strategic management of value networks.

Publication P3 developed a value network mapping tool that allows the assessment of current and potential value networks. In order to develop the mapping tool, specific literature on strategy tools (Andrews, 1971; Porter, 1980; Kaplan and Norton, 1992, 2000; Jarzabkowski and Kaplan, 2014), value networks (Gulati, 1998; Parolini, 1999; Zuboff, 2002; Allee, 2002, 2006, 2008;

Benkler 2006) and value network mapping (Allee, 2006) was reviewed. The literature review revealed that a specific value network mapping method does not exist in the literature. Only some basic instructions were discovered (Allee, 2006), where it is specified what the basic elements of a value network map are.

Publication P5 is also based on a literature review. This allowed the new conceptual development from this study: the Value Network Scorecard, a tool for performance measurement and performance prediction of value networks in cross-sector collaboration, which can be used as a strategic management tool of value networks. Literature on performance measurement systems and the challenges that exist in this area (Kaplan and Norton, 1996; Edvinsson and Sulivan, 1996; Lehn and Makhija, 1996; Buckowits and Petrash, 1997; Ittner and Larcker, 1998; Varamäki et al., 2008; Hatry, 2010) was reviewed for the purpose of this study. All the data available in the literature reviewed was analyzed, and the conceptual development was based on that analysis.

3.3.2. Interviews

In order to get a grasp of the field and to identify the partners' perceptions about how cross-sector collaboration works, interviews were carried out. In the first case study (elder care), we conducted individual interviews with key representative managers from all three sectors (three persons from each sector). The representatives have experience in elder services delivery and several of them also have direct contact with elderly clients in their activities. The aim of the individual interviews was to get a grasp of the current state of collaboration and to find out what the challenges are in welfare services co-delivery for the elderly. Furthermore, during the interviews, the perception about value creation was investigated (what kind of value every participant brings to the collaboration as well as what value they get from the collaboration with other sectors).

The representatives of the public sector were selected from mid- and lower-level management. The private sector interviewees were represented by the managers of three small and middle-sized companies that supply services for the elderly (physiotherapy, home health care, and

housecleaning). From the third sector were selected a manager of a nonprofit organization that acts in elder services delivery (nursing home); a manager of a volunteer workers organization that provides friendship services to the elderly; and a church representative—a deacon who has direct contact with elderly clients in her daily activity (spiritual services or volunteer worker activities). Table 2 summarizes the information about persons who were interviewed.

Table 2: The persons who were interviewed in the first case study

	The role of the interviewed person	**Organization**	**Sector**
1.	Deacon	Church	Third sector
2.	Manager	Volunteer workers organization	Third sector
3.	Manager	Home health care for the elderly	Third sector
4.	Manager	Small physiotherapy firm	Private sector
5.	Manager	Home health care for the elderly	Private sector
6.	Manager	Housecleaning firm	Private sector
7.	Operative manager for elder care in a specific area	Municipality	Public sector
8.	Operative manager for elder care in a specific area	Municipality	Public sector
9.	Operative manager for elder care of whole municipality	Municipality	Public sector

In the second case study, in order to evaluate the method proposed in publication P4, two experts were interviewed. One expert is from the private sector and has experience in hospice services, and the other one is a consultant with experience in public procurement. The person from the private sector who was interviewed has much experience in the domain of hospice services (over 20 years). She has worked in this domain in the private sector (in Finland as an entrepreneur and in the USA). The consultant has international experience (19 years) in public procurement issues (table 3). During the interviews, first it was explained them by researcher how the proposed value network mapping method is intended to be used in public procurement. After that, they were asked to make a risk-benefits evaluation of the proposed method, allowing the drawing of conclusions and the discussions in publication P4.

Table 3: The experts who were interviewed in the second case study

	The role of the interviewed person	**Organization**	**Work experience in the field**
1.	Consultant in public procurement	Consulting private firm	>19 years
2.	Manager	Hospice care private firm	>20 years

The interviews were carried out for publications P1 and P3 (for the first case study) and for publication P4 (for the second case study). The interviews were semi-structured, containing open-ended questions, and they were carried out by the researcher at the interviewee's own organization location. The interviews lasted between 45 minutes and 90 minutes, and they were recorded and transcribed. After that, the data was analyzed, keeping in mind the theoretical background.

For publication P1 ("Management challenges in cross-sector collaboration management: elderly care study"), the aim of the interviews was to identify the challenges in cross-sector collaboration management. Analyses were done using the Force Field Analysis method. For publication P3 ("Creating value in network: a method to assess the current and the potential value in cross-sector collaboration"), the aim of the interviews was to find out the perceptions related to value creation in cross-sector collaboration. Data gathered during interviews was grouped in structured tables, and based on them, the value network map (in the implementation part of the publication) was drawn. In publication P4 ("Using value network mapping in public services procurement as a tool to create value in procurement partnerships: case hospice care"), the aim of the interviews was that experts in hospice care and public procurement evaluate the proposed method, making a risk-benefits analysis. More details about the data analysis for every publication can be found in the publications themselves.

3.3.3. Workshops

In order to map the potential value network in the first case study (in publications P3 and P6), a workshop with experts (eight persons) from all three sectors was organized. The participants selected for the workshop session have wide experience in welfare services delivery. This time,

top managers from the public sector were selected. From the private and third sectors, manager directors were selected.

The aim of the workshop was to learn what the strengths and resources (intangible and tangible assets) are in every sector and what the challenges are in cross-sector collaboration. A ready list of challenges obtained, based on interviews, was offered to the workshop participants, and then they were asked to complete the list. New challenges were discovered that way as well. In order to get trusted answers, the workshop session was conducted through a group decision support system, the ThinkTank software application.

The ThinkTank application allows participants to answer anonymously the questions asked, but all the answers are seen (on a big screen and on their own computers) in real time, by all participants. Having the opportunity to answer anonymously encouraged participants to expose the problems honestly. Based on the data obtained during the workshop session, the potential value network was mapped.

Based on the workshop data, it was analyzed how new value can be created in the network. The outcome of the workshop was a list of challenges and a table with every partner's assets (the strengths and resources). Then every challenge was considered separately for analysis. It was pondered and investigated how the specific challenges could be solved in an efficient way, so that they would create value for other network partners. The investigation was done using the table with the partners' assets. It was pondered what kind of resources or capabilities were needed in order to solve the challenges. Based on that, the roles in solving the challenge were attributed to different partners.

To make it easier to draw the map, all the data obtained during the analyses was introduced in a table. In the first column are listed the challenges. In the second column are specified the assets needed to solve each specific challenge, also indicating which partner owns the specific asset. In the third column, the assets are converted into value attributes, indicating what kind of value can be created while trying to solve a specific challenge. In the same column, the data is codified,

specifying who creates the value and to which partner the value is offered. Then the data from the table is included in the map. The potential value network map was created this way.

3.3.4. Survey

In publication P2 (“Relationship risk perception and determinants of the collaboration fluency of buyer–supplier relationships in public service procurement”), a survey was conducted to find out how collaboration fluency can be enhanced. The data was collected in two parts (two data sets), because of the differences in the nature of the two service sectors. Concerning elder care, a sample of 580 companies and nonprofit organizations (representing the private and third sectors) operating in the care domain were approached with an email invitation to answer a web survey. In total, 125 responses were received after two rounds of reminders.

A sample of 938 organizations that provide child welfare services were approached with an email invitation to participate in the web survey. After two reminders, 216 responses were received. All respondents were small or medium-sized companies (Figure 12), which is typical in Finland, because only a few large international companies operate in the market. In most of the organizations, the annual revenue was less than 500,000 euros.

Most of the measurement items included in the survey were derived from the previous literature and modified for the purposes of this study. Keeping in mind that in the future, the aim of public service procurement is toward a partnership, in addition to the service procurement literature, the collaboration and partnership literature was investigated further. Additionally, because the present study is related to public service procurement and the collaboration between the public, private and third sectors, some items were modified to better describe this type of collaboration. All measures were tested in advance by showing them to three suppliers of public services, and the items were revised until no further changes were suggested.

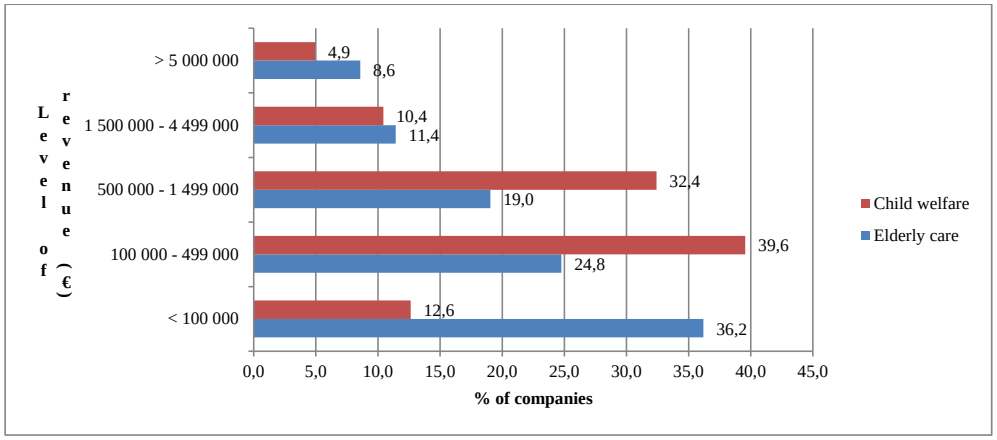

Figure 12. Revenue levels of the organizations

The data was analyzed with partial least squares (PLS) structural equation modeling, which has been considered as an emerging methodological choice in quantitative research for models, with latent variables having several indicators (Reinartz, Haenlein and Henseler, 2009). PLS makes no parametric assumptions and focuses on the significance of the relationships between the dependent and independent variables, instead of analyzing the overall model fit, as in covariance-based structural equation modeling. The PLS method allows for the estimation of the confirmatory factor analysis and the structural relations simultaneously. In the evaluation of the measurement model, PLS estimates the internal consistency for each block of indicators and evaluates the measurement reliability in terms of composite reliability and average variance extracted (e.g., Straub, Bourdeau and Gefen, 2004).

4. REVIEW OF THE RESULTS

This chapter summarizes the results from the whole thesis in the form of a synthesis of the entire study. First, the chapter presents the results from every individual publication. Then the results from the whole thesis, in terms of the contributions made to the literature, are exposed. The objectives of the publications were derived from the research questions of the thesis, and they are investigated from many theoretical and methodological perspectives. Two publications (P3 and P5) include conceptual development, while the other four publications (P1, P2, P4 and P6) constitute the empirical study of the thesis. Next, the individual publications are synthesized further.

4.1. Summary of the publications

Before starting to make an individual synthesis of every publication, the summary of all publications is presented in table 4, below.

Table 4. The summary of publications and their results

Publication title	Objective	Research method and data	Results	Main contribution
P1: *Management challenges in cross-sector collaboration: elderly care case study*	To identify the challenges that occur in cross-sector collaboration management.	●Qualitative method ●Data gathered through individual and group interviews (workshop) with managers from all three sectors. ●A case study for cross-sector collaboration in elder care.	●The study brings evidence that cross-sector management challenges are related to governance and administration of partnership. ●This suggests that the management should focus on social innovation: how partners' resources and capabilities may interact in a more efficient way in order to create social value.	**Theoretical and empirical contribution:** ●Identifies what kind of challenges to expect and what dynamics and attributes must be emphasized when preparing for combined actions of leaders from different sectors. ●Allows managers to understand how to enhance social value creation and social innovations through cross-sector collaboration.
P2: *Relationship risk perception and determinants of the collaboration fluency of buyer-supplier relationships in public service procurement*	To determine which issues a managerial team of cross-sector collaboration must emphasize when aiming to create a solid partnership based on pre-existing collaborative relationships.	●Quantitative method ●Data gathered through a survey ●A structured online questionnaire was sent to organizations from the private and third sectors that provide services in the social and healthcare domain.	●The study shows that communication, governance and administration have strong influences on collaboration fluency. ●The higher the perceived relationship risks are, the more positive effects they will have on increasing trust, communication and the quality of cross-sector collaboration management.	**Theoretical and empirical contribution:** ●The study adds new knowledge on management of cross-sector collaboration in public service procurement partnerships. ●The study underlines which issues management teams should concentrate on when planning to form a partnership, i.e., which critical success factors must

Publication title	Objective	Research method and data	Results	Main contribution
				be carefully addressed in the early stage. **Theoretical and managerial implications are provided.**
P3: *Creating value in networks: a value network mapping method to assess the current and the potential value network in cross-sector collaboration*	To design and implement a method for value network mapping that allows us to understand how new value can be created in cross-sector collaboration.	●Conceptual paper ●Secondary data (scientific articles) was used for the conceptual model. ●For the implementation part, we used a case study for cross-sector collaboration in elder care, through a workshop.	●A framework for value network mapping which allows us to assess the current and the potential value network in cross-sector collaboration.	**Methodological, theoretical and managerial contribution:** ●The value network mapping method designed in this study helps managers and experts to understand how to create a complex value network map, how new value can be created and how to get the full potential of collaboration. ●In the implementation part, the study offers step-by-step guidance and exemplification on how to map the value network and how to use the map in practice. **Theoretical and managerial implications are provided.**
P4: *Using value network mapping in public services procurement as a tool to create value in procurement partnerships: case hospice care*	●To investigate what kind of public procurement practices should be used in order to enhance the effectiveness and the process of value creations in public procurement partnerships. ●After the theoretical investigation, the aim is to propose a tool for the strategic management of cross-sector procurement partnerships: value network mapping.	●Group interviews (workshop) for gathering data for value network mapping. ●Interviews with two experts to evaluate the proposed method. ●A case study of cross-sector collaboration in public procurement for hospice services was used.	●The paper brings evidence (based on experts' evaluation) that value network mapping can be successfully used in cross-sector procurement partnerships as a strategic management tool to create value.	**Methodological, theoretical and managerial contribution:** ●The study adds new knowledge and offers a new solution (method) for public procurement practice and for the strategic management of cross-sector partnerships in public procurement. ●The proposed tool overcomes some challenges in public procurement practices and emphasizes the process of value creation in public procurement. ●Experts who evaluated the method argued that using value network mapping tool in procurement will allow all partners) to understand how new value can be created. ●The study offers step-by-step guidance and exemplification on how to map the value network and how to use the map in public procurement practice. **Theoretical and managerial implications are provided.**
P5*: Performance measurement and performance prediction of cross-sector partnerships: a framework for strategic management of value networks*	To develop a conceptual framework for the strategic management of value networks.	●Conceptual paper ●Secondary data (scientific articles) was used for the conceptual model.	●A framework for the strategic management of value networks on cross-sector partnerships, namely, the Value Network Scorecard.	**Methodological and theoretical contribution:** ●The study offers a method for performance measurement and performance prediction in cross-sector partnerships**.** ●The framework provides performance measurement

Publication title	Objective	Research method and data	Results	Main contribution
				literature with new perspectives, and it overcomes many gaps that exist in the current performance measurement systems. **Theoretical and managerial implications are provided.**
P6: *A new method of measuring and predicting performance in partnerships' value networks: case elderly care*	To implement in practice the Value Network Scorecard, the framework developed in previous publication (P5).	●Group interviews (workshop) ●For the implementation part, a case study was used for cross-sector collaboration in elder care.	The study offers step-by-step guidance and exemplification on how to use in practice the Value Network Scorecard.	**Methodological and managerial contribution:** ●The study implements the method developed in previous study (P5): Value Network Scorecard. ●Understanding how the Value Network Scorecard can be applied in practice helps managers to improve collaboration, to create new value in network, to assign roles for every collaboration participant and to follow easily the performance of duties.

4.1.1 Publication 1: Management Challenges in Cross-Sector Collaboration: Elderly care case study

Overall objective and background

The main purpose of this study is to investigate what kinds of challenges to expect and what dynamics and attributes must be emphasized when preparing for combined actions from different leaders. Furthermore, the study aims to identify solutions for overcoming the challenges discovered. The study starts with a literature review where the collaboration dimensions are defined and the cross-sector collaboration challenges found in the literature are also identified. The empirical part of the study is carried out through a case study of cross-sector collaboration in elder care. Individual and group interviews with managers of the public, private and third sector organizations which operate in elder care services are done. The aim of the interviews was to identify the challenges in cross-sector collaboration management.

Results and main contribution

The study identified the challenges in cross-sector collaboration management from the elder care domain, and the challenges were classified according to collaboration dimensions. This allowed for deeper analyses of challenges, grouping them into specific types of challenges. The results of the study provide evidence that cross-sector management challenges in elder care are related to governance and administration. Governance and administration involve collaborative decision making and problem solving, monitoring mechanisms or defining the roles and responsibilities of the partners. This suggests that the management should focus on how partners' resources and capabilities may interact in a more efficient way in order to solve problems and to create social value.

The contribution of this study relies on identifying what kinds of challenges to expect and what dynamics and attributes must be emphasized when preparing for combined actions of leaders from different sectors. Furthermore, the study takes a strategic perspective while identifying the challenges from cross-sector collaboration, classifying the discovered challenges based on the collaboration dimensions. Approaching the challenges from a strategic perspective, the study allows managers to understand how to enhance social value creation and social innovations through cross-sector collaboration.

4.1.2. Publication 2: Relationship risk perception and determinants of the collaboration fluency of buyer-supplier relationships in public service procurement

Overall objective and background

The objective of this study is to determine which issues a managerial team of cross-sector collaboration must emphasize when aiming to create a solid partnership based on pre-existing collaborative relationships. More specifically, the study investigates what the determinants of collaboration fluency are and how relationship risk perceptions influence the most critical factors of collaboration. The study was carried out through an online questionnaire sent to managers of organizations from private and third sectors that provide services in the social and health care

domains. The data was gathered through two data sets: one comprising organizations from elder care and the other consisting of organizations from the child welfare domain.

Results and main contribution

The results of the study indicate that in collaborative relationships in public service procurement, the higher the perceived relationship risks are, the more positive effects they will have in terms of increasing trust, communication and the quality of collaboration management. Furthermore, communication, governance and administration have strong influences on collaboration fluency.

The contribution of this study lies in the domain approached (cross-sector collaboration in public service procurement in social and healthcare services) as well as the variable it attempts to explain (collaboration fluency). The study adds new knowledge on the management of cross-sector collaboration in public service procurement partnerships by underlining which issues management teams should concentrate on when planning to form a partnership, that is, which critical success factors must be carefully addressed in the early stage of partnership formation.

4.1.3. Publication 3: Creating value in networks: a method to assess the current and the potential value network in cross-sector collaboration

Overall objective and background

The main objective of the study is to design and implement a method for value network mapping that allows us to understand how new value can be created in cross-sector collaboration. The study represents a conceptual development that includes a framework (a method) for value network mapping. The study includes also the implementation of the method.

For the implementation part, a case study was used for cross-sector collaboration in elder care. The data was gathered through a workshop in which managers from the public, private and third sector organizations that provide elder care participated.

Results and main contribution

The main contribution of this study lies in a framework (a method) for value network mapping. The value network mapping method developed in this study consists of two phases; in the first phase, the current value network is mapped, and in the second phase, the future value network is mapped. The future perspective of the value network starts from the objective of solving current challenges that exist in the activity of the network. The method allows cross-sector collaboration managers to assess the current and the potential value network if collaboration is properly managed and if the objectives are achieved.

The study has managerial and practical implications as well. The value network mapping method designed in this study helps managers and experts understand how to get a complex value network map, how new value can be created and how to get the full potential of collaboration. In the implementation part, the study offers step-by-step guidance and exemplification on how to map the value network and how to use the map in cross-sector collaboration management practice.

4.1.4. Publication 4: Using value network mapping in public services procurement as a tool to create value in procurement partnerships: case hospice care

Overall objective and background

The study was initiated by the need of increasing the effectiveness and the process of value creation in public procurement partnerships. The study starts by investigating what the current practices are in public procurement and what are the greatest challenges encountered in public procurement practice. After the literature review, the aim is to propose a tool for the strategic management of cross-sector procurement partnerships: the use of value network mapping. A case study of cross-sector collaboration in public procurement for hospice services was used to explain how to use the value network mapping tool in practice. Group interviews (a workshop)

were used for gathering the data for value network mapping. Furthermore, in order to evaluate the proposed method, interviews with two experts in public procurement and hospice care were conducted.

Results and main contribution

The results of the study give evidence (based on experts' evaluation) that value network mapping can successfully be used in cross-sector procurement partnerships as a strategic management tool to create value. The experts who evaluated the method argued that using the value network mapping tool in procurement will allow all partners to understand how new value can be created. The study has methodical, theoretical and managerial contributions. First of all, the study adds new knowledge and offers a new solution (method) for public procurement practice and for the strategic management of cross-sector partnerships in public procurement. Moreover, the proposed method overcomes some challenges in public procurement practices and emphasizes the process of value creation in public procurement. The study also offers step-by-step guidance and exemplification on how to map the value network and how to use the map in public procurement practice.

4.1.5. Publication 5: Performance measurement and performance prediction of cross-sector partnerships: a framework for strategic management of value networks

Overall objective and background

The main objective of this study is to develop a conceptual framework for the strategic management of value networks. In order to enhance the effectiveness of cross-sector collaboration and partnerships, there is a need for strategic management in cross-sector collaboration. Performance measurement is part of strategic management, and there are no available tools for performance management in cross-sector collaboration. This study proposes a tool for performance measurement and performance prediction in cross-sector collaboration and partnerships.

Results and main contribution

The outcome of this study consists of a framework for the strategic management of value networks in cross-sector partnerships, namely, the Value Network Scorecard. The study starts with a literature review where performance measurement systems are identified as well as the challenges that exist in this area. Based on that, the framework for performance measurement in cross-sector collaboration is proposed. The framework descends from the value network mapping method developed in this thesis (in publication P3). In the second phase of value network mapping, the future value network is mapped; more specifically, an analysis is done of how the value network can be enhanced by creating new value for all partners in the network. Aiming to solve the challenges that exist in the activity of the partnership, it is analyzed which partners have the best resources and capabilities to solve specific challenges and how these capabilities can be combined for the best outcome.

The study has methodological, theoretical and managerial implications. First of all, it proposes a method (a framework) for performance measurement and performance prediction in cross-sector partnerships. The framework has theoretical implications by offering new theoretical insights on how new value can be created in value networks. Furthermore, the framework provides performance measurement literature with new perspectives, and it overcomes many gaps that exist in the current performance measurement systems. The Value Network Scorecard developed in this study also offers managers of cross-sector collaboration a first strategic tool for performance measurement and performance prediction.

4.1.6. Publication 6: A new method of measuring and predicting performance in partnerships' value networks: case elderly care

Overall objective and background

The objective of this study is to implement in practice the Value Network Scorecard, the framework developed in the previous publication (P5). The aim is to make it easier to understand how to use the proposed developed tool in practice and to demonstrate and understand how new

value can be created by using the tool. A case study for cross-sector collaboration in elder care was used for the implementation of the tool. The data was gathered through a workshop where experienced managers from public, private and third sector organizations participated.

Results and main contribution

The study provides step-by-step guidance and exemplification on how to use in practice the Value Network Scorecard. The results of the study have managerial and practical implications. Understanding how the Value Network Scorecard can be applied in practice helps managers to improve collaboration, to understand how to create new value in the network, how the roles may be assigned for every collaboration participant and how to easily follow the performance of duties.

4.2. Summary of the results of the whole thesis

This study started from the need to enhance cross-sector collaboration effectiveness. More specifically, the aim was to find out how cross-sector collaboration and partnerships can be strategically managed in order to create value for all partners involved in the collaboration as well as for customers (citizens) who are the core of cross-sector collaboration. Given these circumstances, theoretical approaches that fit with the study's needs were chosen to be applied: strategic management, value creation theories and value networks. The value network approach has not been applied earlier in the context of cross-sector collaboration, but in this thesis, it has been seen as a suitable theoretical approach, as it involves value creation and value exchange in collaborative networks.

During the whole thesis, it was investigated how combining all these theoretical approaches (strategic management, value creation theories and value network) can contribute to the enhancing of cross-sector collaboration effectiveness. The study proposes the strategic management of value networks to be used in cross-sector collaboration and partnerships to enhance their effectiveness and value creation process. The issue of strategic management of value networks is not well covered as a research area; it has been explored earlier in only a few

studies (e.g., Biem and Caswell, 2008). Furthermore, the value network approach was not applied earlier in the context of cross-sector collaboration. Nor has the term "strategic management of value networks" been used earlier in the vocabulary of academic literature. This study also proposes a first definition for the strategic management of a value network. The main foundation of the strategic management of value networks relies on how value networks can be strategically managed in order to create value.

Besides consolidating the concept, "strategic management of value networks," by offering new theoretical insights and introducing a first definition for the strategic management of value networks, this thesis also developed two strategic visual tools for the strategic management of value networks: (1) value network mapping (a method to assess the current and potential value network) and (2) the Value Network Scorecard (a method for performance measurement and performance prediction in cross-sector partnerships). Both strategic tools incorporate the value network approach as well as the value creation mechanisms discovered in the theoretical part of the study. All three theoretical approaches can be seen as foundations in the outputs of the study. As an output of the study, management recommendations for cross-sector collaboration are also provided in this chapter. Specific details on the results of the whole thesis are presented below.

4.2.1. Consolidating the field, "strategic management of value networks"

The aim of this section is to explain the differentiation between value network management and the strategic management of value networks, to understand how the strategic management of value networks has been approached earlier in the academic literature. The concepts of "value network" and "value network management" are definitely related to organization strategy, but they are not identical with the concept, "strategic management of value networks." Value network management includes the strategic analysis that an organization makes in order to strengthen its position in the market. Value network analysis allows the organization to make different kinds of decisions for strategic planning. More specifically, value network analysis (Allee, 2008) mainly shows how value is created in the network. Such an analysis also looks to performance indicators such as brand management, asset management, and participant contribution in creating value or ease of asset conversion into value. Earlier works related to

value network models and strategic analysis included different perspectives. For example, Allee's (2008) value network analysis model and value network strategy focuses the analysis on how every role (participant) in the network creates value (how it utilizes its assets for value conversion) and how that created value is utilized by other roles (network participants).

One of the most often applied value network analysis models was introduced by Allee (2008). Allee's model considers the network unmanageable, and thus, every participant in the network (roles) is responsible for using the assets under its control to create value outputs. Her view on value network strategy relies on analyzing the participants' capacity in creating value. In this view, the value creation process is not managed; the value is generated through the relationships and the interactions of people involved in the network. The analysis made during the value network management process is done just to support the decision making process.

A closer approach to the strategic management of value networks (which links the analysis to organization strategy) was developed by Biem and Caswell (2008). Their value network model for strategic analysis has as the core of analysis the value proposition delivered to the end customer. The model focuses on configuring the organization network and finding suitable partners, so that value to the customer is maximized. The analysis does not take into account the value created for the network participants (as in Allee's model); just the customer value is considered, while in Allee's model, the customer perspective is not considered at all.

The value network model developed in this thesis represents a holistic approach from the strategic management point of view, including not only the end customer perspective but also all participants in the network. In a "healthy" network, every participant should acquire value; an equilibrium between offering and acquiring value would be ideal for every participant, from the value network perspective (Allee, 2008). If all partners obtain benefits (value) from collaboration, their motivation to be actively involved in network activity will increase (Grudinschi, 2011). But also, if a participant acquires more value from network participants than the value offered to him, his role in the network is diminished, and it can even be excluded from the network. Thus the mission of a value network is to create value for all its stakeholders, for its customers as well as for all partners. This is the strategic management view of value networks.

Even if value network management is a strategic issue, value network management and the strategic management of value networks are distinct concepts. The strategic management of value networks is just an important part of value network management. When value network management (or value network analysis) is linked to organization strategy, we can speak about the strategic management of value networks. In the case of risk management (which is also an issue that is directly related to an organization's strategic settings), the organization needs to clearly link the risk management to its strategy, to be able to create value (Frigo and Anderson, 2011). This represents strategic risk management, which is an important part of the risk management function. In a similar vein, the strategic management of value networks should be linked to the organization's strategic objectives, which represent high-level goals aligned with the organization's mission (Frigo and Anderson, 2011).

The theoretical and empirical investigations made during the whole thesis strengthened the belief that cross-sector partnerships' effectiveness can be enhanced by adopting the strategic management of value networks in the context of cross-sector collaboration. The strategic management of value networks involves long-term objectives regarding value creation for all stakeholders of the network (for partners as well as for customers). As in any other strategic management field, the strategic management of value networks deals with the major initiatives taken by managers to enhance the performance (Nag, Hambrick, and Chen, 2007) of the network, more specifically, to create value by utilizing resources in the most efficient way. Strategic management of value networks has been examined only in a few earlier studies (e.g., Biem and Caswell, 2008); thus, this thesis consolidates this field in the scientific literature, providing new insights. As stated earlier, the term "strategic management of value networks" has not been used earlier in the academic vocabulary. The definition of the new field, "strategic management of value networks" is further introduced.

4.2.2. Proposing a first definition for strategic management of value networks

As there is no definition available for this concept, it was also necessary to propose a *first* ***definition*** for *strategic management of value networks* in partnerships. The study defines the

concept in the following way: *The field of strategic management of value networks in partnerships deals with the major intended and emergent collaborative initiatives taken by the managerial team of the partnership, involving the distribution of roles in solving the identified challenges concerned by the partnership, on the basis of identifying partners' core competences and resources, with the strategic aim of creating tangible and intangible value for all network partners as well as for customers.*

4.2.3. Proposing two strategy tools for strategic management of value networks in cross-sector collaboration

This study also proposes two strategic visual tools for cross-sector collaboration, which were developed in this thesis: (a) the value network mapping method (in publication P3) and (b) the Value Network Scorecard (in publication P5). During this thesis, it has also been proven in the empirical studies that in the adoption of strategic management of value networks in cross-sector collaboration, new value can be created, and the value network is enhanced in this way. The demonstration was done by applying the strategic management tools developed in this study to the described case studies of cross-sector collaboration. In the following, each developed strategic tool is presented in more detail.

(a) ***Value network mapping method*** *- a method to assess the current and potential value network in cross-sector collaboration*

Traditionally, a value network map has been used as a tool that allows managers to improve collaboration by making different kinds of analysis. A value network map helps managers to visualize and understand what the benefits of collaboration are: what every partner brings to the collaboration and what every partner receives from the collaboration. These represent the flow of value in the network, and the network itself is called a value network.

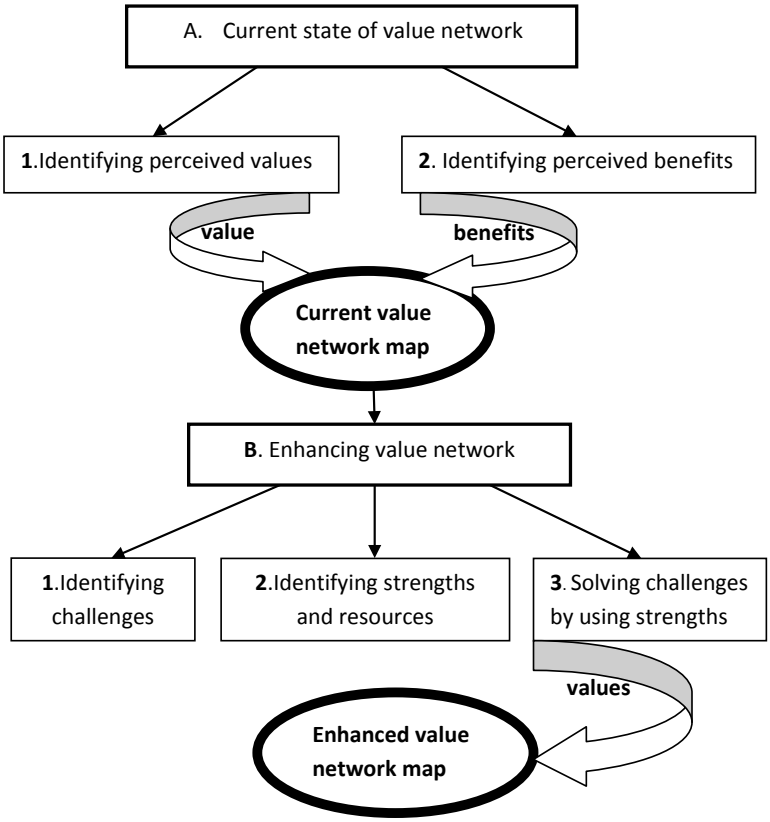

Figure13: A proposed framework for value network mapping: assessing the current and potential value network

When developing the value network mapping method in this study, the aim was not only to make managers understand the benefits of collaboration but also to make them understand how new value can be created in the network. To achieve this goal, the value network mapping method was designed to include two distinct phases: (1) mapping the current value network and (2) enhancing the value network (figure 13). The outcome of the first phase is the current value network map. More specifically, from the current map can easily be seen what the benefits of collaboration in the current situation are. Similarly, the outcome of the second phase is the future value network map. More exactly, from the future map can be observed what further benefits can be gained from collaboration if the partnership is properly managed. Comparing the two value network maps (the current and the future maps) allows managers to understand how to get the

full potential of collaboration. Specific details about the value network mapping process are provided in publication P3.

(b) ***Value Network Scorecard*** *– a tool for performance measurement and performance prediction in cross-sector collaboration*

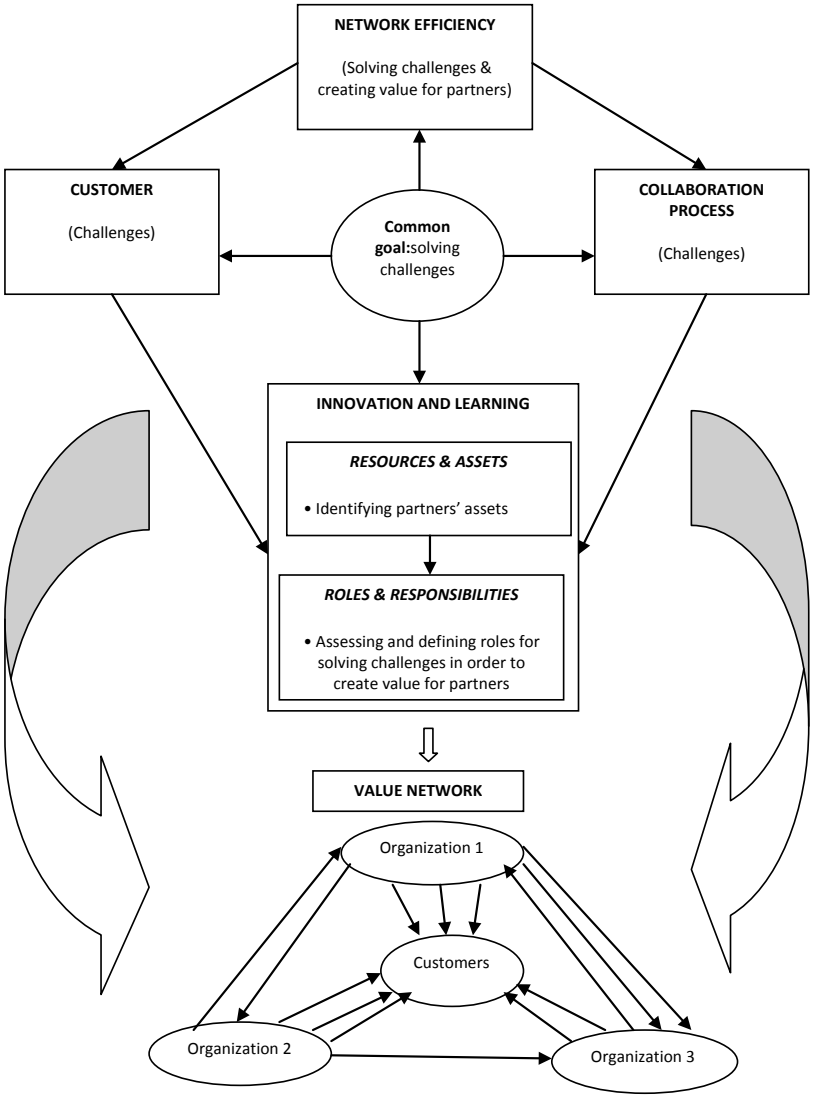

Figure 14: Value Network Scorecard: a proposed framework for measurement and prediction of cross-sector collaboration

The second strategic management tool developed in this study is called the Value Network Scorecard. This is derived from the previous tool, value network mapping. The second phase of value network mapping (enhancing the value network) is the basis for the development of the Value Network Scorecard. The Value Network Scorecard also has its roots in the Balance Scorecard (Kaplan and Norton, 1992), but it is a tool for a network type of organization. The logic of the Value Network Scorecard (figure 14) is explained next.

To be able to enhance the value network in the future (to create new value), the strategic view and the vision (the common goal of the partners) are crucial (Hansen, 2013). In the case of cross-sector collaboration, the common goal relies on solving social challenges. In this case, the challenges are either related directly to customers or are challenges related to the collaboration process. To be able to operate efficiently, the network must be able to solve the challenges in the most efficient way. Efficiency relies on the ability of the management team to combine partners' resources and capabilities (assets) in the most innovative way (Grant, 1996a; Kraaijenbrink and Wijnhoven, 2008) and, based on that, to assign roles and responsibilities to all network partners. New value can be created this way, and the value network is enhanced as well.

Aiming to solve the challenges represents the long-term objectives that the organization wants to achieve in the future. This is a strategic view and the central concept of the Value Network Scorecard. If the challenges are solved in the future and new value is created for all network stakeholders (partners and customers), the performance of the network organization is guaranteed. Solving specific challenges represents performance indicators. Thus, the Value Network Scorecard can be used as a strategic management tool in performance measurement and performance prediction in cross-sector collaboration. More specific details on the principles of the Value Network Scorecard are provided in publication P5. Furthermore, in publication P6, it is explained how to use the Value Network Scorecard in practice.

4.2.4. Management recommendations for cross-sector collaboration and partnerships

Cross-sector collaboration and partnerships have increasingly become a desired strategy that must be applied in solving complex global and social challenges (Bryson et al., 2009). The

collaborative approach has been fundamentally evolutionary, and it can have potential revolutionary implications. Also, cross-sector partnerships can have a great impact on the challenges concerned as well as on all partners involved and all citizens in general (Wadham and Warren, 2013). However, despite their popularity and the potential they may have, the partnerships' effectiveness and their ability to create value has been proven to be limited (Koschmann, Kuhn and Pfarrer, 2012). They need to be strategically managed in order to achieve the desired impact.

In the case studies of cross-sector collaboration studied in this thesis, it was learned that even though cross-sector collaboration exists and its role has increased continuously in the last few years in the social and health care domains, cross-sector collaboration is poorly managed. In fact, it can be asserted that the management in cross-sector collaboration in the studied cases does not exist. The management function in an institution is performed by a manager or a management team. In well performing organizations, strategic planning plays the most important role in increasing performance. Establishing the vision, the strategy and the long-term objectives as well as the action plan to achieve the goals are important activities of strategic planning (Bryson, 2011).

In many cases, especially in the public domain, speaking about collaboration and partnerships is merely rhetorical, policy-driven and far from the real aim of partnership (Carnwell and Buchanan, 2008). For the case of cross-sector collaboration in the health care and social domains in Finland (the case studies used in this research), we cannot speak yet about partnerships. A lot of initiatives in cross-sector collaboration have been held, but the management of cross-sector collaboration is just in its infancy stage. A partnership needs to be orchestrated and managed by a management team (Abbott and Snidal, 2010), and efficient management tools must be used when implementing strategies (Jarzabkowski and Kaplan, 2014). Furthermore, effective collaboration requires powerful communication mechanisms, which must be developed together with all partners to better fit the needs of the partnership.

As Ostrom (1994; 2009) suggests in her study about the organization of collaboration, successful collaboration requires rules that evolve over long periods of time. An important key feature is the

active and collaborative participation of the partners in creating the rules and in decision making. Furthermore, Ostrom (1991; 2009) suggests that effective collaboration also requires monitoring mechanisms that are conducted by insiders, not by outsiders. This motivates more to engage actively in the collaborative activity.

Another important issue that must be considered in the strategic management of value networks in cross-sector partnerships is the dynamics of the value network. As the partnership evolves, some challenges are solved, but at the same time, other challenges occur continuously. The challenges have to be evaluated periodically, and a new action plan must be created. In other words, the updating of the Value Network Scorecard is required periodically.

To conclude, it must be asserted that in order to achieve the impact of collaboration, cross-sector collaboration needs to be moved to the highest level of collaborative relationships, more specifically to partnership, which requires a management team responsible for the strategic planning. This thesis represents a guideline for the strategic management of cross-sector partnerships, especially for the social and health care domain, which was the field of this study.

5. DISCUSSION AND CONCLUSIONS

The main aim of the thesis was to investigate how cross-sector collaboration and partnerships can be strategically managed in order to create value. Cross-sector collaboration and partnerships are increasingly necessary and desired strategies when addressing complex social problems (Bryson et al., 2009). Despite their popularity, cross-sector partnership management is still challenging. Therefore, the need of the study started from the challenges that exist in the effectiveness of cross-sector collaboration and partnership management and also, in their ability to create value (Koschmann, Kuhn and Pfarrer, 2012).

5.1. Answering the research questions

The main research question of this study was formulated as follows: *How can the value networks of cross-sector collaboration and partnerships be strategically managed in order to create value?* In order to answer the main research question, four sub-questions were further proposed, to split the main problem into smaller issues. In the following, all four research sub-questions and their results will be presented in detail.

RQ1: What are the management challenges in cross-sector collaboration?

To be able to enhance the effectiveness of cross-sector collaboration, first it was necessary to understand and identify what are the major challenges that exist in the management of cross-sector collaboration. The investigation started with a literature review, aiming to identify cross-sector collaboration management challenges discussed in previous studies (e.g., Carroll and Steane, 2000; Jupp, 2000; Coulson, 2005; Frisby et al., 2004; Bryson et al., 2006; Roux et al., 2008). Furthermore, in the literature review, we aimed to find out what the collaboration dimensions are (Thomson, 2001) that can help in analyzing the challenges from a strategic point of view. In previous studies, the most important management challenges were identified, without any strategic perspective.

The present study took a strategic perspective of collaboration management, classifying the identified challenges based on collaboration dimensions. The solutions for solving the challenges were analyzed further. Using a case study for cross-sector collaboration in elder care, the results show that cross-sector collaboration challenges in elder care are related mainly to two dimensions of collaboration: governance and administration. Governance involves participative decision making, problem solving and shared power arrangements, while administration implies coordinating the activities, defining the roles of the partners, and the monitoring mechanisms. The results of the study confirm that the collaborative problem solving capacity is poorly managed in collaborative relationships. This suggests that in order to create value, the management of cross-sector collaboration should focus on social innovation: how partners' resources and capabilities may interact in a more efficient way (Le Ber and Branzei, 2010). A well-managed partnership is needed in that sense.

RQ2: How can cross-sector collaboration be enhanced?

Based on the results obtained in the study from the first publication, P1 (which was related to the first research question), there was a need to investigate how cross-sector collaboration can be enhanced. In the study from publication P1, it was confirmed that cross-sector collaboration is generally poorly managed and that a partnership must be formed to be able to create value. With the premise that in many cases, partnerships are formed based on pre-existing collaborative relationships, publication P2 investigated what are the most important factors that must be addressed by the managerial team in these circumstances. Additionally, taking into account that relationship risks influence the quality and the outcomes of collaboration (Delerue, 2004; Chung, Hensher and Rose, 2010), the influence of risk on the critical success factors for collaboration fluency was also investigated.

The results of the empirical study (in publication P2) strengthen the results obtained in publication P1 (related to first research question) (Grudinschi et al., 2013), showing that governance and administration have a strong influence on collaboration fluency. Additionally, the study shows that communication plays a crucial role in collaboration fluency, which was also in line with previous research on this issue (Norrman and Jansson, 2004; Vanhala, 2011).

Furthermore, the study underlines the importance that should be accorded to relationship risk management. All these issues are part of the strategic management that must be addressed in a cross-sector partnership.

RQ3: How can new value be created in cross-sector collaboration and partnerships?

Despite the increasing popularity of cross-sector partnerships as a strategy for addressing huge societal challenges, there is evidence of their poor ability to create value with respect to the problems they address (Koschmann et al., 2012). The need for this research question started from this dilemma: how cross-sector partnerships can be managed more effectively, creating more value for all their stakeholders. Managing value creation and analyzing how to get the full potential of collaboration are challenging issues for the management of cross-sector partnerships.

To be able to understand and to visualize the process of value creation in partnerships, the study proposes the use of strategy tools for the management of cross-sector partnerships. More specifically, the study designed and implemented a method for value network mapping in cross-sector collaboration, which allows assessment of the current and the potential value network. Furthermore, the value network mapping method proposed in this study allows managers and experts to understand how to get the full potential of collaboration. In order to increase the understanding of how to use the method in practice, the implementation of the method in practice was done through a case study. The value network mapping method designed and implemented in this study allows the understanding of how new value can be created in cross-sector collaboration if the partnership is properly managed.

RQ4: How can partnerships' value networks be strategically managed?

To be able to properly manage a partnership, the strategic view is an essential part of the management. Moreover, to evaluate the performance of the management, performance measurement should be done periodically (Kaplan and Norton, 1996; Hatry, 2010). Additionally, value creation for all stakeholders should be a strategic issue in partnerships. Moreover, value creation is the core of the value network concept. For all these reasons, in this thesis, the strategic

management of value networks is proposed as a new approach for cross-sector collaboration management. The question which rose in these circumstances was: how can partnerships' value networks be strategically managed?

The study proposed a tool for performance measurement and performance prediction in cross-sector collaboration. The proposed tool has as its central concept the value network. The performance measurement process proposed here starts from the vision and the strategy of collaboration: to solve the challenges of collaboration activity that addresses social issues and to enhance the value network (to create new value for all network participants); this way, the collaborative network can perform efficiently. Using a case study, the proposed tool was implemented in practice, providing managers step-by-step guidelines on how to use the tool in practice. The proposed tool and its implementation in practice allow the understanding of how partnerships' value networks can be strategically managed.

Addressing the four research sub-questions constituted the groundwork for tackling the main research question: *How can the value networks of cross-sector collaboration and partnerships be strategically managed in order to create value?* To conclude, it must be mentioned that the need for cross-sector collaboration in the social domain starts from a lot of social challenges that must be solved. This implies that social value must be created for all citizens (network partners as well as all customers) through cross-sector collaboration. Value creation is the core of the value network concept, and in this study, the strategic management of value networks was proposed to be used for the management of cross-sector collaboration and partnerships. The results of the study confirm that new value can be created in cross-sector collaboration through a solid partnership that must be strategically managed. The study also shows that by using the proposed strategic tools in cross-sector collaboration, more value can be created.

5.2. Research contribution

The study makes *four main contributions*. (1) First, it proposes the strategic management of value networks approach for the management of cross-sector collaboration and partnerships. Moreover, the strategic management of value networks has been approached very narrowly in

earlier studies, in the academic literature. The term “strategic management of value networks” has not been used earlier in the academic literature. This thesis consolidates the field, “strategic management of value networks.” (2) Secondly, it provides a first definition for the concept of strategic management of value networks. (3) Thirdly, the study proposes two strategy tools for the management of value networks in cross-sector partnerships. The tools enable the process of value creation in cross-sector collaboration. (4) And fourthly, the study provides practical guidelines on how the proposed strategy tools can be used in practice. The applicability in practice was explained through case studies of cross-sector collaboration in the social and health care domains, allowing managers and experts to understand how new value can be created if the collaboration is strategically managed.

5.2.1. Theoretical contribution

The thesis consolidates the field of strategic management of value networks, also proposing its applicability in cross-sector partnerships. Furthermore, in the thesis is proposed the first definition of the strategic management of value networks. Even though value networks have been studied for a while (e.g., Zuboff, 2002; Benkler, 2006; Allee, 2008), only a few earlier studies approached and touched upon the field of the strategic management of value networks (e.g., Biem and Caswell, 2008). A value network refers to the exchange of value between partners, but it also involves the process of value creation (Yuan and Yi, 2001), which requires high analysis and management skills. As in any other management field, there is a need for a strategic view to be able to obtain effectiveness in the management.

By consolidating the concept of strategic management for value networks, new theoretical insights are offered for the research field of value networks. Strategic management deals with management initiatives towards the performance of an organization (Nag et al., 2007). In value network literature, specific attention has been afforded to value network analysis, including the dynamics of the value network (e.g., Pagani and Fine, 2008), the value conversion of tangible and intangible assets (e.g., Allee, 2008), or capturing value analysis (e.g., Linden, 2009). The strategic view of value networks consolidated in this study emphasizes the process of value creation for all stakeholders through the effective combination of partners’ resources and

capabilities, applying many perspectives and theories of value creation (e.g., Freeman, 1984; Wernerfelt, 1984; Grant, 1996; Teece et al., 1997; Grant and Baden-Fuller, 2004).

The concept of the strategic management of value networks that was consolidated in this study integrates multiple theoretical approaches: value networks, strategic management and value creation theories. This makes easier the understanding of the logic behind the concept, opening new perspectives for further development of the new research field of the strategic management of value networks. In a value network, the aim is to create value for all partners (Allee, 2008). Emphasizing the strategic view, the value network is approached from a long-term strategic objectives perspective (Porter, 1980). More specifically, in a value network of cross-sector partnership, the strategic view relates to the common goal of the partners (usually the solving of social challenges).

In this study, it was found that the management challenges in cross-sector collaboration relate to the ability to solve the common problems and distribute roles to partners (Grudinschi et al., 2013). This is closely related to the ability of management to combine partners' capabilities and resources, which represent the most important source of value creation (Grant, 1996; Kraaijenbrink and Wijnhoven, 2008). This was also covered in the strategic tools developed in this study, opening new theoretical insights on these issues as well.

5.2.2. Methodical contribution

In this study, two methods were proposed and developed as strategic management tools that can be used in cross-sector collaboration management. The first method developed in this study is a value network mapping method. The value network mapping method developed in this study (publication P3) consists of specific steps that help managers and experts to understand how to create a complex value network map. The method consists of two phases: (1) mapping the current value network and (2) mapping the future value network. This allows managers to analyze how new value can be created to enhance and develop the value network. Creating new value in the future should be a strategic issue in any kind of collaboration. The mapping method proposed in this thesis also allows assessment of the current and the potential value networks,

making easier the understanding of how to make the collaboration more effective and how to get the full potential of collaboration.

The second method developed in this study (the Value Network Scorecard, in publication P5) is derived from the value network mapping method developed in this thesis. More specifically, the second part of the value network mapping method (mapping the future value network) is proposed to be used for performance measurement and performance prediction in cross-sector partnerships. It can be considered as a strategy tool in the management of value networks in cross-sector partnerships. First of all, solving the challenges that exist in the activity of cross-sector partnership is established as the long-term goal of the partnership. It is assumed that new value can be created if the challenges are solved. Then the partners' assets (resources and capabilities) are identified. By combining partners' resources and capabilities in the best possible way to solve a specific challenge, new value can be created for all network partners. The distribution of roles for every partner is assessed, as well, by the managerial team, based on partners' assets. Achievement of the goals in the future constitutes the performance measurement indicators, which is part of the strategic management of the value network.

5.2.3. Contextual implications

This thesis has significant contextual implications. Cross-sector partnerships are increasingly used as a strategy in solving huge social and environmental challenges. Moreover, the recent global financial and economic crisis has deepened the need to form cross-sector partnerships to solve the complex challenges involved. Despite their popularity in the last few years, the effectiveness of such partnerships is very limited. Furthermore, there is no evidence of their ability to create value for the problems they address (Koschmann, Kuhn and Pfarrer, 2012). New ways of organizing cross-sector collaboration and efficient tools are needed to increase the effectiveness of cross-sector collaboration and partnerships. This study suggests that there is a need for the strategic management of cross-sector collaboration.

This thesis offers some possible solutions for increasing the effectiveness of cross-sector partnerships. More important, it offers new solutions for value creation in a cross-sector partnership. The study demonstrates (through the case studies involved in the thesis) that by

applying the strategic management of value networks in cross-sector partnerships, new value can be created dynamically for all partners as well as for customers. This represents social value creation for all citizens if social challenges are solved. The study concludes that there is a need for strategic management in cross-sector collaboration, to form partnerships that are properly managed. In many cases, especially in the public sector, speaking about partnerships is just rhetoric (Carnwell and Buchanan, 2008), but the reality is far away from the real partnership practices.

5.2.4. Managerial implications

For managers of cross-sector collaboration, this thesis represents a guide on how to manage the partnership, to be able to create value and to assure the effectiveness of the partnership. The thesis stresses the importance of the strategic management of cross-sector collaboration. It also introduces a new perspective for the management of cross-sector partnerships: applying the value network approach. By using the value network view in cross-sector partnerships, the managers are able to analyze and understand how new value can be created in partnerships.

Furthermore, the thesis offers managers of cross-sector collaboration two specific strategic tools (the value network mapping method and the Value Network Scorecard), which help them in analyzing the activity and the value created, in developing strategies and in measuring and predicting the performance of their activity. The Value Network Scorecard proposed in this study overcomes many gaps that exist in the current performance measurement systems, providing managers new perspectives for the performance measurement of cross-sector collaboration. The proposed tools also consist of specific steps, which make it easier to understand the applicability of the tools in practice.

5.2.5. Practical implications

The present thesis offers step-by-step guidelines on how to use the proposed strategy tools in practice. The guidelines are offered through real-life examples, using case studies of cross-sector collaboration from the social and health care domains. In publication P3, the value network

mapping method is implemented in practice through a case study of cross-sector collaboration in elder care. The method proposed allows the mapping of the value network for two states: the present and the future. Comparing the two states (with the concrete example offered in the study) allows a much easier understanding of how new value can be created while solving challenges, if the collaboration is strategically managed.

In publication P4, using a case study of cross-sector collaboration in hospice services procurement, the value network mapping method allows managers to understand how new value can be created in public procurement partnerships, for both customers and partners. Explaining with a concrete example how to map the value network and how public procurement can be organized in a new way (by using the value network mapping method), the study offers practical evidence to managers of how the public procurement process can be enhanced, creating more value for customers as well as for procurement partners. Furthermore, the evaluation of the method, made by the two experts in public procurement and hospice services, and the explanations offered by the experts on what is the value created while using the value mapping method in procurement allow public procurement experts to understand much better the benefits of using the method in public procurement partnerships.

Additionally, in publication P6, using a case study for cross-sector collaboration in elder care, the Value Network Scorecard (the tool for performance measurement and performance prediction developed in this thesis) is implemented in practice. Through step-by-step guidelines offered through the case study, managers and experts can understand more easily how the Value Network Scorecard can be applied in practice. Furthermore, it helps managers understand how to improve collaboration, how to create new value in a network, how to assign roles for every collaboration participant and how to follow easily the performance of duties.

5.3. Limitations and suggestions for further research

This thesis has several limitations that must be discussed. First of all, it must be remarked that this study was done in Finland for cross-sector collaboration in the social and health care domains, which involves all three sectors, public, private and nonprofit. The level of

collaboration in other countries and in other domains may be different. There are many strategic cross-sector partnerships that involve only two sectors (e.g., private and nonprofit), where the management function may play an important role in the activity of the partnership. With these considerations, it must be mentioned that in the section, "Management recommendations for cross-sector collaboration and partnerships," some reflection and suggestions for cross-sector partnerships are valid especially for the cases studied in this thesis. However, the recommendations offered may be generalized for every cross-sector partnership.

The research target selected was a rather limited part of the health and social services sector, although the economic value related to elder care (including hospice services, as a separate case study) and child welfare is unquestionable. Moreover, the challenges faced by the quantitative study (in publication P2) also include the small size of the organizations and the large share of individual entrepreneurs who operate in the health and social care field, which also influences the response rate. If the domain of the research is considered more widely, the issue of collaboration and partnerships is topical, because the public sector is evolving toward developing purchasing strategies and making outsourcing decisions. Therefore, the generalization of the results requires widening the research to other domains in health and social care.

One important issue which was not covered in the study is risk management. In partnerships, risk assessment and risk management are important management tasks (Hallikas et al., 2004; 2005; Abd Karim, 2011). This study also confirms (in publication P2) that risk management is an important issue that must be considered in order to improve the collaboration fluency. Frigo and Anderson (2011) argue that in highly uncertain environments, risk management should be linked to strategy; more specifically, risk management should focus on creating value as well as on protecting value. In the strategy tools developed in this thesis, these issues were not considered at all. The strategy tools proposed for cross-sector partnerships need further developing, linking risk management to strategic management and the value creation process. Future research is also needed to investigate and to find out what kinds of risk management tools are suitable for partnership management.

Also, customer value was touched on in the study only to some extent. Customer value creation is the central part of any partnership (Ancarani, 2009). In some publications (e.g., publication P3), customer value was not explicitly addressed. The data obtained during the interviews and the workshop includes many aspects of customer value. But this study (publication P3) was limited to investigating only the value network of the partners involved in collaboration. However, in other publications (e.g., publications P5 and P6), customer value was more carefully addressed. In future research and practice of the strategic management of value networks for cross-sector collaboration, the customer and customer value should be the central part of the value network.

There are limitations related to the strategy tools developed in this thesis as well. Although the value network mapping tool was evaluated by the experts as being a powerful tool in creating value in partnerships, it will take time until it is used in practice. There is not enough knowledge in practice about how to map the value network, which makes its applicability in practice difficult. The dissemination of the method requires time, and new ways of doing things are not usually easily accepted by practitioners (Vilen and Palko, 2010). Individuals are more likely to adopt an innovation if they perceive that they will get benefits from it (Berwick, 2003). First of all, a new method must be sound and its benefits explained through different seminars.

Furthermore, when the value network mapping tool is taken into the practice of cross-sector collaboration and partnerships, a performance measurement will be necessary. The impact of the value network mapping tool on the effectiveness of cross-sector collaboration should be evaluated and measured, as well as the impact on the motivation to collaborate and on the collaboration commitment. More future research is needed in that sense as well.

For the value network mapping process, it is difficult to evaluate what is the best way to organize it in practice for the case of cross-sector partnerships, if there is no earlier experience. The case studies of cross-sector collaboration from this thesis are not based on partnerships. As cross-sector collaboration is an emerging strategy, the value network mapping tool has to be taken into the practice of the strategic management of cross-sector collaboration to be able to evaluate the efficiency of the mapping process. First, it is necessary to apply the method in practice and then

to test different ways of organizing it, either through technical discussions, or workshops, or using a short questionnaire, as was done in the case study of hospice service procurement (in publication P4). As McNiff suggests (2013), action research would probably be a good way of enhancing the method, to follow in the real world what works, what doesn't, what should be done another way and what should not be done at all.

Another interesting aspect is how the strategy tools developed in this study can be applied in other kinds of partnerships, especially in the business domain, where the partners are driven by the same goal of increasing their profit and gaining a competitive advantage (Porter, 1985). This includes examining what the similarities and the differences are in the strategic management of value networks in the business domain and how the tools developed in this study can be adopted to be successfully used in other kinds of partnerships. Also, regarding the context of cross-sector partnerships, this study's context was cross-sector collaboration in the social and health care domains. If the context were different (e.g., cross-sector partnerships for environmental issues), could the tools developed in this study be applied in a similar way? These are also interesting topics for future research.

As has been reviewed, there are many uncovered issues in this thesis. This study opens new research opportunities and also invites scholars to approach the unexplored field of the strategic management of value networks. More specifically, a very important aspect is the value creation mechanism, to explore which kind of mechanisms contribute more to value creation and how to combine key resources in the most efficient way to create more value. Additionally, as the field of strategic management of value networks is still unexplored, the study also invites scholars to improve the definition proposed in this study. Many different issues and angles of view can be approached in the study of the new field, "strategic management of value networks."

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PART II: PUBLICATIONS

Publication 1

Daniela Grudinschi, Leena Kaljunen, Timo Hokkanen, Jukka Hallikas, Sanna Sintonen and Antti Puustinen (2013).

Management Challenges in Cross-Sector Collaboration: Elderly Care Case Study.

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Management Challenges in Cross-Sector Collaboration:
Elderly Care Case Study

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Management Challenges in Cross-Sector Collaboration: Elderly Care Case Study

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ABSTRACT

Using a case study for the collaboration between the public, private and third sectors in elderly care, the purpose of this research is to create new knowledge on cross-sector collaboration management. Cross-sector collaboration leads to innovations in governance. It creates social value and provides reduction of costs and benefits for society. Effective collaboration between the public, private, and third sector requires innovative thinking, leading, and acting. New skills and forms of cooperation between partners are needed.

The main purpose of this study is to investigate what kind of challenges to expect and what dynamics and attributes must be emphasized when preparing for combined actions from different leaders. Individual and group interviews with representatives of elderly care services suppliers from the public, private, and third sectors were carried out in order to identify the challenges in cross-sector collaboration. The findings confirm that most of the challenges encountered in the management of cross-sector collaboration in the field of elderly care are related to two dimensions of collaboration: governance and administration. This suggests that the management of cross-sector collaboration should focus on social innovation: how partners' resources and capabilities may interact in a more efficient way in order to create social value.

Keywords: Cross-sector collaboration, management challenges, social innovation, social value creation, elderly care

Background of the study

In order to meet complex social needs, the interdependence between people and organizations from different domains has continuously increased (Handy, 1996; Lipman-Blumen, 1996; Cleveland, 2002). Be they from the world of business, government, or non-profit, all organizations need to engage in collaboration across sectors to solve complex and challenging social problems. Cross-sector collaboration requires careful attention from researchers and practitioners dealing with social issues.

The continuous growth of the elderly population is one of the most serious social challenges encountered today in many developed countries. In Finland, the situation is even more challenging because its rate of aging is higher than the European Union average. According to Statistics Finland (2009), the proportion of the Finnish population aged over 65 years is currently 17% of the population as a whole, and is estimated to rise to 23% by 2020 and 27% by 2030. Although Finnish municipalities are legally responsible to provide welfare services to the elderly, the private and third sectors have also been involved in welfare service provision.

Each year every elderly welfare service professional and organization is expected to function more effectively with fewer resources. Currently, welfare services for the elderly are highly resource-oriented and do not always satisfy the customers' needs. In the future, the main goal is to provide customer-oriented services for elderly people. The welfare service system is also currently decentralized. If the aim is to achieve cost reduction, effective usage of resources, and quality improvement, an integrated service system is needed. In order to meet all the previous goals, cross-sector collaboration (among the public, private, and third sector) is crucial.

In the current welfare service system, the collaboration among the public, private, and third sectors is unplanned and several gaps can be found in the collaboration process. Many challenges also exist in cross-sector collaboration in the provision of welfare services for the elderly. A solid partnership among the three sectors is crucial in order to respond to the current challenges. Optimized usage of resources, integration of the service system, and improvement of customer satisfaction can be attained via partnership to enhance the quality of life of the elderly. In order to assure an effective collaboration and to create social value, the partnership among all three sectors has to be well managed. The management of partnership in cross-sector collaboration implies numerous specific challenges that must be identified.

Objectives and benefits of the study

Cross-sector collaborations are increasingly seen as the best approach when dealing with social challenges and stimulating innovation (Jupp, 2000). Furthermore, cross-sector collaborations create social value through social innovations (Le Ber and Branzei, 2010). Although cross-sector collaboration has reached an increasing interest in practice, its management is often left unconsidered (Frisby, Thibault and Kikulis, 2004). When it is considered, managing cross-sector collaboration is extremely challenging (Jupp, 2000). There is no one model that can be applied to all domains because environment and circumstances are quite different from one domain to another (Jupp, 2000).

Even though challenges in collaborative relationships have been addressed in earlier studies and in different domains (Carroll and Steane, 2000; Jupp, 2000; Coulson, 2005; Frisby, Thibault and Kikulis, 2004; Bryson, Crosby and Stone, 2006; Roux et al, 2008), the challenges of cross-sector collaboration management in elderly care have not yet been discussed. The growing aging population is a huge global social challenge that requires special attention.

Therefore, the aim of this study is, generally, to identify the challenges that arise in cross-sector collaboration, specifically in the area of welfare service provision for the elderly, and to identify

solutions to overcome these challenges. Thus, our research question is: what are the challenges in the management of cross-sector collaboration in elderly care, and how can they be overcome?

We will begin our study with a literature review. First, we want to define the collaboration dimensions and then identify the general challenges that are encountered in cross-sector collaboration. In the empirical part of the study, we will investigate the specific challenges for cross-sector collaboration in welfare services for the elderly. While recognizing and identifying challenges in cross-sector collaboration management, we will classify the challenges according to their collaborative dimensions. This will allow us to more deeply analyze the challenges. We will then investigate the drivers for an effective collaboration. Finally, we will provide analysis and discussion to improve management, using the Force Field Analysis method, showing and explaining the drivers for better collaboration.

We are proposing to contribute to the literature on cross-sector partnerships by addressing the collaboration challenges collectively, in different domains, and by analyzing the challenges identified by the empirical part of the study, emphasizing the process of social value creation. Furthermore, we will compare the challenges shown by our case study to the challenges presented in the literature review, addressing the specificity of the elder care field.

The results of the study will serve as a guide for an effective cross-sector collaboration management of welfare service delivery for the elderly. Furthermore, it will allow managers to understand how to enhance social value creation and social innovations through cross-sector collaboration.

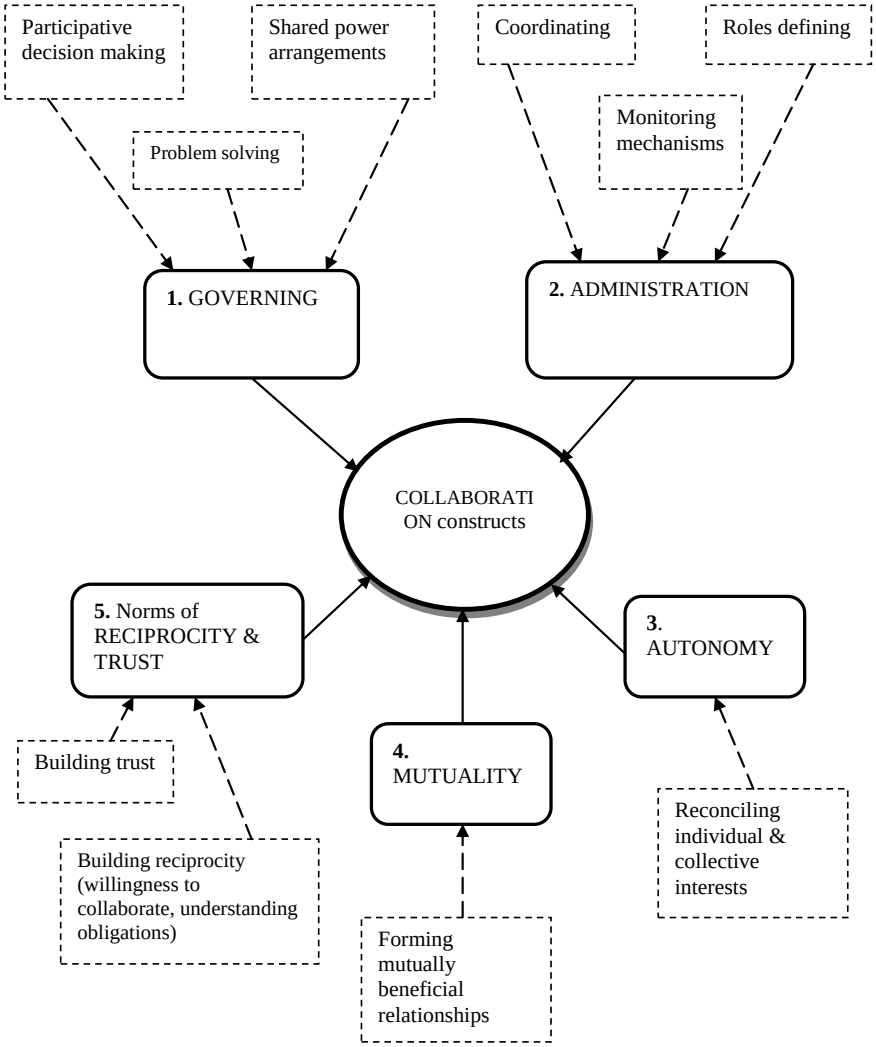
Theoretical background: Collaboration constructs

Managing collaboration requires a deeper understanding of collaboration process and collaboration dimensions, because collaboration is a complex concept. In Thomson and Perry's (2006) collaboration process study, when some managers were asked to define collaboration, one of them defined it as follows:

> Collaboration is when everybody brings something to the table (expertise, money, ability to grant permission). They put it on the table, take their hands off and then the team creates from there.

Although collaboration has the capacity to connect fragmented systems with the purpose of addressing multifaceted social concerns, its definition is somewhat theoretical, elusive, and inconsistent (Gajda, 2004).

Figure 1: Collaboration Constructs and Their Elements (based on Thomson, 2001)



Source: Daniela Grudinschi, Leena Kaljunen, Timo Hokkanen, Jukka Hallikas, Sanna Sintonen, Antti Puustinen

In her multidisciplinary research, Thomson (2001: 37) made a review and analyzed a wide variety of definitions of collaboration. She built a new definition of collaboration: "Collaboration is a process in which autonomous actors interact through formal and informal negotiation, jointly creating rules and structures governing their relationships and ways to act or decide on the issues that brought them together; it is a process involving shared norms and mutually beneficial

interactions." She concluded that the essence of collaboration processes can be distilled into five key dimensions: (1) governing, (2) administration, (3) autonomy, (4) mutuality, and (5) norms of reciprocity and trust. Figure 1 above represents the constructs of collaboration and their components.

The *governing* dimension is defined as the *process of collaborative governing*. Partners who engage in collaboration must understand how to *jointly* make decisions. In the scientific literature on collaboration, the governance dimension is described in different ways such as *participative decision making* (McCaffrey, Faerman and Hart, 1995; Wood and Gray, 1991), *problem solving* (Hellriegel, Slocum and Woodman, 1986), or *shared power arrangements* (Clift et al, 1995; Crosby and Bryson, 2005).

Alternatively, the *administration* dimension refers to the *process of collaborative administration*. The key administrative functions identified in the hierarchical management literature — functions such as *monitoring mechanisms*, *coordination,* and *clarity of roles and responsibilities*— are also emphasized in the collaboration research (Mattessich and Monsey, 1992; Ring and Van de Ven, 1994; Bardach, 1998). Instead, in the literature on collaboration these functions take on new meaning in light of the more symmetrical *horizontal relationships* (no hierarchies).

The *autonomy* dimension can be defined as *the process of reconciling individual and collective interests.* Partners engaged in collaboration share a dual identity: their own (organizationl) identity and the collaborative identity. This reality creates a tension between *self-interest* – achieving individual organizational missions– and a *collective interest* – achieving collaboration goals and maintaining accountability to collaborative partners and their stakeholders (Van de Ven, Emmett and Koenig, 1975; Wood and Gray, 1991; Bardach, 1998; Tschirhart, Christensen and Perry, 2005). Huxham (1996: 15), referring to this tension, emphasizes that because "collaboration is voluntary, partners generally need to justify their involvement in it in terms of its contribution to their own aims" or to refrain from collaborating altogether.

Finally, the *mutuality* dimension represents the *process of forging mutually beneficial relationships*. If the partners perceive mutual benefits from the collaboration, the commitment will increase. But the commitment is unlikely without trust and reciprocity. So, with the last dimension, the norms of trust and reciprocity refer to *the process of building social capital.*

Trust is a critical component of collaboration, but trust building takes a substantial amount of time and nurturing. Additionally, trust reduces complexity and transaction costs more quickly than other forms of organization (Smith, Carroll and Ashford, 1995; Chiles and McMackin, 1996; Ostrom, 1998).

Due to the complexity of collaboration and the dynamism that collaborations can create, public managers may encounter management difficulties. Managers and individual partners who understand the variable and complex nature of these five dimensions of collaboration are better prepared to engage in collaborative activities than those who focus merely on achieving individual goals through collaboration (Thomson, 2006).

Social innovation through cross-sector collaboration

Cross-sector collaborations are themselves innovations in governance. Their main aim is to create and capture social value (King, 2007; Plowman et al, 2007; Le Ber and Branzei, 2010). The partners involved in cross-sector collaboration leverage their core capabilities to address market share (Austin, Stevenson and Wei-Skillern, 2006) or social opportunity (Crane and Matten, 2007), thus generating social innovations (Le Ber and Branzei, 2010). While addressing social challenges, social innovations have two main aspects: (1) the creation of benefits or cost reductions for society through the adoption of a new strategic repositioning, and (2) the creation of social value through novel combinations of partners' resources, capabilities, or ideas (Phills et al, 2008). These can be achieved through effective management, by powerfully governing and administrating cross-sector collaboration.

Management skills are needed to identify partners' core competencies, to be able to find the innovative combinations of those competencies, and to solve specific challenges efficiently, thus creating social value. The term *cross-sector* refers to the three primary institutional sectors of society: public (government), private (business), and third (non-profit). The reality is that a new socio-economic model is evolving, where the relationships between public, private and third sectors play a central role in achieving sustainable communities. None of the sectors have sufficient capabilities and resources to solve complex challenges in the social domain alone (Gajda, 2004). By combining each sector's unique capabilities and resources, positive social change can obtain through collaboration.

The potential of cross-sector partnership refers to two main issues. First, as stated earlier, engaging in partnership should combine each partner's unique capabilities, which allow them to gain benefits that any one of the sectors could not get by acting in isolation. Second, the partnership provides an answer and an alternative to a system marked by competition, conflict, and growing imbalance of power among sectors. In this context, the partnership is a tool for transforming divergent interests into collaboration with innovative ideas (Selsky and Parker, 2005). By focusing on these main issues, partners can formulate solutions to solve the complex social challenges that brought them together.

Challenges in cross-sector collaboration

Cross-sector collaboration has been of increasing interest in the literature. An important segment of the literature on cross-sector collaboration emphasizes the merits and benefits of organizations' collaborating (Child and Faulkner, 1998; Doz and Hamel, 1998; Kanter, 1994; Linden, 2002). On the other hand, an increasing number of studies warn leaders and managers about the complexities and difficulties of these types of organizational partnerships (Frisby, Thibault and Kikulis, 2004; Hodge and Greve, 2005; Huxham, 1996; Huxham and Vangen, 2000a; Provan, Isett and Milward, 2004; Wondolleck and Yaffee, 2000). Wondolleck and Yaffee (2000) argue that it is very important to understand the difficulties facing the development of cross-sector partnerships and to provide insight into how these challenges have been overcome in practice by managers and leaders. This is the aim of the literature review in this study.

Despite the increasing interest in cross-sector collaboration, one big concern in the literature is that the *management function is often unconsidered* by leaders (Frisby, Thibault and Kikulis, 2004).As a result, these partnerships were plagued with two major problems: (1) inadequate managerial structures (e.g., *lack of clear planning* and *policy guidelines, insufficient human resources, unclear roles,* and *information share models*); and (2) inadequate managerial process (e.g., *insufficient time* devoted to partnership, *lack of communication, lack of strategies, lack of evaluation, poor coordination, insufficient supervision, insufficient training*).Another set of challenges in cross-sector partnerships refers to *differences in organizations' goals and objectives*, in values, in language, in procedures, in culture, and power (Smith, Carroll and Ashford, 1995; Huxham, 1996; Coulson, 2005). Huxham (1996) argues that these challenges have prevented organizations from realizing their full collaborative advantage.

Wondolleck and Yaffee (2000) discuss other barriers to effective cross-sector partnerships. These barriers may be *constrained resources, lack of opportunity or incentive to collaborate, mistrust, inflexible policies and procedures* that do not support the partnership, *group attitudes* about each other that may not be accurate and *lack of support or commitment* to the partnership. In the context of cross-sector partnerships, Andreasen (1996) also identified consequences associated with *ineffective management*.

Along similar lines, Eisenhardt and Schoonhoven (1996) underlined the problems of *self-interest and competitions* among partners, which contribute to tensions in the coordination of multiple cross-sector partnerships. Additionally, *pressures from external agencies* to form partnerships (e.g., government) and efforts to be more efficient, cost conscious, and professional have led organizations to engage in partnerships. At the same time tensions may be introduced while trying to acquire scarce resources and seeking credibility and legitimacy in a competing manner (García-Canal, Valdés-Llaneza and Ariño, 2003; Parise and Casher, 2003).

These were the most significant challenges we found in the literature related to cross-sector collaboration. In the following section, we will present our research methods while addressing the challenges in cross-sector partnership in the case study of welfare services delivery for the elderly.

Research methods: Research context

The present study is part of a research project at the Technology Business Research Center (TBRC) in Lappeenranta University of Technology, titled "From the welfare needs of the elderly to renewal of service structure." The purpose of this research project is to conceptualize a service structure based on the needs of elderly customers that promotes their wellbeing. Furthermore, it aims to create an integrated service system that is successful from the customers' standpoint and cost-effective from that of the public sector. In order to achieve all these goals, the collaboration between public, private and third sectors is imperative.

In Finland, the public sector is responsible for providing basic welfare services to elderly people. Because of its limited resources, some services are provided through public service procurement

from private and third sectors. Additionally, some specific services are provided only by the private sector (e.g., housecleaning services), or by the third sector, (e.g., spiritual services provided by churches, or friendship services provided by volunteer organizations).

In the last years, due to the need for enhanced service quality and availability of services in all areas, the collaboration between all three sectors has continuously developed. However, there are many gaps and challenges in collaboration. The management of cross-sector collaboration is challenging and requires time and effort from all participants in the collaboration process. Identifying challenges in this specific context and more generally in the management of cross-sector collaboration can provide valuable data for an effective collaboration.

Data collection

The study design incorporated three main approaches to evidence gathering: (a) document analysis (from literature review), (b) individual interviews, and (c) group interviews. We conducted individual interviews with key representative managers from all three sectors (three persons from each sector). The representatives have experience in elderly services delivery and several of them also have direct contact with elderly clients in the course of their professional activities. Further details concerning the managers interviewed will be given below.

The first stage of data analysis included the examination of all documents for any reference to, or statement made about, any partnership (e.g., alliance, cooperation, collaboration, network, or partner). All passages relating to any type of interaction between or among organizations were highlighted and transcribed into a computer file. The challenges related to collaboration were picked up and discussed in the literature review part of this study. In the second stage of the study, we interviewed key persons involved in elderly care. The aim of the individual interviews was to get a grasp of the current state of collaboration and to find out what the challenges are in welfare services co-delivery for the elderly. The representatives of the public sector were selected from mid- and lower-level management. The private sector interviewees were managers of three small- and mid-sized companies that supply services for the elderly (physiotherapy, home health care, housecleaning). From the third sector were a manager of a non-profit organization that works in elderly services delivery (a nursing home), a manager of a volunteer worker organization that provides friendship services to the elderly, and a church deacon who has direct contact with elderly clients in her daily activity (spiritual services or volunteer worker activities).

In the third stage of the study, we carried out a group interview with eight experts from all three sectors. The participants selected for the workshop session have extensive experience in welfare services delivery and they are members of the cross-sector collaboration management board. For this third stage, the public sector representatives were top-level managers. From private and third sectors, managing directors were selected. We gave a list to the group interview participants with the challenges identified during the interviews, and they were asked to complete the list of challenges. Several other challenges were also identified during the workshop session.
The list of challenges identified during the individual interviews and the group interview session was very long. We tried to categorize the challenges and, for this study, we selected only the

challenges related to the management of cross-sector collaboration. Because our research emphasizes the process of value creation through social innovations, it was important to identify the partners' core capabilities and resources and to be able to combine them in a novel way. During the individual and group interviews the partners' core capabilities and the resources they could contribute to a partnership were also identified. The results are presented in the designated section below.

Data analysis

After data collection we began data analysis. Based on the theoretical framework presented in this study, we categorized the challenges related to the management of cross-sector collaboration for elderly care according to collaboration dimensions. Then, we analyzed every category of challenges separately, using the Force Field Analysis method (Lewin, 1951), and tried to identify solutions (or driving forces) to solve challenges and to implement the change management.

When analyzing the data, the social value creation issue was emphasized. To be able to create social value, innovative combinations of partners' resources and competences must be found. Table 2 (Partner's Core Capabilities and Resources) illustrates the fruits of our efforts to find solutions to overcome the challenges (change management process) in this regard. More details are given in the section devoted to analyses for change management.

Results: Challenges in the management of cross-sector collaboration for elderly care

In this section we will present the results of the analysis. The challenges in cross-sectoral collaboration are listed below, starting with the most challenging issues identified by the workshop participants.

- *Fragmentariness of services*: services are dispersed and old people have difficulties in finding service and piecing together the various components of the welfare service system. They need guidance from family and friends, or a specialized guidance provided by the service system. The need for service integration is a priority in the present service system.

- *Uncertainty relating to the activity of other organization* leads to ineffectiveness in the use of resources; information disconnects wherein no one has the information regarding the whole service system and there is little to no information flow between different service suppliers. Everyone manages his or her own job and the overall situation remains unclear. The management of partnership (leadership, strategic goals, strategies of actions, information sharing) must be planned and designed in order to assure an effective management.

- *Limited resources* (financial, personnel, leadership) mean that service providers cannot always meet the needs of their user base.

- *Keeping abreast of organizations' rules:* if the rules are unclear, an effective management cannot be assured.

- *New operation models* for the elderly services are required. These could help ensure customers lead a more active life.

- *Quality control:* developed programs for quality control are required in order to provide quality services to the customers.

- *Common rules and modes of action* are required for service effectiveness and customer satisfaction.

- *Continuity of collaborative projects* must be planned. There have been many successful short-term projects (e.g., the widow project) that have resulting from collaborative initiatives between the public sector and the third sector. The problem is that these projects have an end date, after which the needs of their user base go unmet.

- *The volunteer sector requires more support:* specifically, recruiting and commitment policies, activity expanding, and financial support.

- *Bureaucracy and hierarchies in the public sector* cause problems in the collaboration process.

Structuring challenges by collaboration dimensions

The challenges were categorized according to collaboration constructs. It was somewhat surprising to find that the challenges discovered during this study are related only to governance and administrative dimensions. The categorization of challenges is presented in Table 1. As Table 1 shows, most of the challenges are related to governance, followed by administrative challenges. The results confirm the fact that the management of collaborations among the public, private, and third sectors in elderly care does not receive enough attention from organizational leaders. There is a huge need for elaborating a strategic partnership among the three participants.

Identifying partners' core capabilities and resources

Because our study emphasizes the issue of social value creation through cross-sector collaboration, special attention is given to novel combination of partners' competences. To be able to create social value in cross-sector collaboration, it is very important to know each partner's strengths, what special resources and capabilities each can contribute (Le Ber and Branzei, 2010), and after that to ponder how some partners' strengths can compensate for the weaknesses of others. Identifying partners' strengths is a very important task for collaboration managers, as it is necessary for finding innovative solutions to different kind of challenges. Furthermore, participants can create new value for the benefit of society.

Table 1: Challenges in The Management of Cross-Sector Collaboration for Elderly Care, Categorized by Collaboration Dimensions

1. GOVERNING *-problem solving* *-participative decision making* *-shared power arrangements*	**2. ADMINISTRATION** *-coordinating* *-defining roles* *-monitoring mechanisms*
weak management initiative	fragmentariness of services
limitation of leadership	uncertainty relating the activity of others
lack of strategies of actions	lack of common rules and modes of actions
limitation of personnel resources	disconnectedness of information
limitation of financial resources	unclear organization's rules
rigid operation models	lack of quality control
no continuity of collaborative projects	-
volunteer sector operates much in isolation	-
weak position of volunteer sector	-
birocracy and hierarchy in public sector	

Table 2 presents each sector's strengths in the case of cross-sector collaboration for elderly care in Finland. Due to the limitation of this paper, we will not present each strength in detail but will rather list them.

Table 2: Partners' Core Capabilities and Resources (Strengths)

Public sector's strengths	***Private sector's strengths***	***Third sector's strengths***
Certainty of activity	Innovativeness	Timetable flexibility
Certainty of service delivery	Customer-oriented services	Regional know-how
Nearness of services to customers	Collaborative capacity	Human resources
Democratic service supply	Advanced welfare services	Customer-oriented services
Responsibility to organize services (quality control)	High educational level and technology know-how	Church is expert in spiritual needs and crisis situations
Financing/funding opportunities	Flexibility of open times	Light organization structure
Taxing power	Effectiveness of action	Free labor (volunteers)
Continuity of activity	Financing know-how	Special know-how
Legitimacy know-how, law regulation, law making	Transparency of earnings and expenses	Big collective facilities (of non-governmental organizations)
Wide collaboration network	Individuality/quality of services	Big collective spaces
Variety of know-how	Well defined core tasks	Ideology is value based
The ethic of public services	-	The pioneer role in many concepts development

Analysis for change management in cross-sector collaboration in elderly care

We used Force Field Analysis method to perform this task. Additionally, while emphasizing the process of social value creation, the strengths of each sector (Table 2) were constantly considered during analysis. The Force Field Analysis is widely used in planning and implementing change management programs. It is a simple and powerful visual tool consisting of driving and restraining forces for change, which permits examination of ways to increase the positive, driving forces and reduce the negative, resisting forces (Lewin, 1951). In this study, Force Field Analysis is used as a visual tool that foments understanding of how challenges should be approached in order to change and improve the management of cross-sector collaboration in elderly care.

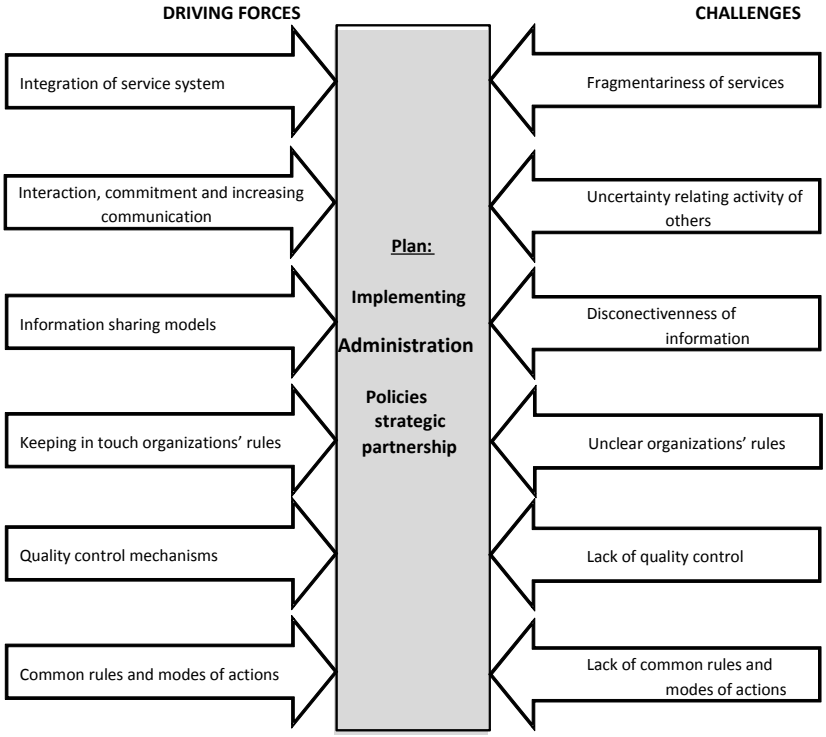
The analyses are divided into two groups: governance and administrative. The first steps in the formation of a strategic partnership are the implementation of policies for governing and for administration of the partnership. A change management plan was realized in each case, using the Force Field Analysis (Figure 2 and Figure 3).

We will explain in detail how the first three challenges could be solved, aiming to impute value to all participants, as well as creating social value. Table 2 suggests which sectors' strengths could be used to solve the specific challenges and how different strengths could be combined to achieve a given goal. Table 3 below contains the compiled data from our investigation.

For the purposes of our analysis we examined each challenge in isolation. In the first row we have the first challenge: fragmentariness of services. Using Table 2, which contains each sector's strengths, we pondered which of these strengths could be used to surmount this particular challenge. We came up with the following strengths that could be used to overcome this challenge: (a) public sector's strengths ("Responsibility to organize services", "Legitimacy know-how, law regulation, law making", and "Funding/financing opportunity"), (b) private sector's strength ("Innovativeness"), and (c) third sector's strengths ("Regional know-how" and "Special know-how").

Making use of each sector's special capabilities, efficient and innovative solutions may be found to facilitate integration of the service system. Because the public sector is responsible for organizing services for the elderly, it also is responsible for the management initiative in a partnership context. The public sector can set a good example in this regard by investing the significant time resources necessary to effectively manage a collaborative project. Additionally, the public sector has legitimacy in law regulation. In some specific cases (e.g., public services procurement), legal policies do not encourage innovation. With intensive collaboration and constructive discussions, the public sector could introduce new stipulations in legal regulations that will facilitate new action. The public sector could thus demonstrate this strength for the benefit of the private and third sectors.

Figure 2: Force Field Analysis to Solve Challenges Related to Administration



Source: Daniela Grudinschi, Leena Kaljunen, Timo Hokkanen, Jukka Hallikas, Sanna Sintonen, Antti Puustinen

Before implementing the integration of the service system, several discussions and negotiations are required. The third sector has a great amount of regional and special know-how because their relationships with customers are very close and based on empathy. This knowledge is important for the public and private sectors when the aim is to build a customer-oriented integrated service system. It is essential that the representatives of the third sector who have this kind of knowledge share their experience and information with others. Furthermore, the private sector has high innovativeness potential and has huge technology know-how. The private sector participants are specialized firms that deliver security services for the elderly with innovative technological solutions. The discussions and negotiations with such firms could allow the best possible technological solutions for the integration of the service system. The public sector would have the opportunity to fund projects in such a way that each partner could derive value from others, as long as the collaboration were strategically managed. Most importantly, this private-sector strength could create social value and several social challenges could be overcome through strategic cross-sector partnership. With an integrated service system, higher-quality services

Table 3: Creating Value While Solving Challenges

Challenge	Strength that can be used to solve the challenge (Whose sector strength)	Value for partners (Sector which offers -> Sector which gets)	Social value
• *fragmentariness of services*	Responsibility to organize services (Public) Legitimacy know-how, law regulation, law making (Public) Innovativeness (Private) Funding opportunity (Public) Regional know-how (Third) Special know-how (Third)	Management initiative responsibility Public->Private Public->Third New required laws Public->Private Public->Third Integration system solutions Private -> Public Private ->Third Funds for integration Public->Private Valuable knowledge Third _-> Public Third -> Private	Integration of service system Higher quality of service for clients Cost reduction Availability of services in all areas
• *uncertainty relating the activity of others*	Responsibility to organize services(Public) Wide collaboration network (Public) Innovativeness (Private)	Common informative seminaries Public->Private Public->Third Information sharing models	Cost reduction Better communication systems Higher service quality for clients

	Technology know-how (Private)	Private->Public Private->Third Information sharing system Private->Public Private->Third	
• *disconnectedness of information*	Innovativeness (Private) Technology know-how (Private)	Information flow system Private->Public Private->Third	Cost reduction Better communication systems Higher service quality

Source: Daniela Grudinschi, Leena Kaljunen, Timo Hokkanen, Jukka Hallikas, Sanna Sintonen, Antti Puustinen

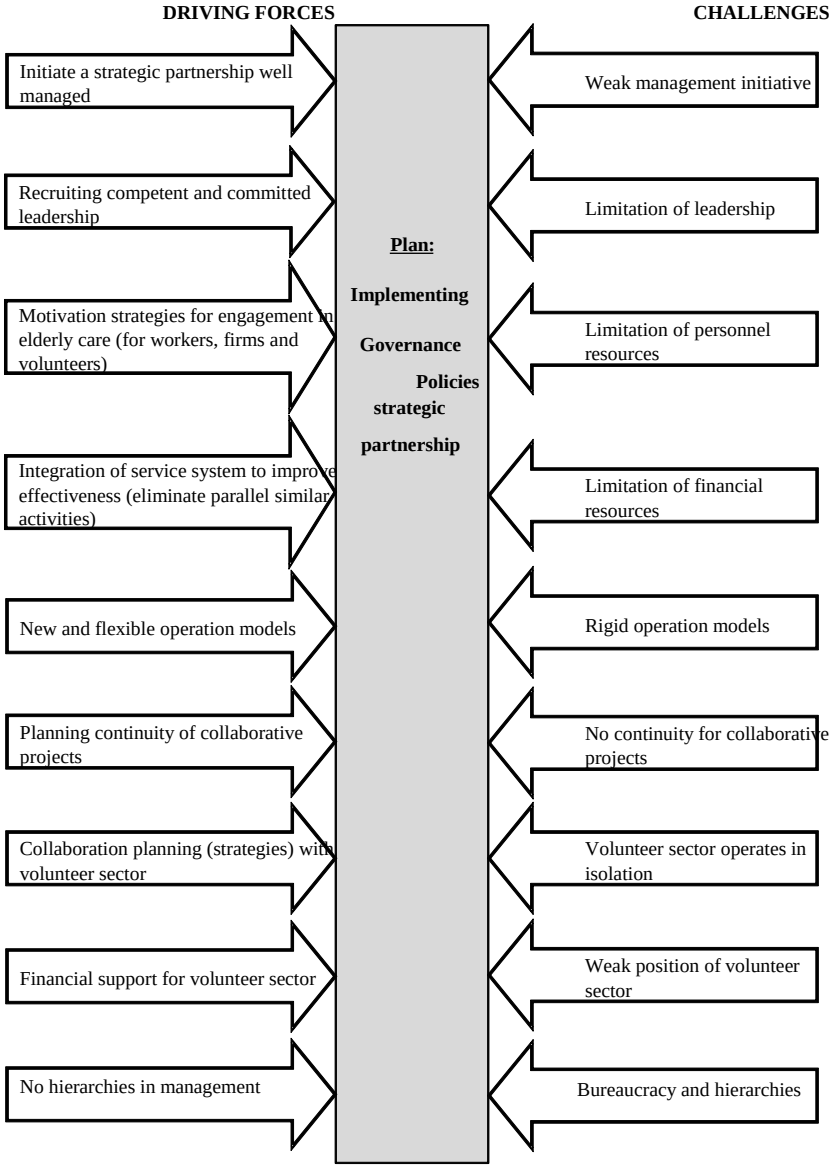
could be provided to clients, the availability of services in all areas could be assured, and significant cost reductions could obtain (e.g., research costs while trying to find better solutions for integration).

Conclusions and discussion

During the study, we investigated what the challenges are in the management of cross-sector collaboration for elderly care. The results of the study show that the present challenges are related to the governance and administration dimensions of collaboration. There were no identified challenges related to the other three dimensions of collaboration; namely, autonomy, mutuality, and norms of reciprocity and trust. These are elements that correspond with a higher-level collaboration (Thomson and Perry, 2006). This certifies that the management of cross-sector collaboration in elderly care is currently at a low level.

At the same time, the fact that the challenges that we discovered in our case study belong only to these two dimensions of collaboration (governance and administration) indicates that they are mostly related to decision-making and organizational aspects of management. These strongly relate to the participants' strategic ability to create social value. This confirms that managers should concentrate more on strategic issues: how partners' core capabilities and resources may be combined in an innovative way in order to create social value. This is the main goal in the case of cross-sector collaboration that addresses social issues: to create social value while solving social challenges.

Figure 3: Force Field Analysis to Solve Challenges Related to Governance



Source: Daniela Grudinschi, Leena Kaljunen, Timo Hokkanen, Jukka Hallikas, Sanna Sintonen, Antti Puustinen

To be able to combine partners' core capabilities and resources, managers must first identify them. Based on this knowledge, every single challenge should be analyzed when making strategic decisions. The members of the management board should investigate together which partner has the best capabilities and resources to efficiently solve a specific challenge. Efficiency in this sense means creating social value, as well as value for other partners. Everyone should benefit from cross-sector collaboration: society as a whole, as well as participants involved in the collaboration process. If there are no benefits, collaboration motivation decreases or even disappears.

In the literature review, we addressed challenges in cross-sector collaboration and partnerships. Some of the challenges mentioned in the literature were also identified in our case study (e.g., those related to the management function of collaboration: ineffective management, limitations of human resources and leadership, lack of strategies, lack of monitoring mechanisms, lack of common rules and modes of actions, lack of communication, lack of incentives to communicate, inflexible policies and modes of actions) (Andreasen, 1996; Frisby, Thibault and Kikulis, 2004; Wondolleck and Yaffee, 2000). Some other challenges specified in the literature were not identified in our case study (e.g., mistrust, lack of commitment, self-interest and competition, pressure from external agencies to form a partnership) (Wondolleck and Yaffee, 2000; García-Canal, Valdés-Llaneza and Ariño, 2003; Parise and Casher, 2003).

We also identified some challenges specific to the elderly care context: the fragmentariness of services and the need for the integration of service systems, the weak position of the voluntary sector and its isolated activity, and the need to assure the continuity of efficient collaborative projects. These are specific challenges facing service delivery to the elderly. By making efforts to solve these challenges through social innovations in cross-sector collaboration, social value can be dynamically created. For example, by strategically repositioning the voluntary sector, notable cost savings can be achieved. Furthermore, higher-quality services and greater availability of services can be provided to the elderly through integration of service delivery systems, where the voluntary sector can play an important role.

This study approached the challenges of cross-sector collaboration widely, in different domains (based on literature review), underlining the specificity of the context (elderly care services), and emphasizing the importance of social value creation. This study could be used as a guideline for effective cross-sector collaboration, in the social services domain generally and in the domain of elderly care service delivery specifically. Due to its specific cultural and regional context, case study research always contains limitations. For example, in Finland, interpersonal trust is very high compared to other countries (Newton, 2001). This may be one of the reasons why trust was not identified as an obstacle to collaboration in our case study. Even if our study did not identify any challenges related to autonomy, mutuality, and norms of reciprocity and trust, special attention should be accorded separately to all possible collaborative challenges. Effective partnership management also requires finding an equilibrium among all the dimensions of collaboration (Thomson and Perry, 2006).

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Relationship risk perception and determinants of the collaboration fluency of buyer-supplier relationships in public service procurement

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Articles

Relationship risk perception and determinants of the collaboration fluency of buyer–supplier relationships in public service procurement

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ABSTRACT

Public service procurement effectiveness has been emphasized as a major challenge in recent years. Well-managed partnerships between buyers and suppliers are needed in this domain to achieve collaboration fluency and improve the effectiveness of procurement. The main objective of this study is to determine which issues managerial teams must emphasize when aiming to create a solid partnership based on pre-existing collaborative relationships. The originality of this study lies in the domain approached (public service procurement in social and healthcare services), as well as the variable it attempts to explain (collaboration fluency). The study investigates two major issues: firstly, how collaboration risk perception influences communication, trust, and the governance of a collaboration and, secondly, how these factors (communication, trust, and governance) affect collaboration fluency. The study is performed via a survey regarding the collaboration of the public sector with organizations from the private and third (non-profit) sectors within public service procurement. The empirical evidence was gathered with a structured online questionnaire that was sent to organizations from the private and third sectors that provide services in the social and healthcare domain. The results indicate that in collaborative relationships in public service procurement, the higher the perceived relationship risks are, the more positive effects they will have in terms of increasing trust, communication, and the quality of collaboration management. Furthermore, communication, governance, and administration have strong influences on collaboration fluency.

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1. Introduction

1.1. Background of the study

Public service procurement effectiveness has been emphasized as a major challenge in the last decade (Lawther and Martin, 2005; van der Valk and Rozemeijer, 2009; Merkert and O'Fee, 2013), especially in the social and healthcare domain, where many challenges can be found (Crosby and Bryson, 2005). Public service procurement in the social and healthcare domain requires special attention because it represents an important part of public service procurement. In Finland, for example, more than half of the costs related to public services are incurred due to health and social care. When the focus is on public service procurement, the health and social service sector accounts for 93% of service procurement (Statistics Finland, 2012).

In order to increase the effectiveness of public services procurement, the collaboration between the municipalities (the buyers) and the service providers plays an essential role (Guzmán and Sierra, 2012). Service providers in public procurement are organizations from the private and non-profit sectors. To provide high-quality services, well-managed cross-sector collaboration is required in this domain. Even if many collaboration practices and relationships have evolved in this area, it remains challenging to obtain fluent collaboration between all partners. Solid partnerships are needed in this domain (Vilén and Palko, 2010). Collaboration is just one stage of a true partnership. A solid partnership also requires management actions and high-quality management skills (Cahill, 1996).

Collaboration and partnership research in public services procurement has generated increased interest in recent years (Guzmán and Sierra, 2012). Collaboration in services procurement, or buyer–supplier relationships, has been studied from various perspectives, such as efficiency (Byoung-Chun et al., 2011), effectiveness (Manzoni and Islam, 2007; Chen, 2010), performance (Heimbürger and Dietrich, 2012), and success (van der Valk and Rozemeijer, 2009; Plane and Green, 2012). However, only a few studies focus specifically on collaboration in public service procurement (e.g., Chen, 2010).

Collaboration efficiency makes reference to the cost of collaboration; it is about its economic value (Byoung-Chun et al., 2011). When studying collaboration effectiveness, the ways in which objectives are achieved using a managerial perspective are evaluated (Manzoni and Islam, 2007). Collaboration performance is a broader concept that includes economic, operational,

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and managerial indicators (Heimbürger and Dietrich, 2012). Collaboration success is related to satisfaction or dyadic sales (Mohr and Spekman, 1994; Byoung-Chun et al., 2011).

However, collaboration fluency has not been studied previously. Similar to collaboration effectiveness, collaboration fluency takes managerial indicators into account. However, collaboration fluency is a new and clearly defined concept (Crockett et al., 2011) that includes broad managerial elements: identifying the common goal and challenges, making a plan to achieve this goal, putting the plan into action, analyzing and developing the activity, and establishing roles. All these managerial elements are parts of partnership management (Thomson et al., 2007). Generally, in collaborative relationships, the aim of collaboration is information exchange (Chen, 2010), whereas in partnerships, a common goal brings partners together (Cooke, 2012). Achieving this goal requires the management of action. Therefore, partnerships are related to the management of collaboration. Because the context of this study relates to partnerships, investigating collaboration fluency is logical.

Furthermore, understanding the risks leads to a better understanding of the risk management process, with direct implications for the success of a collaboration and partnership management (Delerue, 2004). Several studies have approached the field of risk management and the perception of risk in research related to collaboration management. The effect of trust on relationship risks in partnerships (Blomqvist, 2002; Vangen and Huxham, 2003), the effect of communication on risk management (Vangen and Huxham, 2003), and the effect of organizational structure (governance and administration) on the perception of relationship risks (Cooke, 2012; Das and Teng, 2001) are examples of ways in which the effect of various factors on risk management and risk perception have been studied. However, risk perception and relationship risk management are rarely highlighted in discussions of public procurement and collaboration.

1.2. Objectives and benefits of the study

The objective of this study is to determine which issues must be emphasized by a managerial team when aiming to create a solid cross-sector partnership based on pre-existing collaborative relationships. The study concerns buyer–supplier relationships in public service procurement in the social and healthcare domain. The baseline of the study is the perspective of the suppliers. In the social and healthcare domain, the suppliers are representatives of the private sector, as well as the third sector (non-profit and volunteer organizations). The two main research questions that this study addresses are as follows:

Q1: What is the effect of suppliers' perceived relationship risks on partners' trust, communication, and organizational structure (governance and administration) in public service procurement in the social and healthcare domains?
Q2: What are the effects of the most critical success factors of collaboration (trust, communication, and organizational structure) on collaboration fluency in public service procurement?

The perception of relationship risks influences the success of collaboration (Hallikas et al., 2004), and the aim of this study is to explore to what extent perceived risks have an effect on all of these factors (trust, communication and organizational structure). Additionally, the study aims to identify the main factors that affect collaboration fluency in public service procurement.

The role of partnerships in public service procurement is increasing, and new knowledge is needed in that domain (Lawther and Martin, 2005). This study adds new knowledge specifically about the management of public service procurement partnerships and generally about any partnership. Furthermore, the study contributes to the literature on risk management in public service procurement and collaborative relationships generally, showing that the acknowledgment of risks to collaboration participants is an important issue in risk management. Studying the effect of perceived relationship risks on these factors is important when the aim is to build a solid partnership and organizations are ready to "invest" their resources and commitment in partnerships. Additionally, the study underlines those issues management teams should concentrate on when planning to form a partnership, i.e., which critical success factors must be carefully addressed in the early stage.

1.3. Outline of the study

Drawing on the perception of relationship risks and collaboration management literature, the paper identifies and outlines the factors that may be affected by risk perception, as well as factors influencing collaboration fluency in collaborative relationships. Based on the theoretical background, a series of hypotheses are developed that describe the moderating effects of perceived relationship risks on trust, communication, and organizational structure. Thereafter, these hypotheses are developed to capture the effect of these factors on collaboration fluency. This is followed by the research methods, which link the hypotheses and the essential concepts within the research model, as well as a description of the data collection and the measurement of the concepts. The results focus on testing the research model using partial least squares structural equation modeling. Finally, the discussions and the conclusions are presented, elucidating the theoretical and managerial implications of the study.

2. Theoretical background and hypotheses

Firstly, it is necessary to clarify two main concepts used in this study: collaboration and partnership. Although collaboration and partnership are important topics in the social and healthcare domain, the use of these terms still causes confusion. Often, they are used interchangeably (Carnwell and Buchanan, 2008). In fact, they are two distinct concepts, with collaboration being a component of a complete partnership. Cahill (1996) describes the collaborative relationship as a pyramid, in which the partnership is the top of the pyramid. Collaborative relationships evolve gradually in this order: (1) involvement, (2) collaboration, (3) participation, and (4) partnership (Cahill, 1996). Therefore, partnership can be described as the highest level of a collaborative relationship. It has been proven that in many cases, collaboration and partnerships, especially in the public domain, are merely rhetorical, policy-driven, and far from the real aim of partnership (Carnwell and Buchanan, 2008).

Collaboration implies informal relationships, which do not ensure equality among the parties involved (Gardner, 2005). Collaboration is about sharing information between stakeholders. Unlike collaboration, partnership implies formal and structured relationships between equal partners. Equality makes reference to power, responsibilities, privileges, and mutual decision-making regarding common goals and objectives (Feenstra et al., 2006). A true and solid partnership requires effective management to ensure the fluency of collaboration and to maintain successful relationships (Alexandre and Ponte, 2008).

To understand how relationships develop and evolve in collaborations and partnerships, the understanding of risk perception is a key issue (Delerue, 2004). According to its definition, a relationship risk is a specific risk of partnering, such as the probability of not having a satisfactory collaboration (Das and Teng, 2001) or the probability of opportunistic behavior on the part of one's partner and the consequences that may occur in those circumstances. Additionally, to understand and manage

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these relationships, a clear understanding of which factors affect business relationships is needed. In their study identifying the critical success factors in alliances, Hoffmann and Schlosser (2001, p. 372) argue that "Most of the critical success factors have to be considered early in an alliance evolution".

The collaboration and business relationship management literature identifies various types of factors that affect a relationship between partners: defining the common goal and objectives, establishing roles and resources among partners, the norms of mutuality and trust, the governance form of the organization, the information sharing and communication mechanisms, etc. (Hoffmann and Schlosser, 2001; Thomson et al., 2007). However, the critical factors mentioned in the literature are reputation and trust, information sharing and communication between partners, and organizational structure (the governance and administration of the partnership) (Sanders and Premus, 2005). No specific empirical research on public service procurement relationships was found that concentrated on the factors that affect supply relationships.

Drawing from the literature related to partnerships and collaborative relationships in general, this study will specifically examine buyer–supplier relationships in public service procurement. The impact of perceived relationship risks on these critical factors in collaboration will be analyzed. In turn, the impact of these factors (trust, organizational structure, and communication) on collaboration fluency will be investigated. Collaboration fluency refers to the ability to interact successfully with other partners (Crockett et al., 2011). Based on the theoretical background, the hypotheses and conceptual model for our study are built.

2.1. Relationship risks and trust

In collaboration-and-partnership-related literature, several instances can be found in which the relationship's risk is linked to the trust concept. Most discussions and research findings suggest that trust involves risk in collaborative relationships (Blomqvist et al., 2005). Service procurement involves very complex risks, because the procurement process itself is very complex (van der Valk and Rozemeijer, 2009). For that reason, risk management is an important issue that must be taken into account in collaboration management within public service procurement (Chung et al., 2010).

According to ISO 31000, risk management is the process of the "identification, assessment, and prioritization of risks", as well as the coordination of resources to minimize and monitor these risks. In the buyer–supplier relationship literature, risk perception and trust have been most often studied from the buyer's perspective (e.g., Mohr and Spekman, 1994; Selnes, 1998). The buyer's perceived risk is associated with the fairness of the supplier or the quality of products or services purchased because the buyer is unable to infer the quality of the products or services, especially when purchasing complex services (Selnes, 1998). In this study, the trust and relationship risks are investigated from the supplier's perspective.

Suppliers' views on relationship risk management are quite different from buyers' views. The supplier's perceived risk in collaborative relationships is associated with a satisfactory relationship (Das and Teng, 2001). More specifically, the supplier's perceived risk is based on the attitudes of the buyer toward supplier (Skjoett-Larsen et al., 2003), the goal and strategies of collaboration (Hallikas et al., 2004), the partners' commitment to collaboration, and the lack of community spirit between partners (Austin, 2010). All these constructs of risk are included in the empirical part of this study.

In addition to risk management, trust is another component that is considered in our analyses. Over time, trust has been studied at the individual level and the organizational level. From the perspective of collaboration in public procurement, both interpersonal and organizational trust constructs have to be considered (Schiele and McCue, 2006; Merkert and O'Fee, 2013). Interpersonal trust has components such as competence, benevolence, and integrity (or truthfulness) (Blomqvist, 2002; Connell et al., 2003; Mollering et al., 2004). For organizational trust, Vanhala (2011) suggests two constructs: capability and fairness. One important component of fairness is communication. Similar to Selnes's model (which was developed for buyer–supplier relationships) (1998), Vanhala's model (2011) of trust measuring includes capability. The second component of organizational trust, fairness, is a broader concept that includes communication. In this way, it is similar to Selnes's model. Because Vanhala's model is up-to-date, it was chosen for use in the empirical part of this study regarding the organizational level of trust in buyer–supplier relationships. In the empirical part of the study, all of these elements of interpersonal and organizational trust are included in the analyses.

Most definitions of trust consider risk to be the core element related to trust (Das and Teng, 2001). In the buyer–supplier relationship literature, it is also argued that trust can be perceived as "implicit contracting" for those who are able to trust by accepting risks and uncertainty (Sako, 1998) because to develop trust, a risk must be taken in the first place (Das and Teng, 2001). Furthermore, establishing trust is a fundamental need for the successful formation and growth of any new relationship (Aurier and N'Goala, 2010). There are also pertinent discussions in the scientific literature on public service procurement: it is argued that risk and the perception of risk can be seen as opportunities to build trust (Schiele and McCue, 2006). Based on these arguments from the literature review, we posit the following hypothesis:

H1. Suppliers' perceived relationship risk in buyer–supplier collaboration in public service procurement has a positive influence on trust.

2.2. Relationship risks and organizational structure (governance and administration)

In service procurement collaboration and partnerships, risk management is not only related to trust and trust building in collaborative relationships. Another important factor related to risk management is the organizational structure of collaboration, more specifically how collaborative relationships are governed and administrated (Vangen and Huxham, 2003; van der Valk and Rozemeijer, 2009). While the governance dimension of collaboration is concerned with participative decision making, shared power arrangements, and problem solving, the administrative dimension refers to coordination, monitoring mechanisms, and role defining within the collaboration process (Thomson et al., 2007). These are also the constructs used for the governance and administration dimensions in the analyses in the empirical part of this research project.

Risk management should ensure an effective and powerful governance structure and administration for the partnership. The risks and challenges include determining the following: how to identify potential partners and their strengths and resources (to understand who is accountable for what in the collaboration); how to agree on a collaborative agenda, especially considering the difficulty of judging and balancing the personal and organizational goals; how to make arrangements for the sharing of power; and what type of coordination and monitoring mechanisms should be used to achieve maximum outcomes (Thomson et al., 2007; Crockett et al., 2011). Such activities are extremely time-consuming and resource-intensive and require commitment and great management skills. Therefore, we assume the following:

H2. In public services procurement, the higher the supplier's perceived relationship risk, the better the governance and administration of the collaboration management of the partnership must be.

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2.3. Relationship risks and communication

Another important issue in the management of relationship risks in service procurement is related to communication and the sharing of information. In order to build trust and ensure powerful and effective governance and administration in a partnership generally and in public service procurement in particular, communication is a critical factor (Cooke, 2012; Merkert and O'Fee, 2013). Collaboration risks may arise due to insufficient interaction and information sharing between partners (Norrman and Jansson, 2004; Vanhala, 2011). The sufficiency and accuracy of information are the constructs of communication (Vanhala, 2011) used in our measures. Although communication is seen as a critical factor in collaboration in many studies, effective communication requires a large number of meetings and is time-consuming. This process is very challenging for many participants in collaboration. It requires a great deal of commitment from partners in terms of communication and information sharing. Furthermore, the disclosure of all necessary information for a specific partner may cause a high level of risk for the entire collaboration process (Parker, 2000). Accordingly, we hypothesize the following:

H3. In public service procurement, the higher the supplier's perceived relationship risk, the better the communication in collaboration must be.

2.4. Trust and collaboration fluency

It has been argued by many scholars that collaboration stimulates progress. To effectively collaborate, collaboration fluency is crucial (Crockett et al., 2011). Collaboration fluency is "the ability to successfully work and interact with virtual and real partners" (Crockett et al., 2011). The authors specify that collaboration fluency includes broadly managerial elements: identifying the common goal and challenges, making a plan to achieve this goal, establishing roles, putting the plan into action and analyzing and developing the activity. The collaboration fluency constructs are related to the management of collaboration. When testing the collaboration fluency in the empirical part of this study, the previously mentioned constructs were used in the analyses.

Because collaboration fluency is a new term in the scientific literature, we have not found a direct relationship between trust and collaboration fluency. However, most of the studies related to service procurement have found trust to be the critical factor in collaboration success (van der Valk and Rozemeijer, 2009; Merkert and O'Fee, 2013). Moreover, trust reduces transaction costs in public procurement (Merkert and O'Fee, 2013). Communication-based trust increases learning outcomes, and trust-based governance has a large impact on task performance in collaborative relationships, even if in reality, trust-based performance is quite challenging (Merkert and O'Fee, 2013). Moreover, trust is seen as a precondition for successful collaboration, and trust-building is considered to be the most important competence in partnership management (Das and Teng, 2001). Therefore, we posit the following:

H4. In buyer–supplier relationships in public services procurement, supplier trust has a positive influence on collaboration fluency.

2.5. Organizational structure (governance and administration) and collaboration fluency

In searching the literature related to these issues (governance and administration and collaboration fluency) and the relationships between them, nothing specific was found in the context of service procurement. It was shown earlier that governance and administration have important roles in collaboration success (Parker, 2000; Thomson et al., 2007; Vangen and Huxham, 2003). The organizational structure and management system chosen are important influences on collaboration outcomes: clearly defined objectives, an effective allocation of roles and responsibilities, the perception of equally shared benefits, shared power arrangements, etc. have significant impacts on collaboration success (Parker, 2000; Thomson et al., 2007). Appropriate governance and administration mechanisms have an important influence on collaboration success and collaboration fluency, but the full value of collaboration must be developed as it evolves (Hoffmann and Schlosser, 2001). Therefore, we posit the following:

H5. The governance and administration of collaborative relationships in public services procurement have a positive influence on collaboration fluency.

2.6. Communication and collaboration fluency

In addition to trust and organizational structure, communication is seen as an important factor that influences collaboration outcomes in partnerships. In their study of public-private partnerships, Jin and Doloi (2008) found that communication has a strong positive influence on collaboration outcomes. Furthermore, in service procurement studies, the findings are similar: communication is one of the most important factors influencing collaboration success (Thatcher and Sharp, 2008; van der Valk and Rozemeijer, 2009). Two types of communication are critical to collaboration success: interpersonal and organizational (Ohlinger et al., 2003; Vanhala, 2011). Collaboration success depends not only on how well partners collaborate with each other but also how well they collaborate with anyone else who may be interested in their activities or who can be affected by their activities (e.g., customers).

The accuracy of information, the openness of information, frequent communication, and bi-directional communication are also important factors in collaboration success (Chen and Paulraj, 2004; Vanhala, 2011). All of the above-mentioned items were used in the empirical part of the study when measuring communication. Establishing an information and communication system in which all partners are linked to one another, as well as using modern information and communication technology, can greatly reduce transaction costs and have a significant effect on the efficiency of collaboration and collaboration fluency (Hoffmann and Schlosser, 2001). Thus, we posit the following:

H6. Communication between partners (buyers and suppliers) has a positive effect on collaboration fluency in public service procurement.

3. Methods

3.1. Description of the study

The present study is part of a larger research project that aims to increase customer value through innovative public services contracts in the social and healthcare domain. The empirical research focused on organizations that either provided elderly care services or child welfare services. In Finland, the public sector is responsible for providing these types of services to citizens. Some services are provided by the public sector itself, whereas other services are provided through public procurement from the private and third sectors. Regarding health and social services procurement, the combined share of these two service sectors is more than 60%. The procurement decisions are made based on the resources that the public sector owns, as well as the areas in which every sector operates in the specific domains.

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Public, private, and third-sector organizations that deliver services to elderly people and children have collaborated actively in recent years. The main aim is to improve the quality of services; however, many other challenges have brought all of the organizations together. The increasing elderly population, as well as the increasing number of family problems, the limited resources, the availability of services in sparsely populated areas, and the efficiency of service delivery are just some of the major challenges in that area (Grudinschi et al., 2013). Even if many collaboration initiatives have taken place, challenges still exist, and there is a need to improve the collaboration between all three sectors. To improve the collaboration and to achieve a high quality of service and customer value, a partnership between all of the sectors is needed. Although collaboration exists, it has not been strategically

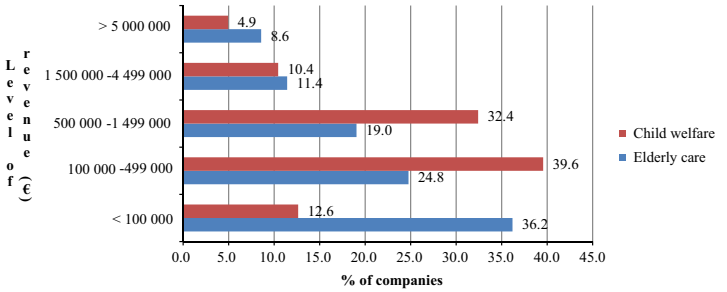

Fig. 1. Revenue levels of the organizations.

Table 1
Measurement model (sources are presented in Appendix A).

Latent variable	*Mean*	*SD*	*Item loading*	*CR*	*AVE*
Relationship risks				.964	.842
Attitudes	4.577	1.918	.904		
Lack of community spirit	4.535	1.914	.933		
Insufficient commitment to collaboration	4.900	1.716	.951		
The absence of a clear leader	4.602	1.817	.894		
Unclear goals and strategies	4.680	1.771	.906		
Trust				.984	.875
People who represent other organizations are reliable	5.217	1.436	.945		
Our organization can count on each partner to meet its obligations	4.955	1.405	.929		
Our organization should continue to cooperate with partner organizations	5.687	1.334	.942		
Our partners have capabilities in their field operations	5.387	1.305	.951		
Our partners are able to build relationships	5.151	1.361	.960		
Our partners are aware of each other's activities	4.778	1.488	.907		
Our partners understand the needs of the service area	5.099	1.365	.927		
Our partners do not violate agreements and laws	5.549	1.529	.920		
Our partners have good reputations in the industry	5.337	1.376	.936		
Communication				.979	.870
Our organization provides information on current, important changes to us	3.581	1.786	.911		
During collaboration, information is distributed effectively	3.580	1.755	.936		
Shared information is accurate	4.502	1.757	.941		
Shared information is up-to-date	4.229	1.671	.947		
Shared information can be trusted	4.555	1.811	.930		
Collaboration is based on open communication	3.881	1.835	.942		
Communication with partners is easy and relaxed	4.324	1.806	.922		
Governance and administration				.969	.862
As a representative of our organization, I understand our roles and responsibilities	4.301	1.711	.937		
Our organization develops solutions to collaboration problems jointly with other partners	4.392	1.715	.932		
During the meetings with our partners, we achieve what was proposed	4.771	1.537	.947		
The objectives of collaboration are agreed upon in cooperation with partners	4.903	1.660	.913		
Our organization tasks are highly coordinated with the tasks of the partner organizations	4.540	1.543	.9140		
Collaboration fluency				.981	.881
Facilitative routines have been created for our collaborative activities	4.640	1.720	.909		
Problems are easy to solve through collaboration	4.833	1.644	.943		
The partnership efficiently uses all parties' knowledge	4.388	1.786	.945		
The partnership has the needed resources and capabilities for successful operation	4.288	1.703	.943		
The collaboration is well-organized	4.000	1.685	.960		
The partnership takes future challenges into account	3.931	1.715	.934		
The goal of cooperation is clearly defined	4.162	1.866	.933		

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managed until now. The management of collaboration should be strategically planned through a partnership.

3.2. Sample

The data were collected in two parts because of the differences in the nature of the two service sectors. Concerning elder care, a sample of 580 companies and non-profit organizations (representing the private and third sectors) operating in the care domain were approached with an email invitation to answer a web survey. In total, 125 responses were received after two rounds of reminders. A sample of 938 organizations that provide child welfare services were approached with an email invitation to participate in the web survey. After two reminders, 216 responses were received.

All respondents were small or medium-sized companies (Fig. 1), which is typical in Finland because only few large international companies operate in the market. In most of the organizations, the annual revenue was less than 500,000 euros.

Most of the responses were received from companies (82.3%). The remaining respondents represented non-profit organizations (12.3%), co-operative societies (2%), and individual practitioners without an official company (3.9%). The number of personnel varied from one to 200 persons. More than 15% of the respondents were private entrepreneurs solely employing the entrepreneur. Most of the organizations were rather new; more than half of them were established after the year 2000. The respondents were mainly women (72.3%), and they were either within top management or entrepreneurs. This finding is in line with the target population because the overwhelming majority of personnel working in the health and social sector are women. In social services, 88.1% of entrepreneurs are women, and in health services, the corresponding share is 66.7% (Statistics Finland, 2012). Only some of the companies had experiences with collaboration and had an on-going collaboration, and therefore, 286 responses were eligible for the analysis.

3.3. Analysis method

The research model was analyzed with partial least squares (PLS) structural equation modeling, which has been considered as an emerging methodological choice in quantitative research for models with latent variables having several indicators (Reinartz et al., 2009). PLS makes no parametric assumptions and focuses on the significance of the relationships between the dependent and independent variables, instead of analyzing the overall model fit, as in covariance-based structural equation modeling.

3.4. Measurement and research model

Most of the measurement items included in the survey were derived from the previous literature and modified for the purposes of this study. The items and sources used to measure each of the constructs are presented in Appendix A. Keeping in mind that in the future, the aim of public service procurement is toward a partnership, in addition to the service procurement literature, the collaboration and partnership literature was investigated further. Additionally, because the present study is related to public service procurement and the collaboration between the public, private, and third sectors, some items were modified to better describe this type of collaboration. All measures were tested in advance by showing them to three suppliers of public services, and the items were revised until no further changes were suggested. The variables used in this study are listed in Table 1.

A seven-point Likert scale ranging from “strongly disagree” to “strongly agree” was used to measure these items. The conceptual model is depicted in Fig. 2.

The PLS method allows for the estimation of the confirmatory factor analysis and the structural relations simultaneously. In the evaluation of the measurement model, PLS estimates the internal consistency for each block of indicators and evaluates the measurement reliability in terms of composite reliability and average variance extracted (e.g., Straub et al., 2004).

Table 1 summarizes the descriptive information of the measurement items, along with the results of the factors analysis, as well as the latent construct reliabilities. The loadings produced with confirmatory factor analysis were all high ($>.7$) and statistically significant ($p<.001$), suggesting that the selected items measured the underlying constructs properly. The composite reliability (CR) coefficients were all higher than the general limit of.7 suggested in the literature (e.g., Esposito et al., 2010). The average variance extracted (AVE) was also used as an indicator of measurement reliability, and it should exceed .5 (Fornell and Larcker, 1981).

Table 2 includes the correlation between latent variables, where the diagonal represents the square root of the AVE. The discriminate validity of the measurement can be confirmed by computing the square roots of the AVE coefficient and comparing them with the latent variable correlations. The square root of AVE should produce higher values than the correlations, indicating that more variance is shared with the latent construct and its indicators than with other components that represent different blocks of indicators (Chin, 1998).

Overall, when assessing the outer model (i.e., the measurement), it can be concluded that the measurement model meets the established criteria, which suggests that further analysis can be conducted.

Non-response bias can be approached by comparing earlier and later respondents. In the present study, the non-response bias was approached via a *t*-test comparing earlier respondents to those that replied after a reminder. The results supported the assumption that there was no non-response bias. Additionally, a comparison between profit and non-profit organizations was conducted to assess the homogeneity of the sample. The *t*-test comparison did not indicate any significant differences in the measured items

Table 2
Correlations of the latent variables and the square root of the AVE scores on the diagonal.

Variable	RISKS	TRUST	COMM	GOVENR	FLUENCY
RISKS	.918				
TRUST	.632	.935			
COMM	.548	.772	.933		
GOVENR	.564	.872	.830	.929	
FLUENCY	.571	.755	.859	.801	.938

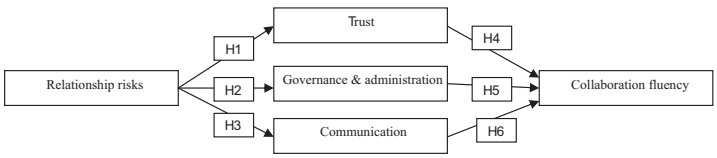

Fig. 2. The research model and hypotheses.

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across the non-profit and profit suppliers. Group-wise differences between sectors were also assessed, and no significant differences were found.

4. Results of the modeling

Table 3 presents the results of the structural model, along with path coefficients and their significance. It also includes the *R* square of the dependent variables and summarizes the results of the hypothesis testing. The significance of the path coefficients was determined based on *t*-statistics that were calculated with a bootstrapping method of 500 samples (see, e.g., Chin, 1998). *R* squared is used as a measure to indicate how well the hypothesized model fits, and it is computed for each dependent variable. The perceived risks related to collaborative relationships explain much of the variance for trust (40.0%), communication (30.0%), and governance and administration (31.8%). In addition, a relatively high share of the variance in collaboration fluency was explained by the model (76.7%). The high values for *R* squared could indicate problems related to multi-collinearity or an incorrectly specified measurement model (highly correlated latent constructs). On the other hand, the dimensions of governance and administration, trust, and communication could be highly related, although they reflect separate dimensions of collaboration.

The first three hypotheses discussed the effects of perceived collaboration risks on three dimensions of collaboration. According to the first hypothesis (H1), risks were assumed to influence trust within a collaboration. The path coefficient was positive and statistically significant, suggesting that higher perceived risk produces higher trust in a collaboration. Similarly, the second hypothesis (H2) is accepted because the path coefficient is positive and significant. Thus, high levels of risk would make the degree of governance and administration higher in collaboration. In addition, the positive and significant path coefficient between risks and communication suggests that the higher the perceived risk, the more effort is put into communication between collaboration partners. The third hypothesis is thus accepted.

The last three hypotheses discussed how different elements of collaboration influence the fluency of collaboration. Governance and administration had no statistically significant relationship with fluency, although the positive path coefficient points in the right direction. Therefore, hypothesis H4 must be rejected. The relationship between governance and administration and fluency was positive and significant, suggesting that hypothesis H5 is accepted. The last hypothesis (H6) is also supported by the analysis, and communication has a positive influence on collaboration fluency. Thus, this study was in line with the previous literature only to some degree.

5. Discussion and conclusions

The findings suggest that perceived relationship risks have a positive effect on increasing trust, enhancing government and administration, and improving communication. Additionally, trust has an insignificant effect on collaboration fluency, whereas communication and governance and administration have strong effects on collaboration fluency. The perceived relationship risks showed the strongest positive influence on trust. This means that when participants' relationship risk perception is high, they have no other choice than to trust their partners, as Das and Teng (2001) suggest. This is also in line with the Schiele and McCue's (2006) study of public service procurement. This is the case when partners truly believe that they can benefit enough from collaboration, i.e., when collaboration motivation is very high.

Furthermore, this finding is also in line with the view of Lyson and Mehta (1996), who suggested that the perception of risk can be seen as an opportunity to build trust. On the other hand, when levels of perceived relationship risks are low, this implies that managers should put greater effort into building trust to improve collaboration. Therefore, when building a partnership, the management team should focus on acknowledging the risks involved for the partners in the collaboration process (as well as the benefits that could be gained from collaboration) because building trust will be easier in this situation. However, a benefits-risks analysis is important in motivating participants to be committed to the collaboration process.

When the perceived relationship risk is high, the collaboration participants will put more effort into communicating effectively with others, and alternatively, when the risks are lower, the motivation to communicate frequently may decrease. Similarly, the managers' task of acknowledging collaboration participants' risks and benefits related to collaborative relationships may have a great impact on improving collaboration. The results indicate that the same effect should occur for participants' motivation to improve the governance and administration of collaborative relationships when they are aware of the risks and benefits involved in these collaborations. These results are also in line with the previous academic literature (Parker, 2000; Vangen and Huxham, 2003; Merkert and O'Fee, 2013).

When investigating the effects of trust on collaboration fluency, the results indicate that trust has no significant effect. This is not in line with most of the academic literature, in which it is argued that trust has a significant impact on collaboration success (Lane and Bachmann, 1998; Walsh et al., 1999; Child, 2001; Das and Teng, 2001; Cooke, 2012; Merkert and O'Fee, 2013). Nevertheless, our findings are in line with Hoffmann and Schlosser's study (2001), which suggested that even though trust and good relationships are important for collaboration, they are only a prerequisite for collaboration success, and high-quality

Table 3
Results of the PLS path modeling.

Independent		*Dependent*	*Path coefficient*	*p*	*R square*	*Hypothesis*
Risks	→	Trust	.632	**	.400	H1: accepted
Risks	→	Governance and administration	.564	**	.318	H2: accepted
Risks	→	Communication	.548	**	.300	H3: accepted
Trust	→	Fluency	.113	ns	.766	H4: rejected
Governance and administration	→	Fluency	.197	*		H5: accepted
Communication	→	Fluency	.608	**		H6: accepted

ns, not significant.
** $p < .001$.
* $p < .01$.

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management skills are much more important. The results of our study reinforce the discovery made earlier that in buyer–supplier relationships, trust does not play an important role in supplier delivery performance (Ahimbisibwe et al., 2012). The academic literature that was found to be relevant to this study concentrates on the role of trust in the success of collaboration. No relevant literature was found on the role of trust in collaboration fluency. It may be that the effect of trust on collaboration fluency is not significant; therefore, the results of our study may be relevant. Nonetheless, there is a need for further examination in other countries, where the levels of corruption and trust among individuals are different.

The study indicates that governance and administration positively influence collaboration fluency. Governance and administration are management functions in partnerships (Thomson et al., 2007). Governance deals with participative decision making, shared power arrangements and problem solving. Similarly, the administration of a partnership is responsible for defining the roles of the partners and finding suitable coordinating and monitoring mechanisms (Thomson et al., 2007). If all these tasks are performed well, this will influence positively the collaboration fluency in public procurement partnerships and in partnerships generally. These are two important management functions that require specific attention from the management team.

5.1. Theoretical implications

The modern economy has become service-oriented (Sin et al., 2002). Consequently, the importance of collaboration and partnerships is increasing continuously not only in the private sector but in the public and third sectors as well. Even if cross-sector collaboration and partnerships have become important topics in the domain of service procurement, practice has demonstrated that in many cases, they are simply rhetoric- or policy-driven (Carnwell and Buchanan, 2008). Many collaboration initiatives already exist, but well-managed partnerships will be needed in the future to provide better services.

This study emphasizes the importance of cross-sector collaboration and partnerships in public service procurement. It takes a step forward in that direction by showing what issues must be emphasized when aiming to build a solid partnership based on pre-existing relationships. Most of the earlier studies related to collaboration and buyer–supplier relationships in service procurement adopted the buyer's perspective (e.g., Manzoni and Islam, 2007; van der Valk and Rozemeijer, 2009; Plane and Green, 2012). This study took the opposite approach, investigating the collaboration fluency from the supplier's perspective, emphasizing the importance of real partnership formation between buyers and suppliers in service procurement.

Additionally, it must be remarked that as collaboration has become popular in recent years, in the service procurement domain, in many cases, partnership formation is often based on pre-existing collaborative relationships. Many studies have approached the issue of partnership formation in the business domain (Tuten and Urban, 2001; Blomqvist, 2002; Hagedoorn, 2006), but most of them concentrated on how to find suitable partners. The present study investigates what issues must be emphasized by the managerial team in partnership formation when collaborative relationships already exist.

In the literature on service purchasing and supply management, the effect of risk perception on supplier collaboration has not been widely discussed. In this study, the collaborators' relationship risk perception in the early stage of partnership formation was investigated. This observation helps managers to understand how collaborations work in practice. To achieve good collaboration fluency and a solid partnership based on pre-existing relationships, it is important for managers to know which issues they should concentrate on in the early stages of partnership formation. This research created new perspectives for utilizing risk perception in the management of supplier relationships. Furthermore, cross-sector collaboration and partnerships in service procurement is an emerging research area that requires further study from many perspectives. This study has created new insights in that regard.

5.2. Managerial implications

Even if past collaborative relationships exist, potential partners must be highly motivated to engage in a partnership (Tuten and Urban, 2001). If they already have experiences based on past relationships, these experiences may be an important motivating factor in either engaging in a partnership or not. Therefore, before partnership formation, the assessment of the relationship risk perceptions of potential partners is an important task for the managerial team. Based on this assessment, managers know what the most important factors they should concentrate on in the early stages of partnership formation are. If the perceived relationship risks are high, managers should not concentrate too much on functions such as building trust, governance and administration, and communication. These functions will be handled by the partners themselves.

Similarly, the perceptions of potential partners regarding collaboration fluency play an important role in the development of future relationships. As this study suggests, the key ingredients in collaboration fluency are communication and the governance and administration of the partnership. Therefore, the managerial team should dedicate much effort to developing effective communication channels, as well as good coordination and monitoring mechanisms. Furthermore, defining the roles of partners and preparing a plan of action for solving problems, together with all the other partners, will influence collaboration fluency positively. In this way, every partner will know exactly what his or her task is and what should be done next. Because the expectations may change over time, periodic evaluations are important in determining which potential problems may occur.

5.3. Limitations and further research

The research target selected was a rather limited part of the health and social services sector, although the economic value related to elder care and child welfare is unquestionable. The challenges faced by this type of study also include the small size of the organizations and the large share of individual entrepreneurs who operate in the health and social care field, which also influences the response rate. When considering the concepts measured, the validation of the measurement was convincing because the central concepts were measured with indicators that had been successfully used in previous research. If the domain of the research is considered more widely, the issue of collaboration and partnerships is topical because the public sector is evolving toward developing purchasing strategies and making outsourcing decisions. Therefore, the generalization of the results requires widening the research to other domains in health and social care. Although the procurement processes and the principle of what is “economically most advantageous” in service procurement are identical in other domains, there might still be divergent characteristics across health and social care services that would only appear by replicating the study in other domains.

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Appendix A. Questionnaire question and items with their sources

Relationship risks

Evaluate the significance of the risk that affects collaboration fluency for the following issues: (1=*very low risk* … 7=*very high risk*)

- Lack of community spirit (Austin, 2010).
- Insufficient commitment to collaboration (Bing et al., 2005; Ritchie and Brindley, 2007).
- Attitudes (Skjoett-Larsen et al., 2003).
- The absence of a clear leader (Nada and Sanders, 2005; Ritchie and Brindley, 2007).
- Unclear goals and strategies (Hallikas et al. 2004; Ritchie and Brindley, 2007).

Trust

Do you agree with the following statements? (1= *strongly disagree* … 7=*strongly agree*)

- People who represent other organizations are reliable (Costigan et al., 1998; Vanhala, 2011).
- Our organization can count on each partner to meet their obligations (Thomson et al., 2007).
- Our organization should continue to cooperate with partner organizations (Thomson et al., 2007).
- Our partners have capabilities in their field operations (Costigan et al., 1998; Vanhala, 2011).
- Our partners are able to build relationships (Costigan et al., 1998; Vanhala, 2011).
- Our partners are aware of each other's activities (Williams, 2001).
- Our partners understand the needs of the service area (Costigan et al., 1998; Vanhala, 2011).
- Our partners do not violate the agreements and laws (Jalava, 2006; Blomqvist, 1997).
- Our partners have a good reputation in the industry (Jalava, 2006; Blomqvist, 1997).

Communication

Do you agree with the following statements? (1= *Strongly disagree* … 7= *Strongly agree*)

- Our organization provides information on current, important changes to us (Vanhala, 2011).
- In collaboration, information is distributed effectively (Chen and Paulraj, 2004).
- Shared information is accurate (Vanhala, 2011).
- Shared information is up to date Vanhala, 2011).
- Shared information can be trusted (Vanhala, 2011).
- Communication with partners is easy and relaxed (Vanhala, 2011).
- Collaboration is based on open communication (Vanhala, 2011).

Governance and administration

Do you agree with the following statements? (1=*Strongly disagree* … 7=*Strongly agree*)

- The objectives of collaboration are agreed upon in cooperation with partners (Thomson et al., 2007).
- As a representative of our organization, I understand our role and responsibility (Thomson et al., 2007).
- Our organization develops solutions to collaboration problems together with other partners (Thomson et al., 2007).
- Our organization tasks are highly coordinated with the tasks of the partner organizations (Thomson et al., 2007).
- During the meetings with our partners, we achieve what was proposed (Thomson et al., 2007).

Collaboration fluency

Do you agree with the following statements? (1=*Strongly disagree* … 7=*Strongly agree*)

- Facilitative routines have been created for our collaborative activities (Crockett et al., 2011; Sari et al., 2010).
- Things are easy to solve through collaboration (Crafts et al., 2002).
- The partnership efficiently uses all parties' knowledge (Crockett et al., 2011; Black and Porter, 1996).
- The partnership has the needed resources and capabilities for successful operation (Crockett et al., 2011; Flynn et al., 1995).
- Collaboration is well organized (Crockett et al., 2011; Flynn et al., 1995).
- The partnership takes into account future challenges (Crockett et al., 2011; Black and Porter, 1996).
- The goal of cooperation is defined clearly (Crockett et al., 2011; Tryon and Winograd, 2011).
- Seamless service is realized through partnership (Crafts et al., 2002).

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Publication 3

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Creating value in networks:

A value network mapping method to assess the current and the potential value network in cross-sector collaboration

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Creating value in networks:
A value network mapping method for assessing the current and potential value networks in cross-sector collaboration

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Creating value in networks: A value network mapping method for assessing the current and potential value networks in cross-sector collaboration

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ABSTRACT

How to manage value creation and how to maximize the potential of collaborations are challenging issues in the management of cross-sector collaborations. One strategic tool for addressing these areas of concern is value network mapping; this serves as the starting point for value network analysis, which is used to maximize innovations by forging stronger value creation links with strategic partners. The objective of this study was to design and implement a method for value network mapping that would increase our understanding of how new value can be created in cross-sector collaborations. The proposed mapping method also permits the assessment of current and potential value networks; e.g., what value is exchanged in the current collaborative state and what new value can be created through the proper management of a value network? Using the case study of a collaboration among the public, private, and non-profit sectors for elderly care, this paper describes, step by step, how the proposed value network mapping method can be applied in practice to help managers and experts understand how to develop complex value network maps, how new values can be created, and how to maximize the potential of a collaboration.

Keywords: Value network, value network mapping, value creation, cross-sector collaboration, conceptual framework, elderly care

Introduction

How to manage value creation and how to maximize the potential of collaborations are challenging issues in the management of cross-sector collaborations. In today's dynamic economic environment, which is facing complex socioeconomic problems, cross-sector collaborations have continuously increased (Handy, 1996; Lipman-Blumen, 1996; Cleveland, 2002; Le Ber and Branzei, 2010; Øystein et al., 2012). However, despite sustained efforts to find or develop innovative and powerful methods for effective management and value creation within the context of cross-sector collaborations, this remains a challenge.

Collaborations and partnerships enable people and organizations to support each other by combining and leveraging their complementary strengths and capabilities (Dyer and Singh, 1998;

Adegbesan and Higgins, 2011). The power of a partnership is determined by the value network that results from the collaboration, and managing value creation in a knowledge economy requires a strong appreciation of the intangible aspects of a business model and an understanding of network dynamics (Allee, 2002).

Traditionally, value creation has been seen as a linear process (i.e., value is created through a value chain) (Vargoa, Magliob ,and Akakaa, 2008). In a knowledge economy, however, the situation is much more complex. Organizations themselves are highly complex systems consisting of many variables that cannot easily be controlled, which complicates the management of value creation (Chatain and Zemsky, 2011). Managers will often use visual tools like strategic maps to more easily piece together a huge amount of information (de Benedetto and Klemes, 2009). Value network maps (Allee, 2011) are one such visual tool used to manage value creation. Value network mapping is the starting point in value network analysis, which is used to maximize innovations by forging stronger value creation links between strategic partners (Allee and Taug, 2006).

Although the literature on value networks and value network analysis has reached an increasingly interest (Allee, 2002, 2006, 2008; Lock Lee, 2007; Meggitt and Allee, 2011; Optimice Pty. Ltd., 2008; Anger, 2008; Plambeck and Denend, 2008), there is not a specific method for describing in detail how to map a value network. Allee (2011) has described the basics of value network mapping but provides no details about how to identify the added value that every partner brings to a network or how to identify the participants' assets (e.g., the value flows within the network). Therefore, more research is needed in this area.

The objective and benefits of the study

The main objective of this study was to design a method for value network mapping that provides increased understanding of the value creation process. The investigation process started by delineating the theoretical foundations of this issue to clarify the context of value networks in collaborations and how value networks can be modeled (i.e., mapped). However, the value network mapping method proposed in this study does not simply focus on the mapping process of current value networks—it can also be used to enhance these networks and develop new networks. The method emphasizes the identification of participants' assets, as well as the challenges encountered in collaboration activities. In addition, new value can be created while focusing on these issues, which is an important factor for all types of collaboration.

The empirical step of the study showed how the proposed mapping method can be applied in practice. By using a case study of a cross-sectoral collaboration for elderly care, the applicability of the method is shown in a step-by-step manner. This provides managers with a better understanding of the value network mapping process, as well as how new value can be created in collaborations.

This study contributes to the collaboration management literature and practice (for both managers and collaboration participants). First of all, the research proposes a way to model, map, enhance, and develop the value network in cross-sector collaboration. It also takes a future

perspective of value networks, as it is a relatively new issue in the field of research. New value can be created by solving existing challenges, and an enhanced value network map can be used as a performance measurement tool for cross-sector collaborations. Furthermore, by dividing a value network into two different stages (i.e., the current value network and the potential value network), managers are better able to understand how the value creation process can be managed in collaborations. Additionally, this study provides all collaboration participants with an understanding of the value creation process in cross-sector collaborations by comparing current and potential value networks. This understanding is seen as a factor for motivating organizations to collaborate with each other.

Outline of the paper

The structure of this paper is as follows. In the second section, the concepts of value network and value network mapping are introduced. The next chapter is dedicated to a description of the value network mapping method, using specific steps to outline the different stages of a value network. Then, the research methods section describes the case study, as well as the data collection and data analysis methods. The empirical section describes, step by step, how to apply the mapping method proposed in this study. Thereafter, the discussion and conclusion are presented, emphasizing the theoretical and managerial implications of the study. Finally, limitations and suggestions for future research are discussed.

Theoretical background

This section introduces briefly the theoretical background of the study. More specifically, it explains what value networks are in the context of collaboration. It also presents the basics of value network mapping and the role that strategic maps play for the performance of organization.

Collaboration and value networks

Collaboration can be described as "the linking or sharing of information, resources, activities, and capabilities by organizations to achieve jointly an outcome that could not be achieved by the organizations separately" (Bryson et al., 2009: 6). When different people and organizations engage in collaboration, they are aware that they receive some advantages or benefits from the collaboration. If there are no benefits, then the motivation to collaborate disappears (Gazley, 2008). Therefore, understanding the importance and the benefits of collaboration may play a crucial role in building healthy partnerships and motivating organizations to become involved in collaborations. A true partnership should create value for all partners involved in the collaboration (Grudinschi et al., 2013). This is called a value network.

Verna Allee (2002: 6) has defined a value network as "any web of relationships that generates tangible and intangible value through complex dynamic exchanges between two or more individuals, groups, or organizations." The research of intellectual capital in recent decades has shown the huge impact that both tangible and intangible assets have on organizational action. In particular, they have highlighted the awareness of the importance of intangible assets (Edvinsson and Malone, 1997; Wallman and Blair, 2000; Eccles et al., 2001). Tangibles assets

refer mainly to goods, services, and revenue. Intangible assets include knowledge and benefits (Allee, 2002). Allee (2011) has highlighted the importance of the value network map for the strategic level of partnership management.

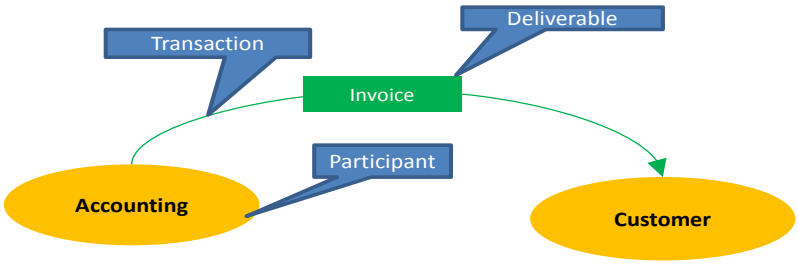
Value network mapping: A strategic visual tool

Performance measurement in business determines action and acts as a motivator of behavior (Drucker, 1959). Ridgway (1956: 247) has argued that "even where performance measures are instituted purely for purposes of information, they are probably interpreted as definitions of the important aspects of that job or activity and hence have important implications for the motivation of behavior." In relation to organizational performance, Kaplan and Norton (2000) have introduced strategy maps as a visual tool to help understand how intangible assets can be converted into tangible outcomes. They argue that strategy maps "give employees a clear line of sight into how their jobs are linked to the overall objective of the organization, enabling them to work in a coordinated, collaborative fashion toward the company's desired goals" and that they "provide a visual representation of a company's critical objectives and the crucial relationship among them that drives organizational performance" (2000: 168).

As a strategic visual tool, value network mapping is a powerful mechanism to monitor, predict, and influence performance (F). Mapping a value network is a technique that is based on traditional business process mapping but also identifies the flow of intangible assets between participants in a network (Allee, 2008, 2011).

When mapping the value network, Allee (2011) introduced a mapping method with three basic elements, namely roles, transactions, and deliverables (Fig. 1):

Figure 1: Basic Elements Used When Mapping a Value Network (Allee, 2011)



a. *Roles* represent real people or participants in the network who carry out distinct functions and provide contributions (the blue ovals in the figures 3, 4 5).
b. *Transactions*, represented as arrows between roles, consist of the flow of tangible and intangibles assets. Tangible flow is expressed as solid green lines, while intangible flow is expressed as red dashed lines.

c. *Deliverables* represent the actual "thing" that moves between the two roles. A deliverable can be physical (e.g., a document) or nonphysical (e.g., a verbal message or a specific type of knowledge, information, or advice).

Building on these value network mapping basics, the next chapter presents the method for value network mapping developed in this study. This method explains how a value network can be mapped and how it can be enhanced (e.g., how new value can be created in a network).

Mapping and enhancing a value network in cross-sector collaborations: A framework

"A value is not a value unless it is perceived to be one. No matter how real a value may be, it has no value at all until the value is perceived" (de Bono and Heller, 2006, p.2). In the article "The Partnership Scorecard" from Open Value Networks, value network it is defined as the following: "Each role is identified with both creating value flows for other roles as well as assessing value from the value flows that it receives" (Optimice Pty. Ltd., 2008: 2). In the mapping method proposed in this study, the value network mapping is based on these two premises: Identifying the perception of each participant regarding his own added value as well as his received value from the other participants in the network.

The mapping method proposed in this paper can be implemented using specific steps. The idea is to first map the value network of the current state of collaboration. Then, by trying to enhance the value network map and creating value for all participants in the collaboration, the potential value network is mapped. Studies on successful collaborations have found that solving problems and challenges in collaboration requires joint discussions and decision-making, as well as a large degree of mutual engagement (Rogoff, 1990). One of the key motives in a successful collaboration is a shared desire to solve a challenge. Therefore, while aiming to enhance the value network, a starting point has to be finding solutions for particular challenges. Furthermore, when taking on the various necessary roles for solving these challenges, each partner's assets (i.e., strength and resources) have to be considered. A particular challenge can best be solved (and with minimum effort) by the partner who has the most competencies in the most relevant area. In this way, new value can be created in the network.

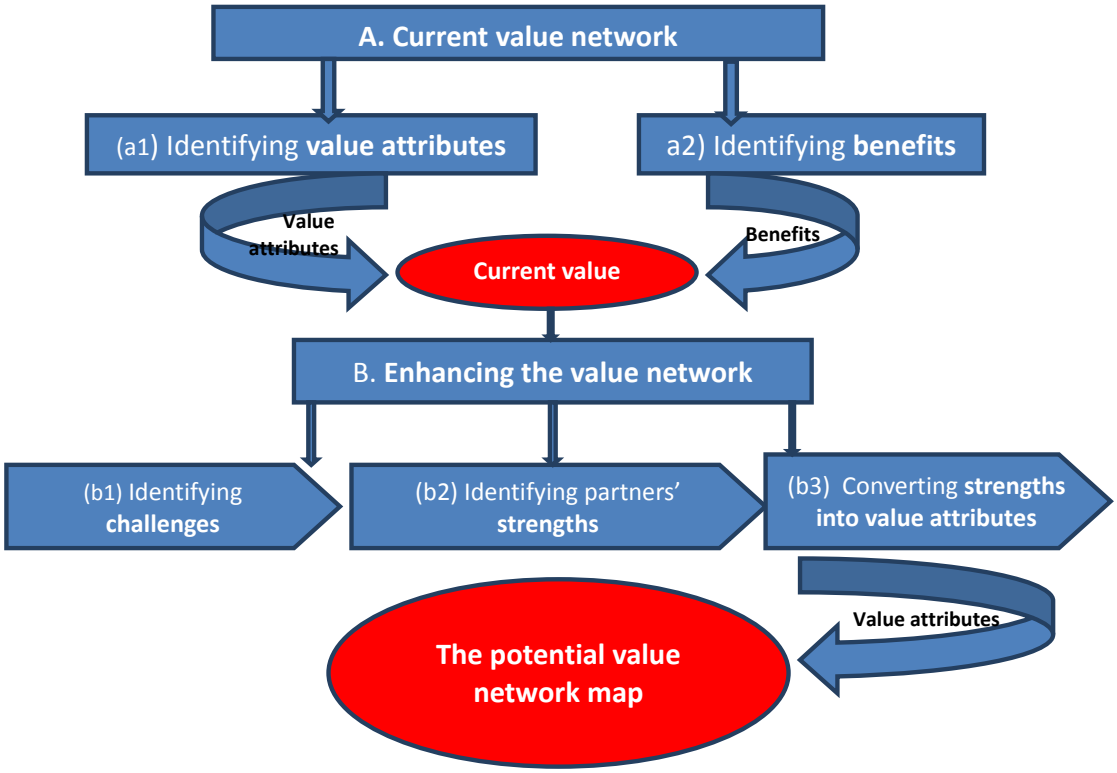
The process of the proposed value network mapping method consists of the following steps (Fig. 2):

A. Mapping the value network of the current state of collaboration:
   (a1) Identifying current perceptions of added value in the network; and
   (a2) Identifying current perceptions related to the perceived benefits of the collaboration.

B. Enhancing the value network to maximize the potential of the collaboration (mapping the potential of the value network):
   (b1) Identifying challenges in the activity of partnership;

(b2) Identifying the strengths and resources (intangibles and tangibles assets) of every partner (or participant in the collaborative network); and
(b3) Converting these strengths and resources (intangibles and tangible assets) into value attributes to respond to the challenges.

Figure 2: Value Network Mapping Process



In Figure 2, it can be seen that the mapping process can produce two different maps: the current value network map and the potential value network map. By comparing these two maps, the process of value creation can easily be assessed. The first map (of the current value network) demonstrates the exchange of values among participants in the current state of collaboration (i.e., what kind of value every partner brings to the network). Similarly, the second map (of the potential value network) shows what additional value can be created if the collaboration is properly managed and existing challenges are solved.

By following the mapping steps presented in detail in Table 1, the value creation process can be easily understood. New value is created by trying to find optimal solutions for specific challenges and by assigning roles based on each partner's assets (strengths and resources).

Table 1: The Steps of the Value Network Mapping Method

MAPPING STEP	QUESTION TO BE ASKED	EXPLANATIONS
A. MAPPING THE CURRENT VALUE NETWORK		***Determining what kind of value everyone brings to the collaboration***
a1. *Identifying perceptions related to added value in the network*	▪What do you offer to service customers? ▪What do you offer to every partner in the collaboration?	▪The perception of the types of value that every partner offers to customers, as well as to all other partners. ▪The question should be asked separately of each partner. ▪After this step, the value attributes (value types) are introduced on the map.
a2*. Identifying perception related to the perceived benefits of the collaboration.*	▪What kind of benefits do you received from every partner?	▪New types of value may be identified; the perceptions of benefits received from the collaboration may be different. ▪After this step, new value attributes (perceived as benefits) will be added on the map.
B. MAPPING THE POTENTIAL VALUE NETWORK		***Enhancing the value network to determine the full potential of the collaboration***
b1. *Identifying challenges in the partnership activities*	▪What kinds of challenges are involved in providing services to customers? ▪What kinds of challenges are involved in the collaboration?	▪The outcome is a list of challenges regarding the specific service domain that needs to be procured.
b2*. Identifying the strengths and resources (intangibles and tangibles assets) of every partner (or participant in the collaborative network)*	▪What are your organization's specific assets: -from the perspective of customers in providing services? -from the perspective of the collaboration?	▪The outcome is a table delineating every partner's assets (core abilities and specific resources)
b3*. Converting the strengths and resources (intangibles and tangible assets) into values to respond to challenges.*	▪How can every challenge be solved so that it creates value to the customers and the other partners? ▪Who has the best capabilities and resources to solve the challenge? ▪What type of value can be created by the network participants to solve the challenges in a specific way?	▪Every challenge discovered in step b1 will be analyzed separately, also using information gathered in step b2. ▪The results of this step will be put into a table that specifies what actions (tasks) are required to solve the challenge. ▪The table will also specify who creates the value and to whom it is offered. ▪The information from the table will then be added to the value network map.

Research methods

To show how to apply the proposed method in practice, a case study of a collaboration among the public, private, and nonprofit sectors for elderly care was used in this study.

Case description

In many European countries elderly care has become a challenge; this is primarily due to the fact that the average length of life is becoming longer, leading to an aging population. In Finland, the situation is even more challenging because the aging rate is higher than the average rate within the European Union. According to Statistics Finland (2012), the percentage of the Finnish population over the age of 65 year is currently 17%, and it is estimated that this number will increase to 23% by 2020 and 27% by 2030. The municipalities of Finland have the legal responsibility to provide welfare services for their citizens. However, although the public sector has this responsibility, the private and non-profit sectors have also played important roles in the welfare service system, because specific services are procured by the public sector from private and third sector organizations through public procurement contracts.

Each year all elderly welfare service professionals and organizations are expected to function more effectively with fewer resources. Currently, the welfare services for the elderly are highly resource oriented and do not always satisfy their customers. Their main goal in the long term is to provide customer-oriented services for the elderly people. Also, the welfare service system is currently decentralized. Therefore, if the objective is to reduce costs, effectively use resources, and improve the quality of care, an integrated service system is needed.

In the last few years in the elderly care domain (and in the whole welfare service system), the collaboration between all three sectors has intensified to increase the quality of services.

However, this collaboration is not organized, and there are many gaps. In fact, many private and non-profit organizations do not see any benefits from the collaboration. Understanding the importance of collaboration and motivating organizations to collaborate with each other is a strategic issue that can be managed through partnerships. A solid partnership between the three sectors is also crucial to respond to current challenges in welfare services for the elderly. An optimized use of resources, integration of the service system, and improvement of customer satisfaction can be attained via a partnership and will increase the quality of life of the elderly (Grudinschi et al., 2013). All these objectives can be achieved through the proper management of a partnership to create value via a collaboration.

Data collection

When applying the value network mapping method in practice, the first step is to map the current value network. This process allows the participants in the collaboration process, who all have experience and in-depth knowledge of the field of elderly care, to express their opinion

about the benefits of collaboration. In this case study, key representatives from the public, private, and non-profit sectors were chosen for interviews (three persons from each sector). All of these individuals had experience in elderly services delivery, and many of them also had direct contact with elderly clients in their day-to-day activities. The representatives from the public sector were selected from mid- and lower-level management. The private sector interviewers were all managers of small and medium-sized companies that provided care services for the elderly. The non-profit sector representatives were a manager of a non-profit organization that provided care services to the elderly, the manager of a volunteer organization that provided friendship services to elderly; and a representative of the church who had direct contact with elderly clients in her daily activities.

The aim of the interviewees was to recognize and map the current value network to increase their understanding of their collaborative partners' perceptions related to customer value, customer needs, and challenges in the provision of welfare services to the elderly. Every sector's value contribution to the collaboration was identified, as well as the perceived benefits that every sector received from the collaboration. Based on interviews, the current value network was mapped.

To map the potential value network, a workshop with eight experts from all three sectors was organized. The participants selected for the workshop session had wide experience with the delivery of welfare services. Top managers were selected from the public sector, while managing directors were selected from the private and non-profit sectors.

The aim of the workshop was to determine the strengths and resources (intangible and tangible assets) of every sector and the challenges in the cross-sector collaboration. A ready list of challenges based on the interviews was offered to the workshop participants, who were then asked to complete the list, which revealed new challenges.

To gather trustworthy information, the workshop session was conducted through a group decision support system using the ThinkTank software application. This allowed the participants to answer all questions anonymously, but their answers were seen (on a big screen and on their own computer) in real time by all participants. The ability to answer the questions anonymously encouraged the participants to give honest feedback. Based on the data gathered during the workshop, the potential value network was mapped.

Data analysis

The data from both the interviews and workshop were then analysed, and the interviewees' perceptions of the added value and the benefits of the collaboration were organized into two different tables. In the first table, the answers of the representatives of each sector regarding their perceived added value were grouped by sector. In the second table, their perceived benefits of the collaboration were grouped by sector. Then, using the data from the two tables, the current value network map was drawn. In the map, the perceived added value and perceived benefits were represented in the form of arrows. The direction of each arrow indicates

for whom the added value was offered by a specific partner or, in reverse, from which partner a specific benefit was received.

Based on the workshop data, an analysis was conducted of how new value can be created in the network. The outcome of the workshop was a list of challenges and a table including every partner's assets (strength and resources). Then, every challenge was analysed separately to determine how the specific challenges could be solved in a way that was both efficient and created value for the other network partners. This investigation was based on the table of each partner's assets, and it focused on what kind of resources or capabilities were needed to solve the identified challenges. Based on this information, the various roles for solving the challenge were given to different partners.

To make it easier to draw the map, all the data from the analyses were placed in a table, with the first column listing the challenges and the second column specifying the assets needed to solve the specific challenge and which partners owned the specific assets. In the third column, the assets were converted into value attributes, indicating what kind of value could be created while trying to solve a specific challenge. In the same column, the data were codified, specifying who created the value and to which partner the value was offered (e.g., *Funds for volunteer activity*, Public -> Non-profit). This information was then added to the map.

Applying the value network mapping method in practice: The value network of a cross-sector collaboration for elderly care

This section shows how the value network mapping method proposed in this paper can be applied in practice and describes the results obtained in the elderly care case study. Then, all the steps of the mapping method are looked at separately, followed by the main results of every step.

Table 2: Perceptions of Value Added to the Network by Sector

Public sector	• Provides primary resources for welfare services for the elderly • Helps elderly safely live independently at home • Knows exactly what services are needed • Has expertise in law
Private sector	• Demonstrates innovativeness • Provides complementary services
Non-profit (third) sector	• Provides feelings of safety to the public sector staff • Offers more time to the elderly • Cares for the spiritual needs of the elderly • Provides consultant services to the other sectors • Brings more value through volunteer workers • Provides recreation and friendship services • Provides free labor (volunteer workers)

A. Mapping the value network of the current collaboration

In this step of the study, the current collaboration was mapped based on the interviews.

a1. Identifying the public, private, and nonprofit sectors' perceptions of each others' added value to the network

One objective of the interviews was to identify the perceptions of experts in elderly care from the public, private, and nonprofit sectors regarding their current collaboration. The aim was to figure out the value that every sector brings to the network as well as what their perceptions of the benefits that every sector could receive from the cross-sector collaboration. Their perceptions of the value added to the network by every sector are summarized in Table 2.

The representatives from the **public sector** identified the following value attributes that their sector can bring to the network:

- *Provides primary resources for elderly care:* In Finland, the municipalities have the responsibility to provide social and healthcare services prescribed by the law. The municipalities also have a financial responsibility to protect the welfare of their citizens. Welfare services are usually provided through non-commercial activities of local and joint authorities, as well as nongovernmental organizations. Furthermore, the Finnish municipalities work in cooperation with the government to ensure the sustainability of funding for all necessary services for elderly (Local and Regional Government of Finland, 2009). Customers' fees cover only one-tenth of the costs of services; most services are subsidized from public funds (municipal taxes and state subsidies).

- *Helps the elderly safely live independently at home:* In Finland there is a national framework for high-quality care and services for the elderly. Most of the municipalities have policies and strategies regarding the welfare and care of older people. The Social Welfare Act of Finland (710/1982) states that "the main policy aim is that as many older people as possible should be able to live independent lives in their own homes, and in a familiar social and living environment. Living at home is supported with rapid-access professional social welfare and health care services." Primary services include support for informal care, guidance and preventive services, home-help services, various support services, housing services, 24-hour home care for those that need permanent assistance and health care in health clinics for those who cannot live alone in their own homes.

- *Knows exactly what services are needed:* The public sector has also the responsibility to provide preventive home visits for the elderly. The main aim of these visits is to get information about the welfare services that elderly people need to live safely at home Social Welfare Act of Finland (710/1982). After these preventive home visits, the public sector is able to provide information to the other sectors about needed service.

- *Has expertise in law:* Abiding by laws and regulations is the responsibility of the public sector, and law experts are a resource of the public sector. Therefore, the public sector brings more value to the collaboration process from the perspective of law knowledge and law regulations.

The non-profit (third) sector's key representatives that were interviewed indentified the following **value attributes** their sector can bring to the collaborative process:

- *Provides feelings of safety to the staff of the public sector:* The nonprofit sector's volunteer workers provide friendship services to the elderly and are thereby able to spend more time with the elderly. Due to the limited resources of the public sector, volunteer workers provide safety for the staff from the public sector as well as for the customers and their families, by spending time with elderly, when public sector's workers are not available.

- *Offers more time to the elderly*: One of the biggest challenges in home help and health care services is that the staff from the public sector seems to always be in a hurry when they are working with the elderly. The elderly think that this is as a big problem, as they do not share their problems with the staff because they are afraid of taking up too much of their time. On the other hand, volunteer workers have plenty of time to spend with the elderly.

- *Cares for the spiritual needs of the elderly*: The elderly seem to have more spiritual needs than other people. The church is expert in caring for the spiritual needs of the elderly and is perhaps the most trusted organization for meeting these needs.

- *Provides consultant services to the other sectors*: Many of the non-profit organizations were pioneers of many welfare service concepts. Furthermore, due to the empathy of volunteer workers, the elderly people confess to them. Therefore, voluntary workers absorb a lot of information from customers (elderly people), many times in the form of tacit knowledge that can be used to develop and improve welfare services for the elderly.

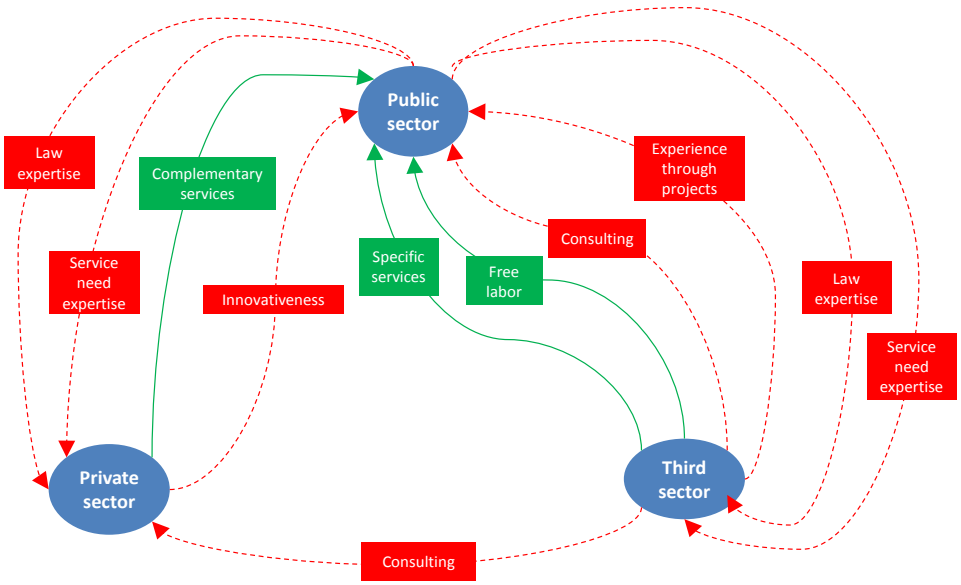
- *Brings more value through their volunteer workers:* Non-profit organizations use volunteer labor to conduct and develop new projects. In the interview we conducted with a leader of a nonprofit organization, she described the "Widow project." For this project, recreational activities and get-togethers were organized for widows to make they feel more safe and to forget their loneliness. The goal was to keep them from becoming depressed and suffering from other health problems, which could result in more costs to the public sector. When the project was finished, one widow described how the project had benefited her: "We were like shipwrecks in the middle of the ocean and you threw us a life preserver." These kinds of projects mean a lot to the elderly and bring financial savings to the public sector.

- *Provides recreation and friendship services:* Non-profit organizations provide different kind of recreation and friendship services to the elderly. Services provided by the non-profit organizations mean also a lot to the public sector that have the responsibility to provide high-quality welfare services to the elderly. With an intensive and planned collaboration between all organizations engaged in welfare of the elderly, a higher quality of life may be assured to the elderly.

- *Provides free labor (volunteer workers):* Volunteer workers represent a huge value to the public sector because their efforts results in significant financial savings. When a manager of a small volunteer worker organization was interviewed, it was discovered that the volunteer workers from that organization offered over 3,500 work hours in friendship services for the elderly during the last year.

After the first phase of the research, the perceived value that every sector brought to the collaborative network was discovered. These results were then added to the first part of current value network map (Fig. 3).

Figure 3: Current Value Network Map – Part 1 (Includes Every Sector's Perceived Added Value to the Network)



During the research process (especially during the interviews), value attributes related to the customers were identified; e.g., the nonprofit sector's value of "Offering more time to elderly". However, they were not included in the value network map in Figure 3 because this study was only focused on the value network of three sectors. In future research, customer values should be linked to the value network map.

a2. Identifying the perceived benefits that can be attained through collaboration

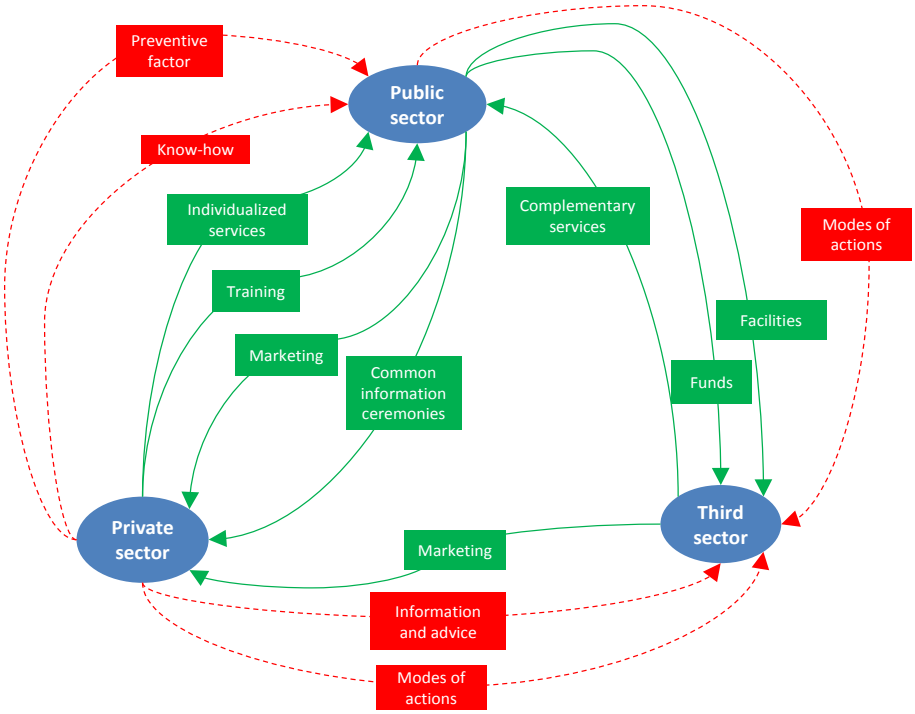
For this step in the study, the aim was to determine the perceptions related to the benefits that all sectors can receive through the collaboration. It was discovered that all of the three sectors could identify many benefits from the collaboration. For example, the public sector's key representatives perceived many benefits from the collaboration even though the private sector's representatives could not identify many value attributes that they brought to the network through the collaboration process. Based on every sector's perceived benefits, new value attributes were included on the current value network map (part 2). Table 3 summarizes the perceived benefits of all sectors related to the cross-sector collaboration for elderly care.

Table 3: Perceptions of the Attainable Benefits of the Cross-Sector Collaboration

Public sector	***1. Benefits from collaborating with the private sector*** • Complementary services • Private sector works as a preventive factor in home visits • Adoption of innovations and knowledge • Advice • Know-how • Individualized services ***2. Benefits from collaborating with the nonprofit sector*** • Complementary services for both the public and private sectors • Church provides special help that the public sector cannot provide
Private sector	***1. Benefits from collaborating with the public sector*** • Public sector works as a marketing channel • Common trainings offered by the public sector • Common informative seminars organized by the public sector ***2. Benefits from collaborating with the non-profit sector*** • The nonprofit sector is a marketing partner • Being part of the same network, important information about customers is gotten from non-profit sector. • Advice related the similar activities (how they organize similar activities)
Non-profit (third) sector	***1. Benefits from collaborating with the public sector*** • Project funding • Can compare the modes of action in specific situations • Facilities for different activities ***2. Benefits from collaborating with the private sector*** • Can compare the modes of action in specific situations

Figure 4 shows the current value network map (part 2), which includes only the perceived benefits attained from the collaboration. To get a clearer picture of the collaborative process, the current value network map is shown in this paper in two parts (part 1 and part 2), but they should be treated as the whole picture of the current value network.

Figure 4: Current Value Network Map - Part 2 (Includes Only the Perceived Benefits of the Cross-Sector Collaboration)



B. Enhancing the value network to maximize the potential of the collaboration

To create a map of the potential value network, how the collaboration between all three sectors could be enhanced so that new value could be created for all partners was considered.

b1. Identifying challenges in elderly care service delivery from the perspective of collaboration

During the interviews, the interviewees' knowledge and experience in elderly welfare service delivery were utilized to identify the challenges of the system. The list of challenges obtained during the interviews was completed during the workshop session by the workshop participants (Table 4).

Table 4: The Challenges of Elderly Care

Challenges of Elderly Care
• *More time spent with the customers*: the public sector's personnel seem to be always in a hurry • *More activities for the elderly are required*, especially during the day, but also during the evening and weekends • *New operation models* for elderly services to provide more active lives for the customers • *Volunteer sector requires more support*, such as recruiting and commitment policies, expanding activities, financial support, etc. • *Limitation of resources* (financial, personnel, and leadership) means that we cannot provide customer-oriented services • *Fragmentation of services*: There is a need for service integration • *Individualization of services* to meet customer needs • *Changing the attitudes of people* so that the elderly welfare service staff embrace the new modes of action and to increase the clients' willingness to pay for services • *The multiculturalism of the clients* has to be taken into consideration when designing services • *The management of partnerships*, including leadership, strategic goals, strategies of actions, information sharing, etc. • *Quality control*: There is a need to develop programs for quality control • *Wide networks* and the limitation of common modes of action • *Sparsely populated areas* where customers are dispersed make service availability and effectiveness difficult • *Collaborative projects with continuity* must be planned • *Common rules and modes of action* are required for services effectiveness and customer satisfaction.

b2. Identifying the strengths and resources (intangible and tangible assets) of each sector in elderly care

The strengths and resources (intangible and tangible assets) of every sector were also identified during the workshop. The results are summarized in Table 5.

Table 5: Strengths and Resources (Intangible and Tangible Assets) of Every Sector

Public sector's assets	• Flexibility • Certainty of service delivery • Nearness of services to customers • Democratic service supply • Responsibility to organize services (quality control) • Taxing power • Financing/funding opportunities • Opportunity to govern the costs of the process • Legitimacy know-how, law regulation, law making • Wide collaborative network

	• Continuity of activities • Certainty of activities • Variety of know-how • Steady and trusted employers • Public services' ethics • Officials' ethics
Private sector's assets	• High educational level and technology know-how • Innovativeness • Collaborative capacity • Advanced welfare services • Customer-oriented services • Flexibility of open times • Effectiveness of action • Financing know-how • Well-defined core tasks • Individuality/quality of services • Transparency of earnings and expenses
Non-profit (Third) sector's assets	• Timetable flexibility • Regional know-how • Human resources • Customer-oriented services • Special know-how • Light organization structure • Free labor (volunteers) • Church is expert in spiritual needs and crisis situations • Large collective facilities (of nongovernmental organizations) • Huge amount of personnel • Ideology is value based • Pioneer role in concept development

b3. Converting strengths and resources (intangible and tangible assets) into value attributes to respond to challenges

The information gained in the previous steps was then used for further value analysis and for the value network map enhancement process. The data for this step are listed in Table 6. The challenges discovered in a previous step are listed in the first column.

The second column shows which sector's asset may be made use of to solve a specific challenge in the collaboration process. In the first example, to solve a challenge in the volunteer sector, the public and private sectors' assets can be used. The public sector can make use of its funding opportunities to offer financial support to the volunteer sector. Furthermore, the public sector's assets of a "variety of know-how" and "wide collaborative networks" and the private sector's "innovativeness" can be used in the collaborative process to develop new recruiting and activity-expanding policies and strategies.

The last column of the table specifies how the asset can be converted into a value or what value can be derived from the specific asset, as well as which sector delivers the value and which

sector gets the benefit. For example, the value "funds for volunteer activity" is delivered by the public sector, and the non-profit sector is the beneficiary of the value. Finally, the value attributes obtained were transferred to the value network map, thereby enhancing the value network. For more accurate outcomes, this procedure requires its own workshop session, but for the purpose of this paper, this task was realized by using the triangulation of researchers. Table 6 presents and explain a short example of how the assignment must be solved.

Table 6: Converting Assets Into Value Attributes to Solve Specific Challenges

Challenges	Using an Asset to Respond to a Challenge	Converting an Asset Into a Value
1. Volunteer sector requires more support -financial support -recruiting policies -activity expansion	*Financing/funding opportunities* (Public sector) *Wide collaboration network* *Variety of know-how* (Public sector) *Innovativeness* (Private sector)	*Funds for volunteer activities* Public→ Third *Development policies* Public →Third Public →Private *Development strategies* Private→Third
2. Collaborative projects with continuity must be organized	*Financing/funding opportunities* (Public sector) *Financing know-how* (Private sector) *Special know-how* (Third sector)	*Funds for projects* Public→Third Public→Private *Financing know-how* Private→Public *Special know-how* Third→Public Third→Private

To respond to these two challenges listed in Table 6, we included specific assets of certain sectors and then converted the assets into value attributes. The actual list of challenges was much longer. In Figure 5, the newly identified value attributes from the Table 6 are added to the value network map. Due to the limitations of this paper, it was not possible to show the analysis for the entire dataset. Nonetheless, when all the challenges were analyzed, it was realized that much value can be created. The potential of the collaboration is huge if the partnerships are properly managed.

Discussion

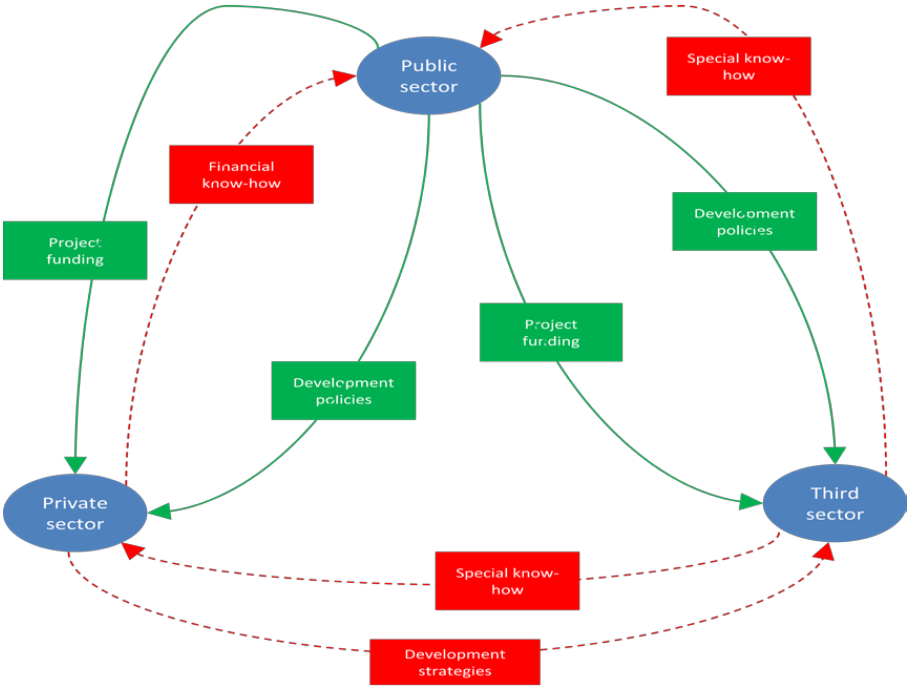
This section presents in details what are the theoretical and managerial implications of this study. Additionally, limitations and future research are discussed.

Theoretical implications

The present study offers a framework for value creation in cross-sector collaborations. Managing value creation is a challenging task (Payne, Storbacka, and Frow, 2008). In cross-sector collaborations that involve complex issues, managing value creation is even more challenging (Grudinschi, 2013).The value network mapping method proposed in this study

provides new insights for the management of value creation because the method enables the assessment of both current and potential value networks and the determination of how a collaboration can be enhanced. The most important theoretical implication of this paper is related to the understanding of the process of value creation in cross-sector partnerships. Because the mapping method consists of clear steps, it makes it much easier to understand the value creation process.

Figure 5: A Short Example of the Extended Value Network of the Collaboration (Including Only the Newly Identified Value Attributes)



In addition, managing the value creation process helps with the performance measurement of a partnership (Gazley, 2010). Value network maps are used for different kinds of network analyses, like defining roles in a network, exchange analyses, or impact analyses (Allee, 2008). The better the maps are done, the better the analyses are. This study offers a clear step-by-step value network mapping method to create better value network maps and to understand the concept of value networks. Therefore, this study contributes with concrete guidelines by taking steps toward a deeper understanding of value network analysis and performance measurement in cross-sector partnerships.

Managerial implications

The management of cross-sector collaborations is a challenging issue, as it consists of a multitude of complex tasks. At the strategic level, one of the tasks is managing value creation and determining how to maximize the potential of collaboration. This study provides some answers and guidelines to managers involved in cross-sector collaborations who are trying to solve these kinds of problems.

A value network is established for two different states: current collaborations and future collaborations. Comparing these two states will help managers understand how new value can be created and who has important roles in solving specific tasks. The future state of value network (the potential value network) is also an answer to how challenges can be solved and who should have the main role in solving specific challenges. Furthermore, the potential value network map can be successfully used as a performance measurement tool once the challenge-solving tasks have been performed.

The value network may be enhanced and developed if there is a systematic way to manage it. Value network mapping is a complex task that requires meticulous attention to gain the full benefit. However, it helps people from organizations that collaborate to better understand easier the benefits of the collaboration, thereby motivating them to engage with and take responsibility for the collaborative process. Furthermore, the value network map is the starting point for many value network analyses. The better a value network map is done, the greater the effect on the results of the analyses. This study can serve as a starting point for future research, as the results have great implications for the strategic management of partnerships in cross-sector collaborations.

Limitations and future research

One important issue that was not covered in this study is customer value. Customer value creation is a central aspect of any partnership. The data obtained from the interviews and the workshop included many aspects of customer value, but this study only focused on the value network of the partners involved in a collaboration. Additional research that includes the customer and customer value as central aspects of a value network is needed.

During the research process, it was discovered that while trying to find solutions for challenges in a team setting, the task can be solved in different ways and different kinds of value attributes can be discovered. Therefore, while trying to enhance the value network, it may be a better approach to have each analysis performed separately by different researchers or collaborative partners.

If the enhanced value network map is intended to be used as a performance measurement tool in the future, the management team members should validate the enhanced value network map, agreeing on the roles. From the enhanced value network map can be see who has the main

responsibility for solving a specific challenge. When a partner deliver a value attribute to other partner (while solving a challenge), it means that the partner who deliver the value has the responsibility to solve a specific challenge. The partners should agree on the divided roles established on the map.

It has been specified that a value network map can be used for the following purposes:

- As a motivator tool for organizations to engage with and take responsibility for the collaboration process;
- As a performance measurement tool in cross-sector collaborations; and
- As a starting point for many value network analyses, such as establishing roles in the network, exchange analyses, impact analyses, and value creation analyses.

Related the issues listed above, the following questions arise:

- To what degree will understand the value network affect a partner's motivation to collaborate? (How will new organizations be motivated to engage in the collaborative process and how will organizations that are already involved in the collaboration be motivated to be fully committed to the collaboration process?)
- What kind of information sharing model should be used for this purpose? How can one assure that the information is passed on, received, and applied responsibly?
- Can the enhanced value network map be used simply as a performance measurement tool or does it need improvements?
- To what degree can the collaboration be improved based on value network analysis?
- Could the proposed mapping tool be generally applied to any collaborative network or is its applicability reserved only for cross-sector collaborations?

Conclusion

This study has proposed a method for value network mapping in cross-sector collaborations. The method allows the assessment of the value network of a current collaboration and the value network of a potential collaboration. In collaborative settings, the value network consists of a set of connections among organizations (and/or individuals) that interact with each other to achieve certain benefits. Each network member relies on the others to foster growth and

increase value. Value networks can be visualized using a value network map, on which all the value attributes that every participant brings to the network, as well as the benefits the every participant receives from the collaboration, can be easily seen.

Additionally, the value network gives people a way to define their roles and to determine the best way to handle the routine tasks and challenges while working together (Allee, 2011). Value is an abstract term, and it is usually difficult to define or identify. The mapping method helps collaboration partners more easily define and understand the concepts of value and value creation. The method consists of specific steps to identify what issues a value network map should include and how value can be identified.

Based on the interviews in this study, it was a little surprising that the private sector's representatives struggled to identify the many value attributes that they brought to the network (Table 2), even when the public and nonprofit sectors' representatives found many benefits from collaborating with the private sector (Table 3). This shows once again that a visual map can help network actors understand and be aware of the value they can bring to a network and the benefits they can get through collaboration.

Furthermore, tackling a future perspective, the proposed mapping method aims not only to map the current value network, but also to enhance the value network and to map the future enhanced value network. By evaluating and pondering how to get the full potential of collaboration, the value network can be enhanced. Particularly in the social domain, the purpose of a collaboration is to solve challenges, thus creating new value and enhancing the value network. This is the main purpose for mapping the potential of a value network.

From the current value network map, both, the cross-sector collaboration managers and also the collaborative partners, can easily see the benefits of the collaboration and the contributions of each partner. Similarly, from the potential value network map, what additional benefits could be attained through the collaboration and what additional contributions every participant could bring to the collaboration if the partnership is properly managed, can be seen. Following the mapping process makes it easier to understand how new value can be created in a collaboration.

The short example of a potential value network in Table 6 shows only a few new value attributes. When the task of enhancing the value network (or mapping the potential value network) was eventually achieved by this research team, it was easier to see how much value can be created if all the challenges can be solved. Comparing the current value network and the potential value network map allows an assessment of the full potential of the collaboration. In that sense, proper partnership management is needed to allow the management of value creation as well.

When applying the mapping method in practice during this study, it was realized that mapping and enhancing the value network involves many complex issues that require meticulous thinking and are very time-consuming. At least a few workshop sessions are required to analyze

and ponder such complex issues. In this study, functional working practices were used during the workshop session, and the individuals who participated in the workshop had good problem-solving skills. The value network was enhanced considerably after every step, and it was determined that the value network mapping method used was efficient.

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Publication 4

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Using value network mapping in public services procurement as a tool to create value in procurement partnerships: case hospice care

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Using value network mapping in public services procurement as a tool to create value in procurement partnerships: case hospice care

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Keywords: Innovation; public procurement partnership; social and health care procurement; value creation; cross-sector collaboration; procurement challenges; value network mapping; hospice care.

Abstract: *Public service procurement efficiency has been emphasized as a big challenge in the last years. Policy makers, academics and practitioners unanimously agreed that public procurement has to become a strategic tool in order to enhance the efficiency of public organization, to promote the sustainable development and to create value for public services consumers. The role and importance of collaboration and partnerships in public procurement have risen dramatically, especially in social and health care domain. Even if a lot of collaborative and new innovative practices have evolved in public procurement domain, there is still a lack of efficiency in that area. Simply collaborative relationships with contractors are not enough anymore. Well managed strategic partnerships between public, private and non-profit sectors are needed to solve huge challenges from the social and health care domain. This paper proposes a new method in public service procurement: the use of value network mapping as a strategic management tool to create value in procurement partnerships. Using a case study of hospice services, the paper explains, step by step, how to use in practice value network mapping tool in procurement. In order to evaluate the efficiency (benefits and risks) of using this tool in procurement partnership management, two interviews, with experts in the hospice services and public procurement, were realized. Their general remarks and evaluations were that using value network mapping tool will increase the value creation in public procurement. Furthermore, the paper discusses the theoretical and managerial implications of the method: (1) understanding the process of value creation through the proposed framework and (2) explaining how some challenges from public procurement may be overcome by using the proposed method.*

1. Introduction

1.1. Background of the study

Public service procurement efficiency has been emphasized as a big challenge in the last years. Policy makers, academics and practitioners unanimously agreed that public procurement has to become a strategic tool in order to enhance the efficiency of public organization, to promote the sustainable development and to create value for public services consumers. (Choi and Pak, 2006). Furthermore, in the health care and social domain, the complex and interconnected problems related to public services make the procurement efficiency even more challenging. The expertise and collaboration of people from multiple disciplines are needed when the aim is to solve such ample problems. Therefore,

collaboration and partnerships across sectors has become a priority in order to solve huge challenges. Public procurement partnership is an emerged issue and the next evolutionary step in "21 Century governance" (Lawther and Martin, 2005).

In the beginning of 1930s government was considered to be the answer to the most societal problems. Little by little the size and the role of government increased, due to the continuously increased number of societal problems. The majority of government activities were provided by the public sector itself, with the public employees. In that times the main mission of public procurement was the acquisition of goods and equipment, discharging public employees of their responsibilities. Later, in the beginning of 1980s the image of government has begun to change, many identified it as a problem. Government has started to reinvent itself into an entrepreneurial government (Osborne &Gaebler, 1992). Public-private competition, privatization or contracting out are few examples of new tools that began to appear (Salamon, 2002). Competition was then predicted to serve better the public interests. The mission of public procurement changed in that conditions; it tried to facilitate the delivery of government services by independent contractors.

However, during the last two decades profound changes have occurred in public procurement practices (Lewis and Roehrich, 2009). Traditionally, public procurement has used the competition as a criterion while assessing the public contracts. Due to the fact that societal and governmental problems have become too complex, too interconnected and too risky, a new paradigm began to appear: moving the public procurement from a competition-based into a more collaborative one (Walker et al., 2013). In such a complex world, no single organization has all competencies and resources needed to solve complex and diversified problems. Therefore, cross-sector collaboration has become a need in public procurement.

Even if a lot of collaborative and new innovative practices have evolved in public procurement domain, there is still a lack of efficiency in that area. Simply collaborative relationships with contractors are not enough anymore. Strategic partnerships between public, private and non-profit sectors are needed to solve huge challenges from the social and health care domain (Grudinschi et al, 2013). Although partnerships are seen as possible solution to public procurement challenges, high level of risks are associated with all public procurement partnerships efforts. Furthermore a partnership success and efficiency means added value to all its stakeholders. To assure a successful partnership, the process of value creation must be properly managed. Additionally, to guard against a partnership failure, the risk management is important, as well (Abd Karim, 2011). Public service procurement has a great impact on the economy of every country (Callender and Matheus, 2001). Furthermore, it is an important tool for achieving economic and social objectives (Arrowsmith, 2003). For all that reasons, new innovative procurement practices and properly managed strategic partnerships are needed in the future.

1.2. Objectives and benefits of the study

The main goal of this study is to investigate what kind of public procurement practices should be used in order to enhance the effectiveness and the process of value creations in public procurement partnerships. After the theoretical investigation, the aim is to propose a tool for the strategic management of procurement partnerships: value network mapping. In the paper will be explained, step by step, how to use in practice the proposed tool. Furthermore the effectiveness of using value network mapping tool in procurement is evaluated by two experts, through interviews, where the benefits and risks of the using tool are analyzed.

The study attempts to add new knowledge and new solutions about the way of how public, private and third (non-profit) sectors can work together in public procurement process. The concept of value network mapping was not used before in public procurement. This is a new method, based on collaborative relationship, that can be used in the procurement of public services. The value network concept emphasizes the process of value creation for all stakeholders involved in public procurement process (customers, as well as all collaboration partners).

The outcomes of the study make a contribution on the public procurement community, by offering a new solution for public procurement practice and for the strategic management of partnerships in public procurement. The proposed tool overcomes some challenges in public procurement practices and emphasizes the process of value creation in public procurement. The value network mapping tool proposed to be used in public services procurement focuses on long term goals and their impact on the service users, as well as on all stakeholders. The value network mapping tool proposed here consists of specific steps and clear description on how to use it practice. Additionally, it makes managers and practitioners understand how new value can be created in collaboration. Furthermore the concrete example, offered through the case study, helps practitioners understand how value network mapping method must be used in practice.

The study has theoretical and managerial implications for public procurement theory and practice. First of all, theoretical implications of the study relates to understanding the process of value creation: the study proposes a framework for value mapping and value creation in public procurement partnerships. Additionally, the paper discusses how the proposed public procurement method helps in overcoming some challenges encountered in public procurement, which are emphasized in the procurement literature. Secondly, the study has managerial and practical implications, as well. Public procurement remains a key focus for public managers in this time of global downturn and austerity. Procurement effectiveness has been a challenge during the last years. While the general aim in public procurement is toward collaborative practices and new value creation, the present study offers a possible solution for public procurement managers in that sense.

1.3. Outline of the study

Drawing on the procurement partnership challenges and collaboration and value creation literature, the paper identifies the challenges in the management of procurement partnerships as well as the sources of value creation in collaboration. Based on the theoretical background, the tool of value network mapping is proposed and presented in detailed, which focuses on the process of value creation in collaboration. Step by step guidelines are provided further, explaining how to use the proposed value network mapping tool. Thereafter, a concrete case study of hospice care is used to show how value network mapping process must be used in practice. Then, in a separate chapter, it is explained how value network map may be used as a tool to create value in public procurement. Finally the discussions and conclusions are outlined, followed by theoretical and managerial implications, and limitation and future research, as well

2. Theoretical background

2.1. Challenges in public procurement and partnerships

Public procurement is the process through which public sector acquires goods, services, or works from third party organizations (Snider and Rendon, 2012). Social and health care

services are often provided to citizens by the public organizations themselves. But as the service spending is growing continuously, the public services are provided through acquisitions from the private and third (non-profit) sectors, as well (Armeanu, 2011). Public procurement procedure is stipulated by procurement legislation and must include specific requirements and criteria regarding the price and quality of goods/services (Armeanu, 2011). In practice there is generally a *lack of sufficient price awareness* and *too little attention is paid to quality criteria* in procurement process (van der Valk and Rozemeijer, 2009). However, as the general aim is to move to a more relationship contracting and partnerships, *procurement process should focus on goals* of what the acquisition tries to accomplish , as well as their impact (Lawther and Martin, 2005).

The need for public services procurement partnerships was never greater, as social and environmental problems continuously occur in the modern society (Snider and Rendon, 2012). Partnerships are required because of a multitude of reasons: more complex and integrated services are needed continuously; there are many challenges in providing the right services to the heterogenic groups of customers from different social categories; the technology needed to create systems is evolving continuously; the coordination of services at the right time and the right place to satisfy customers' real needs is very challenging; the need to continuously create value to provide the efficiency of public services (Lewis and Roehrich, 2009; Andrews and Entwistle, 2010; Koschmann et al, 2012; Grudinschi et al, 2013). These are among the multitude of multi-dimensional and complex aspects that are involved in public procurement. Public managers cannot have such a huge expertise from so many domains. They need to collaborate with people and organizations from different domains and sectors of activity and to form partnerships with them in order to provide high quality services and to create value to all citizens.

But the process of building and implementing a partnership involve a lot of challenges, as well (Agranoff, 2003). Understanding the definition of partnership will help in being aware of the challenges involved in the administration and implementation of public procurement partnerships. There is no a definition of public procurement partnership in the scientific literature (Lawther and Martin, 2005). However, Gribben, Pennington and Wilson (2001, p.8) provide a broad and precise definition of *partnership*, which could be pressed as a definition of public procurement partnership: "*People and organizations from some combination of public, business and civil constituencies (non-profits) who engage in voluntary, mutual beneficial, innovative relationships to address common societal aims through combining their resources and competencies*." Appling this definition to public procurement partnerships clearly suggests a start point from the traditional procurement buyer-supplier relationships.

In traditional buyer-supplier relationships government tries to transfer the performance failure risk to the contractor (Lawther and Martin, 2005). However, as the definition of partnership suggests, regarding mutual benefits, the partners should share the risks, as well as the rewards. Additionally, must be recognized that the features of public procurement partnership differ from the traditional procurement in many other ways: the public managers must be aware that that goal and the outcome of the procurement cannot be achieved by the traditional means (NAPA, 2003); the uncertainty and risk degree in achieving the goal is much higher than in traditional procurement and the risk management should be an important management task (Hardcastle and Boothroyd, 2003; Lawther, 2003); the equal role in decision making and equal responsibilities of all partners must be provided by the management team (Agranoff, 2003). Therefore the public managers should take into consideration, that in a partnership they are not the only one who makes decision and find solutions to achieve the

common societal aims; these must be made through a trustful and committed collaboration between all equal partners.

Moreover, in the social and health care domain the decision making process in providing higher quality public services has become very challenging (Grudinschi et al, 2013). The most significant challenges are related to *defining the goal and the outcome of the procurement* and to arranging efficiently the procurement process (Vilen and Palko, 2010). Furthermore the *lack of long term planning, insufficient resources, comprehensive analyses of needs*, or risk averse culture are among hindrances and challenges in finding better solutions and promoting innovations in public procurement . Also *the style and timing of decision making* in the local authorities , that is often political driven, creates challenges for considering innovative solutions, that can meets the long term needs. It is recommended to form partnerships with suppliers in the early stage of procurement process, to set the objectives together with them and to find innovative end result solutions at service level target, instead of detailed requirement specification (Vilen and Palko, 2010). There is also *lack of knowledge and effective collaborative practices in public procurement*, that encourage public sector to build partnerships with private and third (non-profit) sectors. Therefore, well managed partnerships are required in public service procurement to be able to provide higher quality of services and to meet the customer needs.

2.2. Collaboration and partnerships

The terms collaboration and partnership are often used interchangeable, even if they are different concepts (Carnwell and Buchanan, 2008; Glazer, Alexandre and Reid Ponte, 2008). In fact, collaboration is just a component of a true partnership. Collaboration implies informal relationships which doesn't assure equality between parties. In many cases collaborative relationships exists within hierarchical structures (Gardner, 2005). Alternatively, partnership implies legal, formal and structured relationships between individuals with equal power, which are allowed to equally take part in the process of decision making (Feenstra, Gordon, Hansen, and Zandee, 2006).

In a partnership the goal and the objectives are mutually defined by all partners. They share common responsibilities, common privileges and common interests. Much use of terminology (eg. "collaboration", "partnership", or "joined-up working") is policy driving. In many cases the use of term "partnership" is just rhetoric, with little evidence that partners work together (Carnwell and Buchanan, 2008). The true partnership should create value to all partners in the network (Grudinschi et al, 2013). But how value can be created , will be investigated in the scientific literature, in the next chapter.

2.3. Creating value in network through collaboration

Value is not created by individuals that acts in isolation, but through the collaboration and cooperation among different peoples and factors (Freeman et al, 2004). In the stakeholder view of the firm theory , the process of value creation must be strategically managed not only for the firm owners and shareholders, but having in the mind all stakeholders: such as employees, customers, suppliers and society . Two main issues are addressed in stakeholder theory: (1) the redistribution of benefits to stakeholders and (2) the redistribution of important decision making power to stakeholders . In order to create value, all stakeholders collaboration requires commitment, share interests, actions and values (Dunham et al., 2006).

Maximizing value for all stakeholders seemed an impossible task when the concept of value was limited to economic value. In collaboration and network settings value is a much broader

concept. There were identified six different types of "value" (Argandona, 2003): (1) *economic extrinsic value* which is created through the employees collaboration ; (2) *intangible extrinsic value* (eg. recognition, training); (3) *psychological intrinsic value* (such as satisfaction); (4) *intrinsic value* (in the form of acquisition of knowledge and capabilities); (5) *transcendent value* (consisting of acquisitions of virtues or vices); and (6) *value which consists of positive or negative externalities*, i.e. value that is felt by external agents (for example the relationship between employees and company may generate knowledge that spills over to other people). When the aim is to create value in the network, all types of value have to be considered.

Value creation concept is emphasized also in the resource-based view theory (Wernerfelt, 1984). In this theory it is acknowledged that value is created based on the inimitable resources and capabilities that an organization owns. Inimitable resources consist of different types of tangible and intangible assets, ranging from raw material resources to competences and skills of organization (Teece et al., 1997). In today's dynamic environments, valuable, rare and inimitable resources are typically knowledge-based (Grant,1996; Teece, 1998). Grant and Baden-Fuller (2004) in their paper about a knowledge accessing theory of strategic alliances argue that new value can be created in alliances and networks by integrating knowledge efficiently. Efficiency of knowledge integration means reduced costs of extensive mutual learning that requires effective modes of coordination and effective management tools. All these sources of value have to be considered when the aim is to enhance the process of value creation to all stakeholders.

2.4. Value network mapping – a strategic visual tool

Among management tools used to increase management efficiency are the strategy maps. Strategy map was introduced by Kaplan and Norton (2000) as a visual tool, to help managers understand how intangible assets can be converted into tangible outcomes. Furthermore it allows managers and employees understand how their jobs are linked to the organization objectives, enabling them to collaborate and coordinate their activities towards the organization goals. Shortly, strategy map is a visual representation of organization critical objectives and the relationships among them which drives to organizational performance. It allows to easier measure the performance, with direct implications to the motivation of behaviour (Drucker, 1959).

Value network mapping in turn, is a strategic visual tool used for collaborative networks. It allows monitoring, predicting and influencing performance in collaboration (Value Networks, 2009). Furthermore it allows the understanding of how new value can be created in the network (Grudinschi, 2011). Firstly the value network mapping technique was introduced by Alee (2006), aiming to identify the flow of value (tangible and intangible assets) between network participants. In the value network map the participants in collaboration process are represented with ovals. Also in the map the arrows are used to represent the flow of value every participant offers to others while collaborating.

Additionally, on the map the participants (represented as ovals) are interpreted as having distinct roles in the network. Similarly, the flow of value (the arrows) illustrates the value offered (created) during collaboration process through the assets every participant possesses. The intangible assets are represented with dashed arrows, while tangible assets are represented with solid lines (arrows). It is important to distinguish between tangible and intangible assets, because intangibles play important roles in the process of value creation.

On the arrows are specified the value-attribute (as asset) delivered to other participants. In the figure 1 is a concrete example of a value network map.

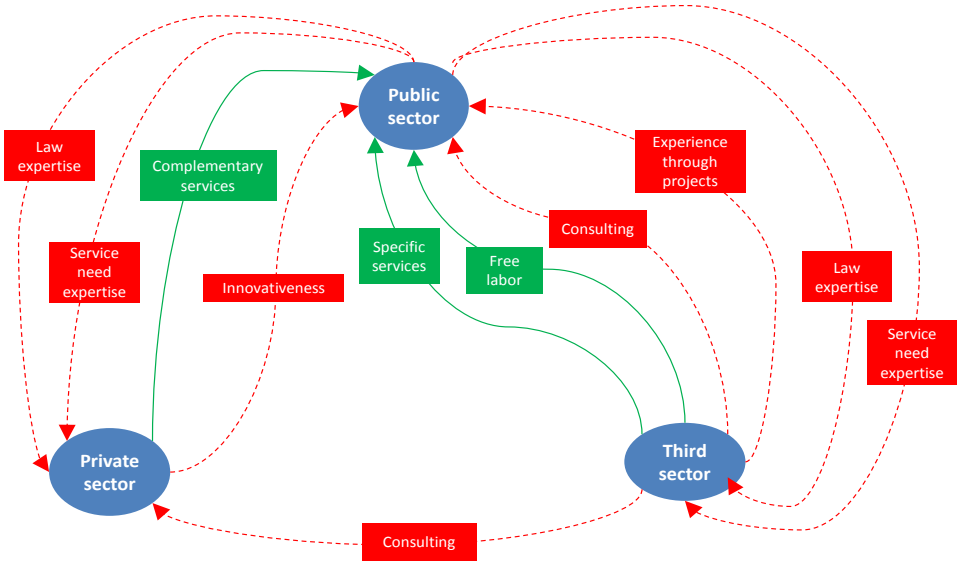

Fig.1. An example of value network map for the collaboration between public, private and third sectors (Grudinschi, 2011)

In the example illustrated in the figure 1 can be observed three participants (roles) in the network, represented by ovals: public sector, private sector and third sector (non-profit sector). The flow of value between public and private sectors during the collaboration process, seen on the map, is the following: public sector offers to private sector law expertise and service need expertise (these are intangible assets – or intangible value-attributes -, as they are represented by dashed arrows on the map); while private sector offers to public sector complementary services and innovativeness. "Complementary services" is a tangible asset – or tangible value-attribute - (represented on the map with a solid line arrow), while "innovativeness" is an intangible asset – or intangible value-attribute - (represented on the map with a dashed arrow). From the same figure it can be observed that the collaboration (as well as the flow of value) between private and third sectors is very limited. Only third sector offers "consulting" to private sector, but third sector itself doesn't get any value from private sector during the cross-sector collaboration process.

A practical value network mapping tool, which include specific steps (see figure 2 and table 1), was introduced by Grudinschi (2011). The mapping tool proposed is a dynamic one, taking into account the future perspective, as well. It evaluates what is the potential of value network if the collaboration is properly managed. Firstly, it is mapped the current value network and then, in a second phase, it is mapped the future value network. In the current value network map can be observed the flow of value of current collaborative relationships. With other words, in the current value network map can be easily seen what kind of value every participant brings into network, or saying it in reverse way, what kind of benefits everyone gets from other partners. The terms "value" and "benefit" are somehow synonyms in the value network map. When a partner offers some kind of value to other partner, the value is perceived as a benefit.

In the future value network map (the enhanced value network map) can be observed what the potential of collaboration is. When mapping the future value network, the aim is to investigate how new value can be created in the network (or how value network can be enhanced), considering that new value can be created to all partners, as well as to customers, by solving challenges. The *mapping steps* are presented in the table 1, and the hole mapping process is presented in the figure 2.

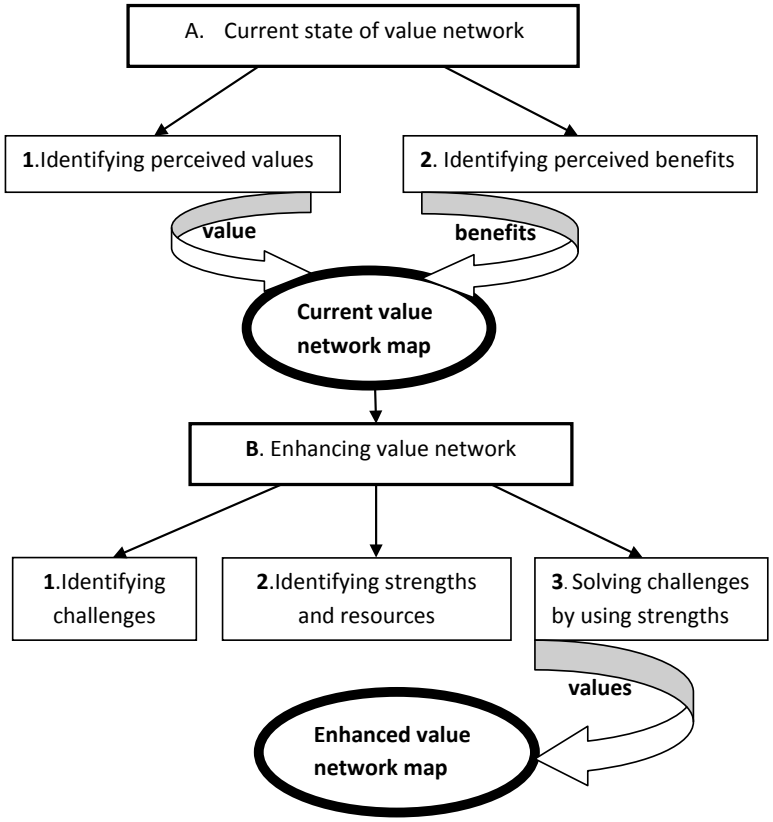

Fig.2. The process of mapping value network potential (Grudinschi, 2011)

Table 1. The steps of value network mapping tool (based on Grudinschi, 2011)

MAPPING STEP	QUESTION TO BE ASKED	EXPLANATIONS
A. MAPPING THE CURRENT VALUE NETWORK		
a1. *Identifying perception related to added value in the network*	▪What could you offer to service customers? ▪What could you offer to every partner in collaboration?	▪With this questions will be found out the perception of types of value every partner could offer to customers, as well as to all partners. ▪The question should be asked separately, regarding every partner. ▪After this step, the value-attributes (value types) will be introduced on

		the map.
***a2**. Identifying perception related to perceived benefits from collaboration.*	▪What kind of benefits do you get from every partner?	▪By asking this question, new types of value may be identified; the perception about benefits got from collaboration may be different. ▪After this step new value-attributes (perceived as benefits) will be added on the map
B. ENHANCING THE VALUE NETWORK IN ORDER TO GET THE FULL POTENTIAL OF COLLABORATION		
***b1.** Identifying challenges in the activity of partnership*	▪What kinds of challenges are involved in providing the services to customers? ▪What kinds of challenges are involved in collaboration?	▪The outcome of this step is a list of challenges from the specific service domain which is intended to be procured.
***b2**. Identifying strengths and resources (intangibles and tangibles assets) of every partner (or participant in the collaborative network)*	▪What are your organization's specific assets: -from the perspective of service providing? -from the perspective of collaboration?	▪The outcome of this step is a table with every partner assets (core abilities and specific resources)
***b3**. Converting strengths and resources (intangibles and tangible assets) into values to respond to challenges.*	▪How every challenge could be solved, so that it creates value to customers and to other partners? ▪Who has the best ability and resources to solve the challenge? ▪What type of value could be created to network participants by solving the challenges in a specific way.	▪Every challenge discovered at the step b1 will be analyzed separately, using also information from table got at step b2. ▪The results of this step will be put in a table, where is specified what actions (tasks) are required to solve the challenge. ▪In the table will be specified also who creates the value, and to whom is offered. ▪The information from the table will be added then into value network map.

3. Research methodology

3.1. Case description

This study is part of a project which aims to find new ways of organizing public service procurement in social and health care domain, in order to increase the customer value. The study consists of a value network approach, proposing the use of value network mapping in managing the partnerships in public service procurement. The main idea is that value network mapping should be done together with all possible service providers (stakeholders), before the procurement process starts. To understand how to use value network mapping in public procurement contracts, a case study of hospice services in the eastern part of Finland is illustrated in the paper.

Hospice services address the needs of dying persons, as well as their family members or close relatives or friends (Wachterman et al, 2011). Death is a delicate matter that requires a specific approach, both for the person concerned and those close to them. In Finland public sector has the responsibility to provide some specific hospice services to people (Suoyrjö et al, 2007). Also the church (as a representative of third sector) has traditionally approached the people for their spiritual needs in the last phase of their life. Typically, in the finish social insurance system hospice services are provided by the public sector itself through homecare, supported housing, efficient supported housing, or retirement homes. But in the last years private companies began to appear in that domain, as well. Private companies deliver hospice services through homecare or in-patient hospice homes. These services are provided through public procurement contracts.

A person belongs to hospice services system if the specialist doctor has made the medical written decision for hospice care admission (Kim et al, 2007). The decision is focused on the patient comfort and not on his treatment. In the absence of hospice care decision, a dying person cannot benefit of hospice services (neither in a private company nor in the public sector), through the social insurance system. In these kinds of situations, many dying patients still stay in a hospital department, where the costs are even two-three times higher than in a private in-patient hospice care home, for example.

The big challenge is that the doctors make hospice decision too late, or in some cases they do not make it at all. Even if the public hospice service contract with the private companies exists, and there are dying people who need these kind of services, most of the time private in-patient hospice care homes have only few patients. This makes their activity very inefficient and also the citizens cannot benefit of the guarantied hospice services through the social insurance system. There is a huge need for an effective collaboration between public, private and third sectors in order to solve multiple challenges from this domain and to provide better services for customers.

3.2. Data collection

In order to find better solutions for public services procurement contracts, in this paper it is proposed a method to improve the collaboration between public, private and third sectors: value network mapping. In public procurement, innovative solutions are generally found before the process of procurement starts (Hoppe and Schmitz, 2013). A lot of collaboration and discussions between all stakeholders should happen before that.

In this case study, in order to map the value network, firstly the representatives of the main service providers were invited for general discussions. The aim of the discussions was to get a grasp of the main problems and challenges in the hospice services domain. Furthermore, during the discussions were identified the most important service providers (stakeholders) that could contribute to value network mapping, as partners with important roles in hospice services system. After that a short questioner, containing some general questions and many open questions, was send to all partners' representatives.

The aim of the general questions was to identify in which specific area they operates and which partner's representative is the respondent. The open questions followed the steps of value network mapping (Grudinschi, 2011), and the questions presented in the table 1. Generally, value network mapping is better achieved through a workshop where all partners' representatives participate. In this case study, because the number of the partners (network participants, or service system providers) is relatively high, it was decided to get every opinion through a questioner. A workshop with too many participants will make difficult the

mapping working process. The optimal number of participants in a workshop is between seven and nine (Allee, 2006).

Twelve partners' representatives which were identified to have important roles in the hospice service system were approached. In order to get a broad overview, the questioner was send to three-four representatives of every partner. The partners were the following: the representatives of the *public sector* ("Hospital department", "Outpatient department", "Retirement home", "Home Nursing Force", "Home care support", "Efficient supported housing", "Supporting housing" and "Homecare"); the representatives of *private sector* ("In-patient hospice care home" and "Homecare- private") ; and representatives of *third sector* ("Church" and a voluntary organization "Non-profit"). Thirty-three persons answered to questioner: twenty-two representatives of the public sector, two representatives of private sector and seven representatives of third sector (three from church and four from non-profit organizations). The representatives of private sector were rather few, due to the fact that there are only few private companies that operate in the market.

3.3 .Data analysis

To be able to analyze the data easier, the collected data was first arranged in a structured way (Robson, 2011), using different tables, as it was specified in table 1, in the column "Explanations". In order to map the value network, the data got through the open questioner was analyzed by a researcher and validated by a group of partners of hospice service system (two representatives of public sector and a representative of private sector). Based on the question "What could you offer to hospice care patients and their relatives?", the customer current value network was mapped (figure 3). (For the purpose of this study, only the current value network related to customer was mapped.) Every individual answer of every partner representative was interpreted as value offered (or possible value added) to customer. Tangible value is specified in the map with black colour text and intangible value is specified with red colour text. It is important to distinguish between tangible and intangible value from the procurement specification description, because intangible value helps in describing the quality criteria of services.

For the second phase of value network mapping ("enhancing the value network") the steps (and their specific questions) presented in table 1 were followed. The challenges were analyzed, in order to find solutions to solve them, creating new value for customers and all partners, that way. Every challenge was analyzed separately, first by researcher, getting the analyzed data in table (see table 3). (Table 3 contains only the analyses of the first challenge; the list of challenges was quite long). After that the analyzed data was validated together with the experts in hospice services (two representatives of public sector and one of private sector). Some modifications were required to be made during the validation session. Modifications were due to the fact that there were some unclear issues the researcher, how the hospice services are organized in practice, or in few instances some better solutions to challenges solving were found by experts.

3.4. Method evaluation

When a new method is indented to use it in practice, a benefit/risk evaluation is necessary to be done (Berwick, 2003). In order to evaluate the efficiency of using the proposed method (value network mapping) in public procurement partnerships, interviews with two experts were organized. One expert is from the private sector, which has experience in hospice

services and another one is a consultant with experience in public procurement. The person from the private sector who was interviewed has a huge experience in the domain of hospice services (over 20 years). She has worked in this domain in the private sector (in Finland as an entrepreneur and in USA). The consultant has an international experience (19 years) in public procurement issues.

After the value network mapping was done, it was shortly explained to the persons which were interviewed, how value network mapping tool is proposed to be used in public procurement. The aim of the interviews was to evaluate the efficiency of using value network mapping in public procurement and to compare the proposed method with the currently used procurement methods, in the case of hospice service, and procurement in general. The evaluation of value network mapping using in public procurement was concentrated on identifying benefits and risks if using this method in procurement.

Additionally, the evaluation of the proposed method is made from theoretical point of view, reflecting the main features of the method in the literature presented in the theoretical background of the study. Two main issues were covered in the literature review: the challenges encountered in public procurement and partnerships; and the process of value creation, respectively. Discussions which reflect these issues will be covered in "Theoretical implications" chapter.

4. Results: *Mapping the Value Network - case cross-sector collaboration for hospice services procurement*

In this section it is exemplified how to use in practice value network mapping tool. In order to understand how value network mapping can be used in public procurement process, first the value network map is done through a case study: collaboration between public, private and third (non-profit) sectors for hospice service system. The mapping steps presented in the table 1 will be followed in that scope.

A. MAPPING THE CURRENT VALUE NETWORK

In the first phase of value network mapping tool, the current value network is mapped. Two different steps are included here: *(a1) identifying the added value* to customers, as well as to all partners in collaboration process; and *(a2) identifying perceived benefits* get from every single partner through collaboration (Grudinschi, 2011). For the purpose of this paper, in this section will be shown only what the identified added value to customers is. The customer value has the most relevance for the application of value network mapping in public procurement process.

Generally, every delivered value is represented on the map with an arrow. In this case study, because the number of network participants (partners) is rather big , as well as value-attributes discovered , to get a clear picture, every partner's offered value to customer was specified in a box (rectangle). In the figure 3 can be seen, that from every partner an arrow is directed to customer and the value- attributes delivered by every partner to customer are specified in the box. Actually, the number of arrows should be as many as the number of value-attributes, but for the simplicity of the picture it was presented this way.

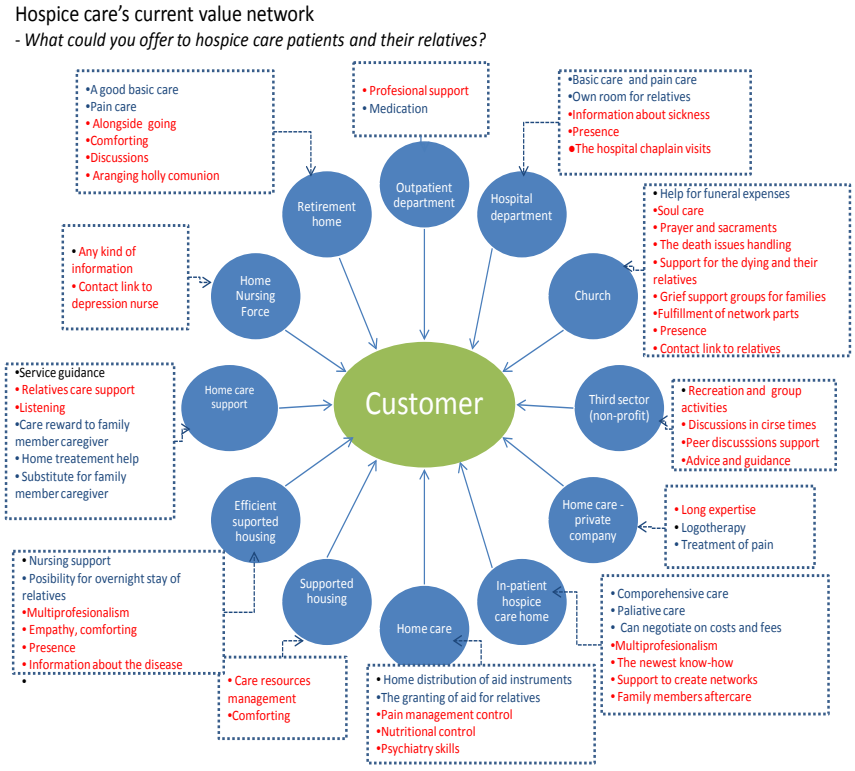

Fig.3.Customer current value network of hospice services

B. *ENHANCING THE VALUE NETWORK IN ORDER TO GET THE FULL POTENTIAL OF COLLABORATION*

In the second phase of value network mapping tool it is identified the potential of collaboration. Value network can be enhanced while solving the challenges and new value is created that way (Grudinschi, 2011). First the challenges are identified (at the step b1), getting a list of the challenges. Then every participant assets (strengths, resources) are identified (at the step b2). A table with every partner assets is the outcome of this step (see table 2). Finally the assets are converting into value while trying to find solutions to solve the challenges (at the step b3). The information got at the steps b1 and b2 are analyzed during the step b3 and the data is structured in a table (see table 3). Following are presented the outcomes of every step.

b1. *Identifying challenges in the activity of partnership*

- Bringing together different actors' expertise for the best of the patients;
- The right place at the right time for the patient;
- Hospice care decision is taken to late, (or is missing);
- A common understanding of the treatment guidelines;
- Communication and the flow of information;
- Competition attitude instead of collaboration;

- Collaboration and trust (too much bureaucracy, a lot of permission issues);
- Difficulties in getting to know each other in collaboration;
- Need for additional training of staff (pain care, comprehensive training and skills upgrading);
- Personnel and time resources;
- Genuine customer intimacy and humanity; adequate support;
- The respect for customer's own will;
- Taking into account the language difficulties and the various cultural differences of customers;
- Law participation of relatives in terminal care.

***b2**. Identifying strengths and resources (intangibles and tangibles assets) of every partner (or participant in the collaborative network)*

Table2. Network participants' assets

Network participant (Terminal care partners)	**Asset from terminal care point of view**	**Asset from collaboration point of view**
HOSPITAL, DEPARTMENTS	●Flexible activity ●Good communication between care department and TeHoSa	●Open to new ideas
OUTPATIENT DEPARTMENT	●Pain care ●Vision about development of terminal care	●Wide-range expertise ●A large created network ●Deep treatment expertise ●Psychiatric specialization
RETIREMENT HOME	●Skilled staff ●Familiar, domestic and cozy environment for patients ●Close to relatives ●Specific attention to residents	●Experience about collaboration
HOME NURSING FORCE	●Pain care	●Private space
HOME CARE SUPPORT CENTER	●Empathy ●Trusted relationship with family member caregiver ●Creating a sense of security ●Financial support to family member caregiver ●Day off right for family member caregiver ●Guidance and counselling	
EFFICIENT SUPPORTING HOUSING	●Care instructions, nursing skills ●Meeting in a familiar environment ●Individual treatment plans ●Powerful pain care ●Empathy ●No need to move to hospital to die	●Flexibility ●Functional teamwork ●24/7 ●Collaboration skills
SUPPORTED HOUSING	●Skilled staff ●Well-known environment ●Quick need response to terminal care ●Knowledge about area's organizations	●The ability to use the network support ●Good organization knowledge
HOMECARE	●Planning the resources ●Multiprofesionalism view-point	●Organizing collaboration ●Existing networks
HOMECARE-PRIVATE	●Expert in nursing issues	

COMPANY	●Given attention to residents'' spiritual needs	
TERMINAL CARE HOME	●Regional qualitative care ●Overnight rooms for relatives ●Specialized nurses	
THIRD SECTOR (NON-PROFIT)	●Guiding and advice ●Challenge skills ●A holistic encountering skill	●Huge networks ●(Free) labor
CHURCH	●Working experience with dying people ●No timetable work ●Home and hospital visits ●Common language with nursing staff ●Grief work experience ●Wide-ranging expertise	●Networking

b3*. Converting strengths and resources (intangibles and tangible assets) into value to respond to challenges. (Solving challenges and creating value)*

The main analyses for the enhanced value network mapping are done during this step (Grudinschi, 2011). E very single challenge identified at the step ***b1*** is taken separately for analyzing. Due to the limitation of this paper, in the table 3 it is exemplified only how the first challenge from the list of challenges was analyzed. Every challenge is approached as a long term goal from the procurement partnerships perspective (first column in table 3). When analyzing which partner has the best abilities and resources to contribute for solving the challenge, the data from the table 2 is checked, pondering what kind of strengths/resources/assets are needed to solve the specific challenge. Then the partners' strength/resource/asset identified and acknowledged as necessary for that specific challenge solving is introduced in the table were the analyses are made (see table 3, the second column).

Next are identified what kind of actions are required in order to solve the challenge. By taking specific actions for solving a challenge, new value is created in the network, having an impact on different people. The partner who is assigned as having the role for taken a specific action creates value to other partners in the network. All this information are structure and codified while introducing in the table of analysis (see table 3, the third column). For example, in the table 3, the third column, it is specified that the first action that should be taken in order to solve the challenge "Bringing together different actors' expertise for the best of the patients" is "The management of collaboration and its orchestration". The partner who is assigned as being responsible for taking this action is the service buyer. While taking this action, service buyer creates value to customers, as well as to all partners. The impact of this action on all partners is "Increasing the business performance of all partners". Additionally, the impact of this action on customers is "Increasing the quality of services" This information is codified in the analysis table as following: "SERVICE BUYER-> CUSTOMER; SERVICE BUYER-> ALL PARTNERS", specifying who creates value, to whom.

While trying to find solutions on how to solve a specific challenge, many different actions must be identified. Innovative ways of solving different kind of problems may be found when using effective working tools and when the collaboration is properly managed. The value created that way to all partners, as well as to customers has a specific impact on them.

Table 3. ENHANCING THE VALUE NETWORK**:** Analyzing challenges (Converting assets into value in order to solve challenges)

Challenge/problem to be solved *(GOAL)*	**Strength/resource/asset which can be used to solve the challenge** *(WHOSE STRENGTH)*	**Action - (or aim) –to be taken to solve the challenge** *(ROLE: who has the responsibility to take the action)*	**VALUE that can be created in the network while taking the action - IMPACT of the action** *(WHO CREATES VALUE → TO WHOM)*
Bringing together different actors' expertise for the best of the patients	*(OUTPATIENT DEPARTMENT)* ○Wide-range expertise ○A large created network *(SUPPORTING HOUSING)* ○Skilled staff ○Knowledge about area's organizations ○The ability to use network support *(HOMECARE)* ○Organizing collaboration ○Existing networks *(THIRD SECTOR)* ○Holistic encounter skill *(CHURCH)* ○Common language with nursing staff ○Grief work experience ○Wide-ranging expertise	●***The management of collaboration and its orchestration*** (SERVICE BUYER)	●**Increasing the business performance of every partner** (SERVICE BUYER → ALL PARTNERS)
		●***Building a collaboration model together with all stakeholders*** (SERVICE BUYER)	●**Increasing the quality of services** (SERVICE BUYER → CUSTOMER)
		●***Joint training and seminars about:*** ▪ ***Care pathway***(SERVICE BUYER) ▪ ***Grief process*** (CHURCH) ▪ ***Encounter skills***(THIRD SECTOR)	●**Synergy of skills** (SERVICE BUYER → CUSTOMER, ALL PARTNERS) (CHURCH → CUSTOMER, ALL PARTNERS) (THIRD SECTOR → CUSTOMER, ALL PARTNERS)
		●***Consulting about:*** ▪***Grief process*** (CHURCH) ▪ ***Encounter skills*** (THIRD SECTOR) ▪***Resourcing***(HOMECARE)	●**Synergy of skills** (CHURCH → CUSTOMER, ALL PARTNERS) (THIRD SECTOR → CUSTOMER, ALL PARTNERS) (HOMECARE → CUSTOMER, ALL PARTNERS)
		●***Nurses' specialization*** (IN-PATIENT HOSPICE CARE HOME)	●**Synergy of skills** (IN-PATIENT HOSPICE CARE HOME → CUSTOMERS, ALL PARTNERS)
			●**Higher quality of services for customers** (ALL PARTNERS → CUSTOMERS)

5. How to use value network map in procurement partnerships: value network based procurement for public services

In the earlier chapter it was exemplified how the value network mapping should be done in practice. In this chapter it will be explained how value network map can be used in public services procurement as a strategic tool in the management of partnership.

It is recommended that the value network map should be done in the early stage of procurement process, before determining of evaluation criteria of the public contracts. It is very important to get a broad opinion, allowing and assuring that all stakeholders that have important roles in organizing and delivering the service system will contribute in the value network mapping process with their own opinions. After identifying the current value network map, broader analysis should be done together to find innovative solution for solving the challenges encountered in the organizations of service system (Grudinschi, 2011). This way the value network can be enhanced and long term goals are identified.

In the customer current value network map (fig.3) can be easily observed which the most important service providers are in the service system. Also it is easily to observe from that map what kind of services (in the form of value), every partner in the network is able to provide to customers. For example “Outpatient department” can offer to customers “Medication” and “Professional support”. “Professional support” is specified in the map with the red colour text, meaning that this is an intangible value. “Medication” is specified on the map with black colour text, meaning that this represents a tangible value to customer. As the name suggests, tangible value means something concrete thing, that can be touch. Similarly, intangible value means something more delicate, that cannot be touch. It is something that says about the quality of things. Therefore intangible value can be used to describe the quality of things or services.

Thus, the current value network map can be used to describe more clearly the needed services in the specification of service requirements; it can help in describing the quality criteria in service specification. This is encountered as a general challenge in the specification of services criteria: the quality criteria are in many cases inexistent, or if they are mentioned, they are very purely described (van der Valk and Rozemeijer, 2009) . This is usually a very challenging task in procurement specification requirements: how to describe the qualitative criteria and what qualitative criteria a service specification should include. From the customer current value network map these criteria can be easily observed, if the map is done correctly and many stakeholders opinions are used in the mapping process.

Another problem encountered in the current procurement practices is that the procurement process is not goal- oriented in most of the cases. The strategic procurement should focus on long term goals and to concentrate on the impact of services on service users (Vilen and Palko, 2010. In that sense strategic partnerships should be formed to be able to set the long term goals and to find solutions on achieving the goals. Enhanced value network map(the future perspective) can be used in that sense in public procurement projects. It helps in defining the future goals of service procurement and to specify the impact of services. The main goals are divided into smaller actions/activities that can be easier planed. This can be easier observed from the enhanced value network map in the used case study (table 3). The evaluation and efficiency of using value network mapping in public services procurement is discussed in the chapter 6.

6. Discussions and conclusions

In this paper it is proposed to use the value network mapping as a tool to create value in public service procurement partnerships. Evaluation of the efficiency of the method was done by two experts: one is a representative of the private sector which has huge experience in hospice services; another one is a consultant with international experience in the domain of public procurement. The evaluation of value network mapping method was done in terms of considering the benefits and risks involved, if the method is used in public procurement partnerships. A benefits/risk evaluation is important to be done for the dissemination of innovation (Berwick, 2003).

When the private sector's representative was asked to compares the value network mapping tool with the current procurement procedure she observed that from value network map can be easily seen the qualitative criteria that must be included in service specification. In the current procurement procedure the qualitative criteria are only little or just at all seen, she remarked. When the aim is to create value to customers, by offering them higher services quality, the qualitative criteria in service specification description play a very important role (van der Valk and Rozemeijer, 2009). The service quality is difficult to measure if there are no indicators on these.

She was also asked to enumerate what are, in her opinion, the most qualitative criteria that should be included in service specification of hospice services. She specified the following criteria: the staff expertise and training, a familiar, domestic and cozy environment for patients, responding to individual need of customers, family members' aftercare, pain management, and comprehensive care (which should include mental, spiritual and social care). When it was checked if this qualitative criteria mentioned by her can be found from the value network map, it was realized that all specified criteria can be found in the information (data) that it was obtained through value network mapping process.

It was also observed that some of criteria were find in the customer current value network map (eg. a familiar, domestic and cozy environment for patients, family members' aftercare, pain management and comprehensive care). Some qualitative criteria were not found directly from the value network map, but just in the table with the partners'assets (eg. the staff expertise and training; responding to individual need of customers).

This observation is useful, indicating that while identifying partners' assets, this information can be also used in evaluating qualitative criteria. Furthermore, in procurement process, it is always important to ask partners opinion about the most important qualitative criteria that should be included in service specification. Even if the value network map is done, there may be still some important qualitative criteria that were not discovered during the value mapping process.

Furthermore the person who was interviewed (the private sector representative) found very useful the early collaboration with all stakeholders for the organization of public procurement process. She mentioned that finding solutions to huge challenges it is not an easy task, at all. Usually public managers don't have experience in practice and sometimes is difficult to know and understand how the things really work in practice. Additionally, public managers cannot have such a huge expertise from so many domains to be able to find good solutions to complex problems (Koschmann, Kuhn and Pfarrer, 2012). The early collaboration with stakeholders, to be able to identify the challenges, to set the long term goals and to find solutions to achieve the goals, it is very useful, she appreciated.

The only risk she mentioned (regarding the using of value network mapping tool in procurement) is if not all important stakeholders will participate in early discussions and collaboration. Therefore, inviting, or getting all important stakeholders to early discussions and collaboration it is a very important issue. This should be done either through a general invitation for technical discussions (Friedler, Salonen and Johansson, 2013), where all the procurement contract information are announced, or through a direct contact of stakeholders. Or even both of procedures could be used to assure that all important stakeholders' opinions will be considered for the ongoing procurement process.

Similarly the consultant's view on risks was that, if the representatives of private sector in the early discussion is too small, the value network map obtained may not be a "perfect" one. An equilibrium in the number of representatives of every sector, in the early discussions, must be found. Otherwise, if the public sector dominates the discussions with their opinions, the result may not be a constructive one. Regarding the benefits of using the value network mapping tool in procurement, the consultant's view was a positive one. He argued that if hanging in the balance, the benefits clearly outweighs the risks. He had a more managerial perspective on the benefits, arguing that using value network mapping tool in procurement will allow all stakeholders (partners) to understand the value network and also, to understand how new value can be created if the collaboration is properly managed.

The consultant remarked also that the process of mapping value network could be easier approached through a technical dialogue (consultation), where all parties advices are accepted by contracting authority (reference). In these kinds of cases a good solution in service procurement could be the framework agreement between service buyer (contracting authority) and service suppliers, who are chosen as partners of the service system.

In this case study the value network mapping process was done through a questioner. Because the number of partners in the value network map was rather big, it was difficult to find out (by asking through a questioner) what specific value every partner offer to every single partner. And similarly, what benefits every partner gets from every other partner. The task of finding solutions to solve challenges may be better done during a workshop where all partners have to participate. They must be encouraged to ponder first individually while finding solutions to solve the problems/challenges and then to discuss together for choosing the best solutions. Also good and practical working methods should be used in that sense (Robson, 2011): for example exposing the individual ides on the flaps, using paper notes. Better and more innovative solutions can be found that way.

6.1. Theoretical implications

The proposed method presented in this paper represents a framework for a new way of organizing public service procurement process in partnership with service suppliers from different sectors (private and non-profit). The method (using value network mapping in public procurement) emphasizes the process of value creation in partnerships. The most important theoretical implication of this study concerns the understanding of value creation process in partnerships. The framework (value network mapping) proposed here consists of clear steps, making easier the understanding of how value can be created in partnerships. Additionally the proposed framework is evaluated, by reflecting its specific features in procurement literature, where the main challenges encountered in public procurement are emphasized.

As stated in the literature review covered in the "Theoretical background" chapter, even if public organizations are encouraged to adopt new ways of organizing procurement and to

form partnerships with service suppliers, in many cases the use of term “partnership” is just rhetoric, usually policy driving (Carnwell and Buchanan, 2008). The collaboration with suppliers is far way from a real partnership. According to the definition, a real partnership implies that organizations from different sectors of activity engage voluntarily in collaborative, innovative and mutual benefits relationship, addressing common societal aims, by combining efficiently their resources and competences (Gribben, Pennington and Wilson, 2001).

The method proposed in this study addresses all these issues presented in the definition of partnership. Firstly, the partners are organizations from different sectors (public, private and non-profit) which engage voluntarily in collaborative relationships. No external parts press them to do that; the possible future partners are invited to engage voluntarily in collaboration. Additionally, following the value network mapping method proposed in this study, in the second mapping phase (*B. Enhancing the value network*), there are three steps: (b1) *Identifying challenges*; (b2) *Identifying partners ‘strengths and resources* ; and (b3) *Converting strengths and resources into value to respond to challenges*. The first two steps (b1 and b2) are elements that are included in the definition of partnership, as well. Furthermore, in the third step (b3) it is emphasized the process of value creation by finding innovative solutions to challenges and getting mutual benefits, as stated in the definition of partnership.

According to *stakeholder theory* (Dunham et al, 2006), value is created by redistribution of benefits to all stakeholders, as well as the redistribution of power in important decision making. Additionally, according to *knowledge-accessing theory* (Grant and Baden-Fuller, 2004), value is created by integrating knowledge efficiently; efficiency meaning effective modes of actions and effective management tools. Similarly, the second phase of proposed method (B. Enhancing the value network) (Grudinschi, 2011) follows the logic of value creation theories, emphasizing the process of value creation through combining and integrating the resources efficiently.

Correspondingly, following the *challenges* encountered in public procurement and partnerships presented in the literature review, the evaluation of the proposed method is in concordance with this, too. The main challenges specified in the literature are: too little attention is payer to *quality criteria* (van der Valk and Rozemeijer, 2009), defining *the goals* and the impact of procurement (Lawther and Martin, 2005), the lack of *long term planning*, insufficient *resources*, comprehensive *analyses* of needs, the style and timing of decision making, *lack of knowledge* and *effective collaboration practices* (Vilen andf Palko, 2010).

Evaluating how the proposed method overcomes some challenges emphasized in the literature, many aspects can be remarked. First of all, the outcome of the first phase of value network mapping tool (A. Mapping the current value network) (Grudinschi, 2011) is a clear picture with the services needed to be provided to customers. Using this picture when preparing the public procurement service specifications, it is much easier to specify quality criteria, as the interviewed experts evaluated. Challenges relating to quality criteria, that are mentioned in the literature (van der Valk and Rozemeijer, 2009), could be overcome using this method. Successively, the second phase of value network mapping method (B.Enhancing the value network) starts by identifying the challenges from the public service procurement domain (Grudinschi, 2011). Solving these challenges efficiently (by creating value to all partners) are goals that are set in the beginning of procurement process, accordingly to the method proposed in this paper. Therefore, it can be observed, that another challenges specified in the literature review, can be overcome by using this method: the difficulty of

identifying the goals, as well as long-term planning.The method presented in this study proposes the active and early participation of all partners, in the procurement planning and decision making processes. Partners from different sectors of activity, having a wide range of expertise and knowledge, will allow different and broad perspective solutions when planning and finding solutions to the problems of public service procurement. Challenges emphasized in the literature review like: the lack of knowledge, comprehensive analyses of needs, insufficient resources, or the style and timing of decision making could be overcome by using this method in public procurement. Moreover, using the value network mapping method in public procurement, may be an answer to the challenge reported in the literature review: the lack of effective collaborative practice.

Summarizing shortly, in this chapter it was shown how the proposed method (using value network mapping in public procurement) overcomes some challenges emphasized in procurement literature and even more, how using the value network mapping in procurement helps in creating value in partnership. Using this method as a management tool in public procurement, may be the evidence of the existence of a real partnership, not just a formal collaboration, as in many other cases. The evaluation of the method was made in this chapter by reflecting the method in the theorethical and empirical discussions found in the scientific literature. In the next chapter, the managerial and practical implications of the method are discussed.

6.2. Managerial and practical implications

From the public procurement point of view it can be shortly summarized that value network map can help public managers to make a clear specification of services, to define the qualitative criteria more detailed, to set the long term goals and to determine the impact of services on their users. Value network mapping tool is a powerful tool in creating value in strategic procurement partnerships (Grudinschi, 2011).

The enhanced value network helps public procurement managers to focus on long term future goals and to find innovative solution to fulfil the goals, together with all partners (stakeholders) involved in the delivery and organizations of the service system. Furthermore, in the enhanced value network map (see table 3) is specified what should be the impact of services. There is a clear need in public procurement to focus on long term objectives and to specify the impact the services should produce (Vilen and Palko, 2010). .

Value network mapping could be used also as a negotiation tool in partnership formation in public procurement process. Based on the value network map, can be made the negotiations on different roles (specific services providers). Public procurement contracts may be assigned through negotiation with different services suppliers. Using the value network map as a visual tool, managers can easier understand what the main components of the service system are. Furthermore, using value network mapping tool in the early stage of procurement may have an important impact on genuine collaboration. Understanding the mutual benefits of collaboration, as well as the role every participant has in collaboration process, may motivate partners to be fully committed in the collaborative activities (Grudinschi, 2011). Additionally, understanding that they are equal partners, with equal decision making rights, as well as responsibilities, can contribute to build trust among partners.

Value network mapping is also a powerful tool in partnership management. Beside trust building, increasing motivation and commitment, and understanding roles, the enhanced value network map can be used in performance management and performance prediction (Grudinschi, 2011). The actions (or aims) proposed to solve the challenges in the enhanced

value network map (see table 3, the third column) are goals of performance prediction for the future. A more detailed action plan, with the timetable, resources and other specific details should be perform in order to follow if the goals are fulfilled in the future. The value network mapping tool proposed in this paper, may increase the efficiency of public procurement process if the collaboration and partnership are properly managed. Also new value can be created to customers, as well as to all services stakeholders (Grudinschi, 2011).

6.3. Limitations and future research

Although the value network mapping tool was evaluated be the experts of being a powerful tool in creating value in partnerships, it can take time until it will be used in practice. There is not enough knowledge in practice about how to map the value network, which makes its applicability in practice difficult. The dissemination of method requires time and usually new ways of doing things are not easily accepted by practitioners (Vilen and Palko, 2010). Individuals are more likely do adopt an innovation if they perceived they will get benefits from it (Berwick, 2003). First of all, a new method must be sound and explain about its benefits in different seminars. Then investing in early adoption of innovation, to have the possibility to prove about the benefits of method application in practice (Berwick, 2003).

Furthermore, when the value network mapping tool is taken into practice of public procurement process, a performance measurement would be necessary to be done. There should be evaluate and measure what is the impact of value network mapping tool on the efficiency of procurement, as well as the impact on motivation to collaborate and on collaboration commitment. More future research is needed in that sense.

Relating the value network mapping process, it is difficult to evaluate how is the best way to organize it in practice for the case of public procurement, if there is no earlier experience. First is needed to apply the method in practice and then to test different ways of organizing it. Either through technical discussions, or a workshop, or using also a short questioner, as it was done in this case study. An action research (McNiff, 2013) would be probably a good way of enhancing the method, to can follow in real world what it works, what it doesn't, what should be done another way and what should not do at all.

Furthermore, in partnerships risk assessment and risk management are important management tasks (Abd Karim, 2011). In this paper these issues were not considered at all. These tasks require specific attention; to guard against a partnership failure, risk management is very important, as well. Future research is needed to investigate and to find what kinds of risk management tools are suitable for partnership management.

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Publication 5

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Performance Measurement and Performance Prediction of Cross-sector Collaboration: A Framework for strategic management of value networks.

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Performance Measurement and Performance Prediction of Cross-sector Collaboration: A Framework for Strategic Management of Value Networks

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ABSTRACT

The aim of this study is to develop a conceptual framework for performance measurement and performance prediction of cross-sector collaboration. Starting from a literature review related to performance measurement systems and the gaps of existing performance measurement systems, the proposed framework has as the central concept the value network. The performance measurement process proposed here starts from the vision and the strategy of collaboration: to solve the challenges of collaboration activity that address social issues and to enhance the value network (to create new value for all network participants); in this way, the collaborative network can perform efficiently. The framework provides performance measurement literature with new perspectives and it overcomes many gaps that exist in the current performance measurement systems. Furthermore, this study has implications for the management of cross-sector collaboration, providing managers a framework for performance measurement and performance prediction.

Keywords: performance measurement; performance prediction; cross-sector collaboration; social challenges; value network.

Introduction

Background of the study

Today's dynamic environment of economy is facing complex socio-economic problems. In order to meet complex social needs, the interdependence between people and organizations from different domains has continuously increased. Whether the organization is a business, government or non-profit, it needs to recognize and to be aware that the collaboration across the sectors is imperative in order to solve complex and challenging problems from the social domain. Therefore, cross-sector collaboration requires a great attention among researchers and practitioners from the social domain.

In cross-sector collaboration that addresses social issues, organizations are joining together to solve challenges from the different domains: education, health care, economic development, environmental sustainability, poverty alleviation, community capacity building, and demographic changes (Selsky and Parker, 2005). However, there are many challenges in the management of cross-sector collaboration (Grudinschi et al, 2013) and collaboration fluency is not always meat (Grudinschi, Sintonen and Hallikas, 2014). Effective cross-sector management tools are required in that sense.

In order to manage the cross-sector collaboration in an efficient way, there is a need to measure the collaboration performance. Many performance measurement systems have been developed over time, like Balance Scorecard (Kaplan and Norton, 1996), Scandia Navigator (Edvinsson and Sulivan, 1996), or Network Scorecard (Varamäki et al, 2008). However, there are a lot of gaps in the existing performance measurement systems (Lehn and Makhija, 1996; Buckowits and Petrash, 1997; Ittner and Larcker, 1998a). Hatry (2010) suggests that in the future performance measurement should concentrate also in performance management and

performance prediction. Additionally, very little research has been related to performance measurement at the network level (Varamäki et al, 2008). According to authors' knowledge, there is no tool for performance measurement in cross-sector collaboration.

Objectives and benefits of the study

The objective of this study is to develop a framework for performance measurement, as well as for performance prediction of cross-sector collaboration, using a value network approach. The proposed framework extends the concept of Balance Scorecard (Kaplan and Norton, 1996), linking it with the concept of value network (Allee, 2002). It also tries to overcome some existing gaps in performance measurement systems.

As Kaplan and Norton argued (2001), the performance measurement system should be linked to organization's vision and strategy. The Network Scorecard (Varamäki, 2008) takes the new dimensions of the network form of organization in consideration, but it does not link the measurement system to organization strategy. The aim of this study is to develop a network measurement system that will overcome this gap. Furthermore, the performance measurement system proposed in this study does not take into account the numbers when evaluating the efficiency of the network activity(Ittner and Larcker, 1998a), but it concentrates on how new value can be created in collaboration process. Additionally, the performance measurement framework proposed here focuses on identifying roles and responsibilities of the collaboration partners, overcoming many gaps that already exist in the current performance measure systems.

Generally, the aim of collaboration is to get benefits and to absorb value from other participants. Furthermore, in the social domain, the need of collaboration starts from the multitude of challenges and the aim of solving them efficiently (Bryson et al., 2006). The

proposed framework for performance measurement in cross-collaboration starts from identifying the challenges related to a specific social issue of collaboration. The aim is to find solutions to solve the challenges efficiently by defining roles for collaboration participants who have more capabilities to perform a specific task. Efficiency means here creating value to other participants. The *research question* of the study is the following:

How cross-sector collaboration can be measured in order to be aligned with the vision of collaboration in the social domain and to overcome the existing gaps in performance measurement systems?

The *contribution* of the present study is in connection to the following issues:

- The study provides a conceptual framework for performance measurement and performance prediction in cross-sector collaboration, namely *Value Network Scorecard*;
- The research addresses a new perspective of performance measurement: a dynamic value network approach, which emphasizes the process of value creation in network settings;
- The research provides managers the understanding of how new value can be created in collaboration process.

Outline of the study

Starting with the theoretical background, where the vision of collaboration and the concept of value network are investigated, the paper makes then a review of the evolution of performance measurement systems, identifying also the gaps that exist in the earlier developed performance measure systems. Furthermore, in the theoretical background chapter, it is also investigated what are the trends and the prediction for the future of performance measurement. Based on these, a new conceptual framework for performance measurement in cross-sector

collaboration is proposed. The proposed framework aims to overcome some gaps that exist in the current performance measurement systems and takes also into account the trend and the predictions made in the evolution of performance measurement systems. Finally, the discussions and conclusions are underlined, showing the theoretical and managerial implications of the study. Also the limitations and future research are presented in the end.

Theoretical background

The vision of collaboration and value network

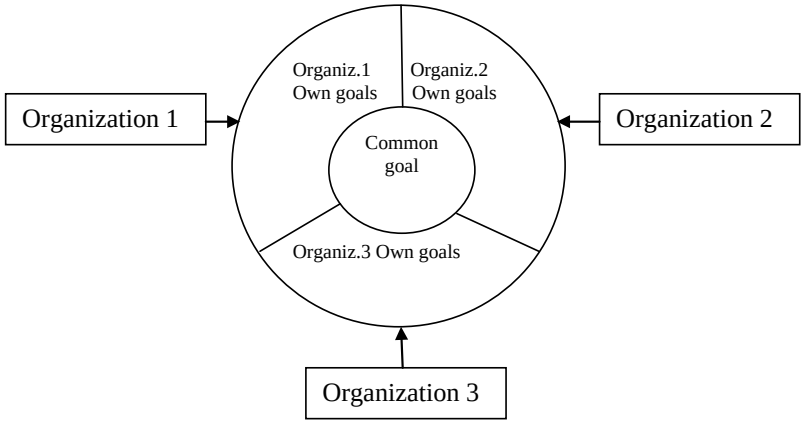
When different people and organizations engage in collaboration, they are aware that they attain some advantages or benefits from collaboration. If there are no benefits, motivation to collaborate disappears (Gazley, 2008). On the other hand, collaboration requires time consuming and resource intensive actions, involving a lot of risks while building relationships (Herman, 2002). New organizational structures and new ways of action that differs from those used in the past are also needed (Cheadle et al. 1997; Fawcett et al. 1997; Wandersman et al. 1997; Kreuter et al. 2000; Mitchell and Shortell 2000).

It has been proven that collaboration is a necessity in navigating today's complex work environments where ambiguity and change are constant (Camarinha-Matos and Afsarmanesh 2006). Therefore, collaboration has become increasingly critical to business success and for solving complex social challenges. It enables people and organization to support each other by combining and leveraging their complementary strengths and capabilities (Alter and Hage 1993; Zuckerman et al. 1995), creating new value that way. Organizations are forming partnerships and

collaborative networks in order to create new value. Research in this domain has proven that collaborative networks have a great potential in value creation (Camarinha-Matos and Afsarmanesh 2006).

When organizations engage into collaboration process, at the network strategic level two main issues are very important to be identified and aligned (1) *the common goal* of collaboration (or goal congruence) and (2) every participant's *own goals*. These two issues must be assembled in the vision of collaboration (Jap 1999; Hansen 2009). In Fig.1 ***the vision of collaboration*** is presented graphically. It is very important to integrate individual goals and actions into the collaborative process to ensure a balance across individual and group interests in order to assure an effective collaboration.

Figure 1: The vision of collaboration

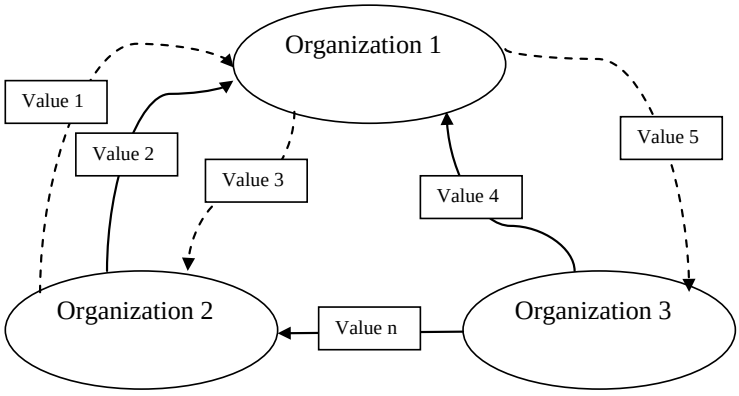


On the other hand, organizations that participate in collaboration process must obtain some benefits in order to be motivated and committed in the collaboration activities (Camarinha-Matos and Abreu, 2005). Benefits mean "value" to them (Camarinha-Matos and Afsarmanesh, 2006). Therefore, in collaboration the participants' own goal is to absorb value from other network participants. In order to establish equilibrium in the network, while absorbing value

form other network participants, every network participant should offer value to other participants in the collaboration process. This is called value network.

Verna Allee (2002, p.6) defines the *value network* as follows: *"…any web of relationships that generates tangible and intangible value through complex dynamic exchanges between two or more individuals, groups, or organizations."* The research and practice of intellectual capital from the last decades have demonstrated the huge impact that both tangible and intangible assets have on organizational action. Particularly, it has raised the awareness relating to importance of intangible assets (Edvinsson and Malone 1997; Wallman and Blair 2000; Eccles et al., 2001). Tangibles refer mainly to goods, services and revenues, while intangibles include knowledge and benefits (Allee, 2002).

Fig.2 Value network map overview (based on Allee, 2006)



Allee (2006) also introduced the concept of *value network map* (Fig.2) and highlighted its importance on the strategic level of a partnership management. In other words, the value network map is a summary of benefits, which network participants acquire from collaboration. In Fig.2 the dashed arrows represent tangible value and solid arrows represent intangible value. The flue of values between network participants can be easily seen from the value network map. The

arrows that leave from a specific participant represent the value he offers to other participants in the network and the arrows that are directed to a specific network participant represent the value (or benefits) that he gets from other network participants in the collaboration process.

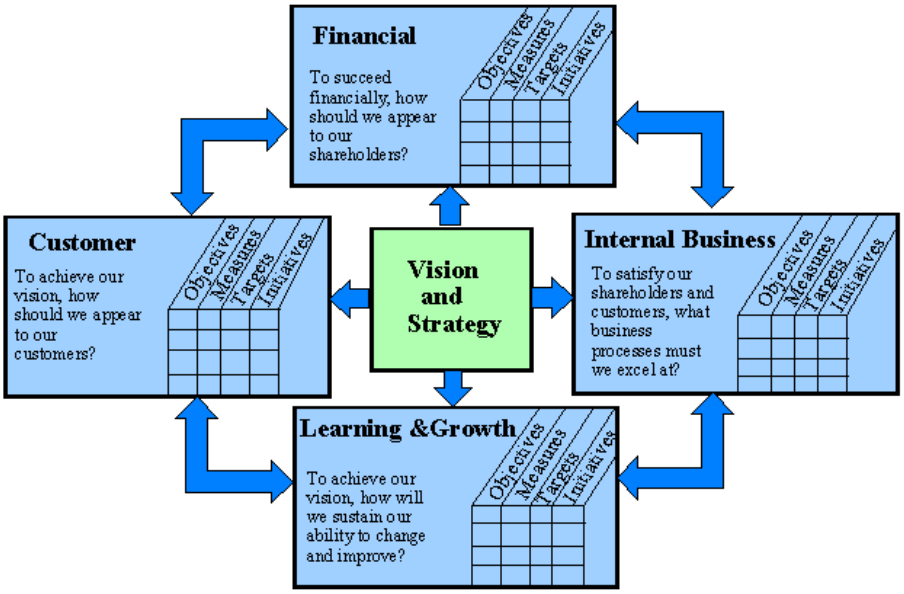
However, the benefits from collaboration cannot be obtained if the collaborative relationships are not properly managed (Sabath and Fontanella 2002, Kampstra et al. 2006, Bitici et al. 2007). In order to be properly managed, collaboration performance must be evaluated and measured. One important task of management is therefore the performance management. By measuring the activity that has been performed by organization, it can be followed how the strategic objectives have been met, thus analyzing what kind of improvements are required in the future activity. In the next chapter, an overview of performance measurement systems evolution is offered.

The evolution of performance measurement systems

In 1991, Robert Eccles, a professor of Harvard Business School anticipated the revolution that will take place in performance measurement. He argued that "Within the next five years, every company will have to redesign how it measures its business" (p.131). Before this, business performance metrics focused only on financial measures. As he anticipated, performance measurement has faced tremendous changes in the 1990s. New approaches have continuously evolved, which emphasizes also the nonfinancial measures (Yeniyurt, 2003). Balanced scorecard (Kaplan and Norton, 1992) is among the first and one of the most popular performance measurement systems that has been widely used by practitioners and researchers. Many other performance measurement systems have been developed after that. A short overview of the most interesting performance measurement systems related to this study is presented next.

Balanced Scorecard (Kaplan and Norton, 1992) is one of the earliest works which began the revolution in performance metrics. Even if is among the earliest which introduced new perspectives in performance measurement, it is still the most adopted method in strategy management, both by practitioners and researchers. It is like an etalon in performance measurement. Balanced scorecard (Fig.3) offers managers four different measurements perspectives, complementing the traditional financial measures with indicators for customers, internal processes and innovation as well as improvement activities (Kaplan and Norton, 1996).

Fig.3. Balanced Scorecard Framework (Kaplan & Norton, 1996)

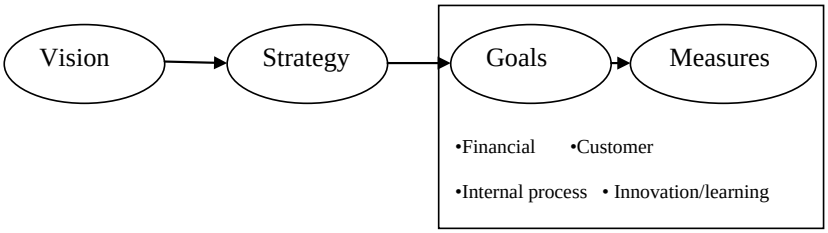


For each perspective the goals and related measures are chosen according to the strategy of the organization. The scorecard helps managers in different steps (Fig.4) of strategic management (Kaplan and Norton, 1996a):

- translating the vision

- communicating the strategy
- linking the strategy to objectives
- business planning and feedback/learning

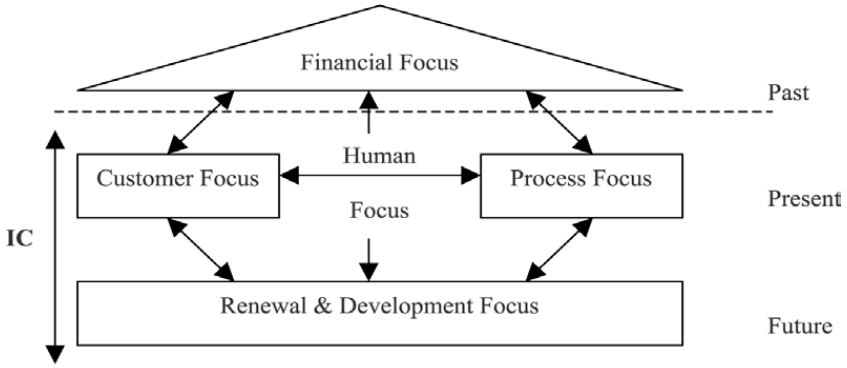
Fig.4.The Balanced scorecard approach to measure development (Kaplan and Norton, 2001)



Also, the scorecard provides managers the ability to track their organization's financial results and at the same time monitor the process of acquiring the intangible assets necessary for future growth and the process of building capabilities.

Skandia navigator is another successful performance measure system which was developed by the largest insurance and financial service company in Scandinavia (Skandia Insurance Co. Ltd), using its own method (Edvinsson and Sulivan, 1996). Skandia navigator (Fig.5.) emphasizes also the communication on the strategic intent. The difference between balanced scorecard and Skandia navigator is that the latter one adds a new component as the core of the measurement system: employee satisfaction. It underlines the importance of intellectual capital in the value creation process and building sustained competitive advantage of the firm (Edvinsson, 1997; Bukovits and Pertash, 1997; Joia, 2000).

Fig.5. Skandia Navigator framework (Edvinsson & Malone, 1992, 68)



As the collaboration has become a strategic issue for organizations in order to compete in the dynamic environment, there was a need for new performance measurement systems, which take into account the network characteristics. In the beginning, the units of analysis in networking studies have varied from a firm (e.g., Tikkanen, 1997), to a dyadic relationship (e.g., Holmlund, 1997; Malinen, 1998; Toivonen, 2000; Vesalainen, 2002a–b). Later on, the analyses evolved to a network or a group (e.g., Nummela, 2000; Varamäki, 2001) and then to a network or regional industry (Kalantaridis, 1996; see also Oliver and Ebers, 1998, p.556). A great amount of research has been done on bilateral relationships between two partners, including buyer-seller relationships, buyer-supplier alliances, or distributor-manufacturer partnerships (Gulati, 1998).

Thomson et al. (2007) conceptualized a multidimensional model of collaboration, which is also used to measure the collaboration process. In their work, they argued that there was not a clear definition on collaboration until that time. In their model, the collaboration consists of five dimensions: (1) *governance*, (2*) administration*, (3) organizational *autonomy*, (4) *mutuality*, and (5) norms of *reciprocity and trust*.

The governance dimension includes participative decision-making, problem solving, and shared power arrangements. Administration dimension refers to the coordination of activity, defining the participants' role, and monitoring mechanisms. Organizational autonomy emphasizes the dual identity of collaboration participants: a real tension is created between organization's self-interest (own goals) and the collective interest (common goal). Equilibrium between these two must be found in order to avoid conflicts in the collaboration process. Mutuality is the process of building mutually beneficial relationships and norm of reciprocity and trust refers to the process of building social capital.

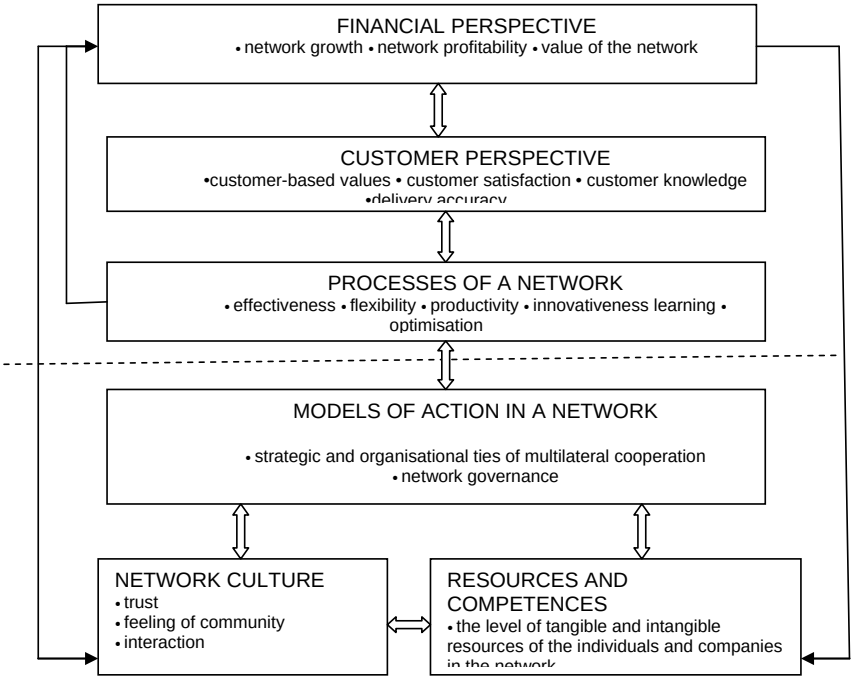
Thomson's framework represents a building theory related to definition and elements of collaboration. The model can be used for the evaluation of the collaboration process (Thomson et al., 2007). If comparing with precedent framework metrics, it can be observed that it does not take the financial, customer, or innovation perspectives in consideration. It simply concentrates only on the collaboration process.

Network Scorecard (Varamäki, 2008) is a framework for performance measurement proposed for a network form of organizations (Fig.6.).

The suggested framework performance measurement in SME networks is composed of factors that enable profitability and productivity in network. The factors considered to influence on that are: (1) network culture, (2) resources and competences, (3) models of action, (4) internal processes, (5) customer perspective and (6) financial indicators of the network.

The Network Scorecard is a tool that allows managers to evaluate the present state of the network, helping in developing a strategy for the future (Varamäki, 2008). For the analysis of network state, different network dimensions that are included in the framework are used.

Fig.6. Network Scorecard framework (Varamäki, 2008)



Gaps in performance measurement systems

A variety of performance measurement systems have been developed over time. While introducing new approaches, the new measurement systems and the changes and challenges faced by organization in their continuing competition were tried to adapt (Bourne et al, 2000).

The continuing competition and the rapid change that is present in the nowadays dynamic environment forces companies into a continuing learning process. The companies are able to understand their strengths and weaknesses better to improve their capabilities, and acquire new ones (Lane, Koka and Pathak, 2006) . Companies have been establishing collaborative

relationships for this purpose. In that sense, creating value is a strategic issue that must be well managed. Furthermore, the role of intangible assets in value creation has dramatically risen in the past years (Alee, 2002).

Among the gaps in performance metrics reported in the scientific literature, in this study are selected those which are more related to our research: the lack of predictive ability to explain future performance, they provide little information on root causes, they report functional, not cross-functional processes (Ittner and Larcker, 1998a), they do not consider intangible assets (Buckowits and Petrash, 1997), they do not measure the value created (Lehn and Makhija, 1996), there are too many measures in one metric, etc. Therefore, new performance measurement systems are required that will be able to describe more with less numbers, and to include a broader set of measures related to customer satisfaction, quality and innovation (Yeniyurt, 2003).

To understand the gaps in the present performance measurement systems better, it is easier to start from the definition of performance measurement. When speaking about performance measurement, we are thinking of a process of collecting information relating to performance and reporting them. During the measurement process, it is followed whether outcomes are in line with what was the intended achievement (Kaplan and Norton, 1996). According to Moullin (2003), performance measurement is "*evaluating how well organizations are managed and the value they deliver for customers and other stakeholders*". Bocci (2004) completed Moullin's definition, arguing that evaluating the way of how organizations are managed does not only mean measuring, but also making a decision on how processes/activities must be performed in a better way.

Furthermore, somebody (Anonymous, 2003) suggested in an article of Perspective on Performance Journal, that there is a need to move from performance review to performance

planning. Additionally, Hatry (2010) suggests in his article about the future of performance management that in the next decade performance measurement should be moved from performance information to performance management. He also anticipates that more attention will be given to cross-sector issues and suggests that "*Partners will agree on the outcomes to track and the targets for these outcomes, and they will identify each partner's role and responsibilities in producing those outcomes"*.

In the next chapter, we will describe on detail the Value Network Scorecard developed in the present research.

Value Network Scorecard (VNS): A new tool for performance measurement and performance prediction of cross-sector collaboration

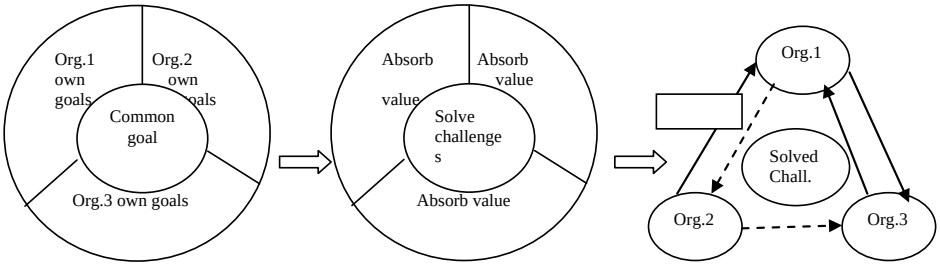
It has been shown that performance measurement should start from the vision and the strategy (Kaplan and Norton, 2001). The vision of collaboration includes the goal congruence of participants (common goal), as well as their individual goals. The glue of cross-sector collaboration in the social domain is the need of solving social challenges (Bryson et al., 2006).

Bryson et al. (2006) argue that "*People who want to tackle tough social problems and achieve beneficial community outcomes are beginning to understand that multiple sectors of a democratic society must collaborate to deal effectively and humanely with the challenges."* Therefore solving challenges related to citizens is the "core" (common goal) of collaboration in the social domain; in other words, creating value for customers. On the other hand, the participants' own goal in collaboration is to absorb value from other network participants (Nooteboom, 2012). At the strategic level, managers should have in their mind how the

collaboration process must be organized in order to create value in the network: how value network could be enhanced.

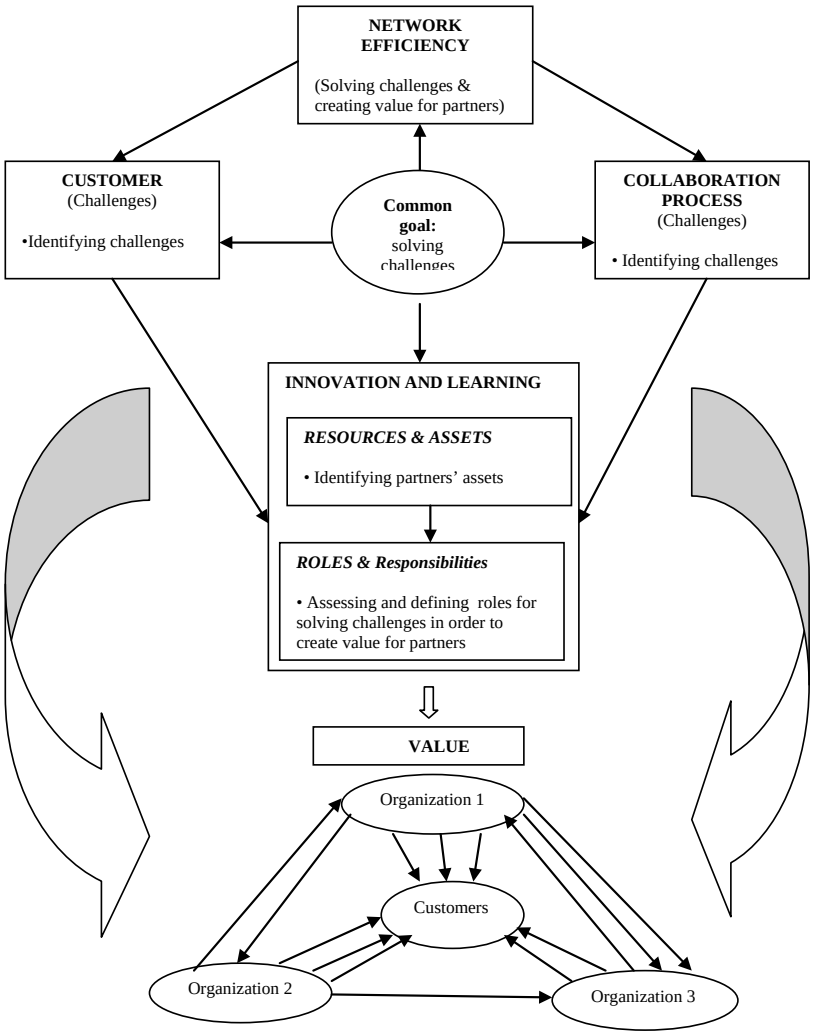
In Figure 7 it is explained how the vision and strategy of cross-sector collaboration for social issues is translated from theory to practice. Therefore, in cross-sector collaboration, the partners' common goal is to solve challenges in the social domain and every partner's individual goal is to absorb value from other partners. The outcome of the collaboration process are the solved challenges and the value (benefits) for all the participants in the network (customers and organizations). This represents the performance prediction in the beginning of performance measurement process. All the outcomes of the collaboration process can easily be observed from the value network map. The map shows the flue of value between network participants, which is the result of the collaboration process.

Fig.7. Translating the vision and strategy of cross-sector collaboration from theory to practice



Value Network Scorecard (Fig.8) adapts the Balance scorecard (Kaplan and Norton, 2001) for network perspective of organization. Instead of taking the financial perspective into account, Value Network Scorecard focuses on network efficiency, not reporting the numbers, just concentrating on value creation to customers.

Fig.8. Value Network Scorecard framework



Translating Value Network Scorecard-picture (Fig.8) into words, it can be remarked that the network will operate efficiently, if it is able to solve the challenges related to customers. Solving the challenges related to customers depends also on how well the collaboration process is managed. In that sense, the efficiency of network is directly dependent on how well the

challenges related to customer, as well as the challenges related to collaboration process are solved. The efficiency of collaboration depends also on how management team is able to find innovative solutions in assessing roles to partners. This assignment can be better solved if firstly are identified the partners' assets and then pondering which partner has the best capabilities or resources to solve a specific challenge. This way the challenges can be solved with minimum efforts and resources, creating value to other partners, as well.

In the performance measurement process of the Value Network Scorecard, specific *steps* are recommend to be followed:

(1) Identifying challenges in the activity of the network (challenges related to customers and collaboration) ;

(2) Identifying participants' assets and resources (intangible and tangible assets);

(3) Establishing roles for participants, according to their assets, in order to solve the challenges;

(4) Converting the assets into value in order to enhance the value network (to create value).

To simplify the understanding of the performance measurement process proposed in the Value Network Scorecard framework, in Table 1 are more details related to the analysis that should be done at every step. It si also specified what kind of outcomes every step should include.

Table 1. The steps of performance measurement process

Steps in performance measurement process	**Questions to be answer at every step**	**Outcomes of every step**
1.Identifying challenges in the activity of network	• *What are the challenges related to customers?* • *What are the challenges related to collaboration process?*	• The list of challenges that must be solved (as management objectives).
2.Identifying every participants' **assets** and resources	• *What are the abilities (strengths) and resources of every participant?*	• A table with a list of strengths and resources of every network participant
3.**Establishing roles** for participants in solving challenges	• *What kind of abilities and resources are needed in order to solve a specific challenge?* • *Who has the best abilities to solve a specific challenge?*	• The list of challenges and their solutions, specifying who has the responsibility in solving every challenge
4.Converting asset into value	• *How a specific asset of a participant can be converted into value to other network participants?*	• The outcomes of hole process are included into a broad table, where are included all the outcomes from the previous steps. •The final outcome of the process is the ***value network map.***

While identifying the challenges related to collaboration process, we recommend the use of Thomson's et al. (2007) framework, because the model includes all the components, which refer specifically to the evaluation of the collaboration process. For the identification of the challenges related to customers, if the collaboration process is related to a service system, we recommend to use the Servqual (Parasuraman, Zeithaml and Berry, 1988) as a theoretical framework.

The performance measurement using the Value Network Scorecard is a cyclic process. At specific periods of time, the evaluation of collaborative activity must be reevaluated and

analyzed. New challenges that appear should be identified and the performance measurement process continues with the same described steps in the framework.

Discussions and conclusions

In the present study, it was developed a conceptual framework for performance measurement of cross-sector collaboration that addresses social issues. The framework works also as a performance prediction system. By aiming to solve the challenges in the future, represents a prediction of performance in cross-sector collaboration. Additionally, it must be remarked that the framework was developed in the spirit of strategic maps (Kaplan and Norton, 2001). Moreover, the conceptual framework has as the central concept the value network, as part of the performance measurement system, investigating how new value can be created in the network. The study has theoretical and managerial implications which will be discussed in detail next.

Theoretical implications

The main theoretical implication of this study is that it offers a new framework for performance measurement of cross-sector collaboration. The aim of the study was to develop a performance measurement framework for cross-sector collaboration, which will overcome some existing gaps in the current performance measurement systems. Kaplan and Norton (2001) argue that performance measurement system should be linked to organization's vision and strategy The earlier work which addressed the network level in performance measurement (Varamäki et al,

2008) does not take the vision and the strategy of the organization into consideration. Oppositely, with the Value Network Scorecard, the process of measurement and prediction of performance starts from this central point.

Many other gaps in performance measurement are reported in the scientific literature. These discussions take into considerations those gaps that Value Network Scorecard tries to overcome. Bocci (2004) argues that performance measurement should include not only the evaluation of how organizations are managed, but more important is to make decisions on how the activities may be performed in a better way. Value Network Scorecard's main task is to investigate how in the future the collaborative activity of the network may be better performed. Starting with identifying the challenges, and also the participants' assets, possible solutions are found for solving challenges. These are set as future objective of the network.

Lehn and Makhija (1996) underline that existing performance measurement systems don't measure the value created and usually, there are too many measures in one metric. Value Network Scorecard overcome this gap, as its main aim is to measure the value created in the network. From the value network map can be easily seen the value that can be created in the network if the objectives are achieved. Only with one metric, Value Network Scorecard (VNS) measures complex objectives, which includes customer satisfaction (by trying to solve challenges related to customers, at the *step 1* of VNS performance measurement process) , as well as innovative ways of organizing the activity of the network (by trying to solve challenges related to the collaborative activity, also at the *step 1* of VNS performance measurement process). This is also in line with Yeniyurt recommendation (2003), which underlines that performance measurement systems must be able to describe more with less numbers and to include a broader set of measures related to customer satisfaction, quality and innovation.

Furthermore, in his article about the future of performance measurement Hatry (2010) suggests that in the next decade performance measurement should move from performance information to performance management. He also anticipates that more attention will be given to cross-sector issues, agreeing on the outcomes and the roles and responsibilities of each collaboration participant. Value Network Scorecard is a performance measurement system which addresses cros-sector issues. Additionlly it must be remarked that, by aiming to solve the challenges, as the core and the vision of collaboration, VNS focuses on outcomes of collaboration. Moreover, at the *step 3* of VNS measurement process it is agreed on participants' roles and responsibilities. Concluding shortly, Value Network Scorecard overcomes many gaps that exist in the earlier developed performance measurement systems.

Managerial implications

Relating managerial implications, it can be shortly conclude that using Value Network Scorecard the managers will be able to predict and explain the future performance, they can report cross-functional processes, and they will be able to consider the role of intangible assets while measuring and predicting performance. But the most important property of the Value Network Scorecard is that it allows managers to measure the value created in the network, as the unique metric of the performance measurement tool.

Additionally, the using of Value Network Scorecard will allow managers of cross sector collaboration to understand how the roles and the responsibilities may be assessed in the network in an efficient way. It also allows managers to understand the dynamics of value network and how new value can be created in the collaboration process. By aiming to solve the challenges in an efficient way (assessing the roles to collaboration participants according to their best

capabilities and resources) new value is created in the network. Furthermore, understanding the dynamics of value network is seen as a motivation factor for the participants in the collaboration process, determining them to be fully committed in their collaborative activities.

Limitations and future research

To truly assess the usefulness of the Value Network Scorecard it needs to made it operational. The functionality and applicability of the framework (Value Network Scorecard) was tested by our research team in a project and it was successfully used. In an ongoing work, we will present in more details, using a case study, how managers can use the Value Network Scorecard in practice.

It must be remarked, that value network mapping it is not an easy task and it is quite a new issue, not so used in practice. Learning and understanding how to map the value network require first of all the teaching of how to use the method in practice. Moreover, the dissemination of Value Network Scorecard it may takes time, because usually new ways of doing things are not so easy accepted by practitioners (Vilen and Palko, 2010). People are more likely to adopt an innovation if they perceive the will get enough benefits from using it. Workshops and seminars must be organized were to explain the functionality and the benefits of the Value Network Scorecard.

Additionally, when using it in practice, an evaluation of the impact of method should be done, to demonstrate the efficiency of it and to measure the role (McNiff, 2013) that it play on the motivation to collaborate. In order develop foreword the framework, an action research would be probably a good way to test the applicability of the method in practice, to see what works, what doesn't work, what should be done another way and what should not do at all.

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Publication 6

Daniela Grudinschi, Leena Kaljunen, Jukka Hallikas and Sanna Sintonen (2013)

A new method for measuring and predicting performance in partnerships' value networks: case elderly care.

Proceedings at Global Conference on Business and Finance, 2-5 January 2013, Las Vegas, Nevada, USA.

A NEW METHOD FOR MEASURING AND PREDICTING PERFORMANCE IN PARTNERSHIPS' VALUE NETWORKS: CASE ELDERLY CARE

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ABSTRACT

In this case study we implement a tool for performance measurement and performance prediction in collaboration, namely the Value Network Scorecard, using value network mapping. Generally, the aim of collaboration is to get benefits and to absorb value from other participants. Furthermore, the need of collaboration starts from the multitude of challenges and the aim of solving them efficiently. The case study starts from identifying challenges in elderly care and then trying to find solutions to solve the challenges efficiently. Here, efficiency means creating value to other participants. In order to create value, it must be identified which collaboration participant has the best capabilities to perform specific tasks while finding solutions to solve the challenges. The task of performance measurement uses the value network mapping, which helps in assigning and defining roles for the participants in collaboration process. The data was gathered through a workshop with key representatives from public, private, and third sectors involved in welfare services delivery for the elderly. Understanding how the Value Network Scorecard can be applied in practice will help the managers to improve collaboration, to create new value in network, to assign roles for every collaboration participant, and to follow easily the performance of duties.

KEYWORDS: performance measurement, performance prediction, value network, cross-sector collaboration, elderly care

INTRODUCTION

Collaboration and partnerships have become crucially important in order to succeed in the today's dynamic environment (Camarinha-Matos and Afsarmanesh 2006). Social domain faces many different kinds of challenges that cannot be solved by a single organization. Collaboration with people from different domains, which have different kind of expertise, is very important (Alter and Hage 1993; Zuckerman et al. 1995). People and organizations must be motivated to get involved and to be fully committed in collaboration process (Hansen 2009). Being aware of the benefits they could get from collaboration could be a good motivator factor in that sense. Acquiring benefits, as well as offering value to other network participants represents the value network: the amount of value that is created in the network to all its participants during the collaboration process.

Elderly care has become one of the biggest challenges in modern society. In the developed countries, the amount of aged population has continuously increased, while the amount of active population has decreased (Selsky and Parker 2005). In Finland, the situation is even more challenging. According to Statistics of Finland (2009), the proportion of the Finnish population aged over 65 years is currently 17% of the whole population. It is estimated, that by 2030 the aged population will rise up to 27%. The strategy of the Finnish government is to provide welfare services to elderly people, so that they can live in their own homes as long as possible, because enhanced services in specialized rest homes are much more costly (Bakker et al 2003). As in any other social domain that faces challenges, collaboration with organizations from different sectors is crucial in order to be able to solve the multitude of challenges in this area.

In order to collaborate efficiently, there is a need to manage collaboration in a powerful way. While managing collaboration, performance measurement is one of the important issues of management, besides strategy and planning (Varamäki et al, 2008). Powerful performance measurement tools have to be used in that sense (Yeniyurt, 2003). Different kind of tools for performance measurement have been developed over the years, but the performance measurement systems have still many gaps: they lack the ability to predict and explain future performance, they do not consider intangible assets, neither measure the value created (Yeniyurt, 2003; Hatry, 2010). The Value Network Scorecard is a tool for performance measurement that overcomes these gaps. It measures and predicts the performance, evaluating how new value can be created in collaboration process.

In this article, we show how the Value Network Scorecard can be used in practice. We exemplify step by step how performance can be measured and predicted in collaboration, using a case study in cross-sector collaboration for elderly care in Finland. In the following section, we present a theoretical background for the topic, explaining in detail the elements of the Value Network Scorecard. Section three consists of explanations related to the data and the methods used in this study. Fourth section illustrates how to use the Value Network Scorecard in practice and finally, the discussions and conclusions are outlined.

THEORETICAL BACKGROUND

Performance measurement and value network

Performance measurement is the process that helps organizations to establish criteria for determining the quality and outcomes of their activities, based on organization's vision or its goals (Kaplan and Norton, 1996; Gates, 1999; Forza and Salvador, 2000). It is about creating an effective and simple tool that allows organizations to follow whether the objectives are met. Performance measurement development starts by defining the vision and strategic goals (Kaplan and Norton, 2001). For a business organization, the most important goal is turning a profit, but for public and third sector organizations the key objectives may be difficult to define. When organizations from different sectors of activities (e.g. public, private and third sectors) collaborate, determining the common goal and objectives may be quite a challenging task (Bryson et al., 2006). Furthermore, designing a performance measurement tool for collaboration is a more complicated task, because it involves a lot of complex issues. Measuring complex issues in a simple and effective way is also challenging.

When defining the performance measurement, Moullin (2003) adopted a somewhat different approach, arguing that performance measurement is evaluating how well organizations are managed, and what is the value the organization delivers to its customers and stakeholders. Starting from this idea, the Value Network Scorecard is a performance measurement tool that evaluates what value can be created in collaboration process to customers, as well as to all collaboration (network) participants, or in other words, how the value network can be enhanced during the collaboration process.

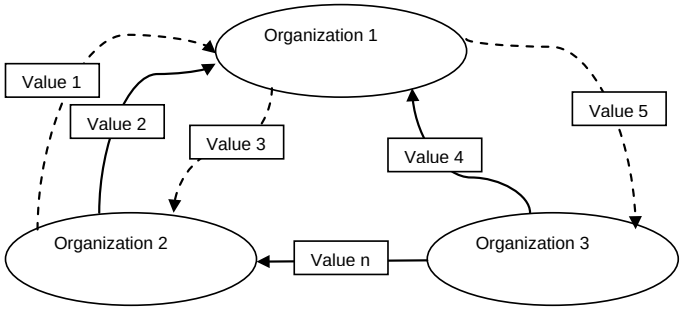

Figure 1: Value network map overview (based on Allee, 2006)

To understand the idea of the Value Network Scorecard (which will be described in the next chapter), the concept of value network is shortly introduced here. According to Allee (2002), a value network is

a web of relationships between individuals or organizations that generate tangible and intangible value through their complex dynamic exchanges. The value network can be illustrated easily using a map (Allee, 2006) where it can be seen what is the value exchange between network participants (Fig.1). When drawing the map, the participants in the collaborative network are indicated with ovals, arrows indicate the value-attributes (see Fig.1). Two different types of line indicate value in the map: the dotted lines indicate intangible value-attributes (e.g. knowledge, experience) and dash lines tangible value-attributes, respectively (e.g. goods, services, money). The direction of the arrow indicates to whom network participant is generated a certain value and the starting point of the arrow indicates which network participant generates the specific value. The value is labeled in the rectangle . In the picture with the example of value network map (Fig.1), *"Value 1"* is an intangible value offered by *"Organization 2"* to *"Organization 1"*. More concretely, it means that during the collaboration process *"Organization 2"* offers (generates) some value (e.g. knowledge about customer needs) to *"Organization 1"*. Alternatively, *"Organization 1"* offers *"Value 3"* to *"Organization 2"*. Value-attributes can simply be associated to benefits. Therefore, during the collaboration process network participants get benefits from other participant. This is the glue of collaboration. If the participants get no benefits, the motivation to collaborate will be very low or inexistent. In the next section, we will see how these two concepts (value network and performance measurement) are linked together.

Value Network Scorecard: a tool for performance measurement and performance prediction

Now we describe in detail what are the main components of the Value Network Scorecard. The Value Network Scorecard is a tool for performance measurement and performance prediction developed by our team. It was designed to measure the performance of collaboration and it is a value network approach. The measurement and the prediction of performance have the value network as the core concept. The main idea is how collaboration should be managed in order to create value to all network participants.

Going back to performance measurement in collaboration, it has been seen that the designing of performance measurement tool starts from the vision and the goals of collaboration (Bryson et al., 2006). When organizations engage in collaboration, all of them aim to fulfill their own goals, but in the same time a common goal should bring them together. These two different types of goals should be embedded in the vision of collaboration, at the strategic level (Jap 1999; Hansen 2009). Usually the common goal encouraging an organization to engage in collaboration process is to solve specific challenges; and every organization's own goals are different kind of benefits they want to acquire from collaboration, in other words, to absorb value from others. Therefore, managers at the strategic level should have in mind that the collaboration should be organized in a way, that as much value as possible will be created to all participants during the collaboration process. The performance measurement is about predicting how value network can be enhanced, while trying to solve the challenges that brought them together. Figure 2 is an overview of performance measurement idea for collaboration, described above. The strategic thinking of the Value Network Scorecard is shown below.

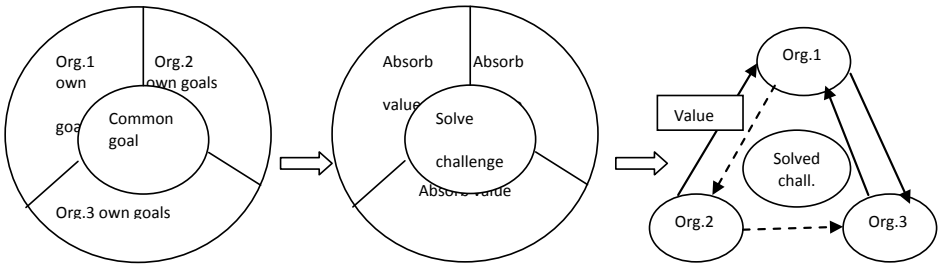

Figure 2: Translating the vision and strategy of collaboration from theory to practice

The outcomes of collaboration can easily be observed from the value network map: the solved challenges, as a common benefit to all participants, as well as different value-tributes as individual benefits to every network participant. In the value network map, the outcomes of collaboration are

predicted as target outcomes. This is done in the beginning of performance measurement process. The flue of value between all collaboration participants that results as outcome of collaboration is expressed in the map.

The Value Network Scorecard is adjusted from the Balance Scorecard (Kaplan and Norton, 2001) for the network perspective of organization. While Balance Scorecard is a financial approach in performance measurement, the Value Network Scorecard focuses on network efficiency, measuring and predicting the value creation in the network (to network participants, as well as to customers).

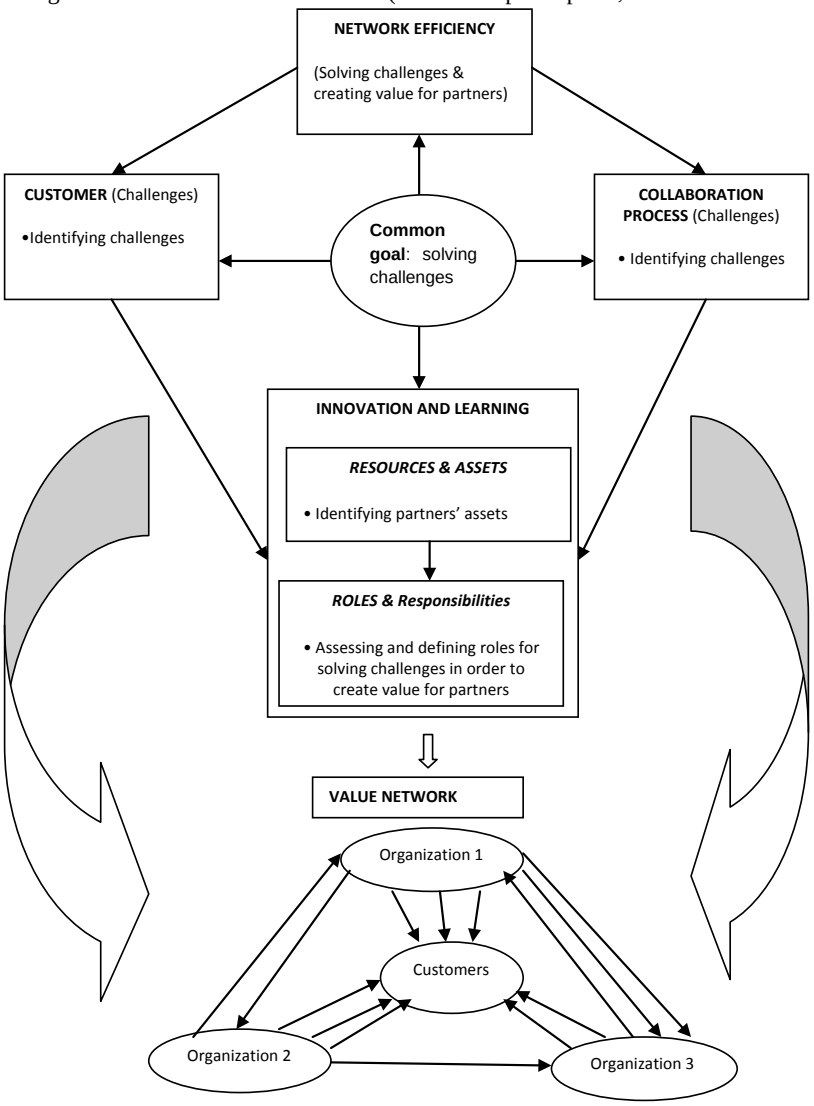

Figure 3: The Value Network Scorecard

In Figure 3, all the components of the Value Network Scorecard are presented in detail. Similarly as in the Balanced Scorecard (Kaplan and Norton 1996), but in a little different manner, the Value Network Scorecard offers managers four different perspectives related to customers, collaboration process, network efficiency, and innovation. The network will operate efficiently if it is able to solve

challenges related to customers as well as overcoming challenges related to collaboration process. In order to create new value in the network, innovation and learning is needed when assigning the roles and the responsibilities. The distribution of roles and responsibilities should be done in the best possible way, by identifying first the partner's assets and resources and then analyzing who is the right partner to solve a specific challenge. Some partner would need to put forward little effort in solving a specific challenge if it possesses the right resources/assets. This way new value can be created to other partners if a big encountered challenge was solved with minimum efforts by others. Value network can be enhanced continuously when new challenges appear, if the distribution of roles is done in the best possible way. That way, the assets of the partners can be converted into value to others.

In the performance measurement process of Value Network Scorecard, mapping the value network is a very important part, that needs skills and *specific steps* that should be followed. We recommend the following steps:

(1) Identifying challenges in the activity of the network;
(2) Identifying participants' assets and resources (intangible and tangible assets);
(3) Establishing roles for participants, according to their assets, in order to solve the challenges;
(4) Converting the assets into value in order to enhance the value network (codifying the data).
(5) Adding the value-attributes into value network map

In the following part, we will exemplify, step by step, how the Value Network Scorecard can be used in practice. First we will describe the data and methodology we use and after that a concrete example, a case study, will be used in this regard.

DATA AND METHODOLOGY

The implementation of the Value Network Scorecard was realized through a case study: the collaboration between public, private and third sector in providing welfare services for the elderly in Finland. The public sector has the responsibility to provide welfare services for the elderly in Finland. The Finnish government's strategy is to provide welfare services to elderly people, so that they can live as long as possible in their own homes, because enhanced services in specialized rest homes are much more costly (Bakker et al 2003). Welfare services are provided through public procurements from private and third sectors' organizations or they are provided by the public sector itself, depending on its own resources in specific areas. Due to the limitation of resources and the big amount of challenges that exists in elderly care domain, an effective collaboration that must be strategically managed, is required. Performance measurement is a very important part of strategic management in that respect.

Performance measurement with the Value Network Scorecard starts with the mapping of value network. The first step in value network mapping is to *identify the challenges* in the activity of network. A workshop with experts from all three sectors was carried out, aiming to identify the challenges. Furthermore, during the same workshop session *the strength and resources* (intangible and tangible assets) of every sector *were identified* ; the second step of value network mapping was fulfilled at the same time. Three persons from every sector participated in the workshop session. The participants were selected from managerial staff of every sector, which has wide experience in the delivery of welfare services for elderly. Top managers were selected from the public sector and from the private and third sectors manager directors were selected. All of them were involved in collaborative projects for elderly services delivery and the challenges from that domain were well known by all of them.

In order to identify the challenges and every sector's assets, Think Tank software was chosen as a working tool during the workshop session. Think Tank software supports the coordination of strategic planners, offering group intelligence and real-time decision support. It allows a quick brainstorming anonymously, encouraging everyone to participate actively to expose their opinions. In the beginning

of the workshop session, we had a short list with challenges collected from the source documents related to welfare services in Finland and participants were asked to complete the list with other challenges which they had encountered in their collaborative activity. Similarly, a ready short list with every sector's assets was given to them to be completed during the workshop session. In the end of the workshop session, we got a long list with different types of challenges from the collaborative activity in elderly services delivery. The challenges were divided into *(a) customer related challenges* and *(b) challenges related to the collaboration process*, as they are identified in different groups in the Value Network Scorecard (Fig.3). In order to map the value network, we needed to divide the challenges in smaller specific groups to make it easier to fit them in smaller maps. As a result of the second step, identifying the sector's assets (strengths) and resources, we got a table with three columns, where the strengths and resources of the sector are specified.

Next steps for value network mapping are *establishing roles in the network* and *converting the assets into value-attributes*. These steps require another workshop session. To be able to demonstrate the applicability of Value Network in practice through this publication, the tasks from these steps were conducted by the research team involved in this project (three researchers). When the tasks were performed, the results were validated (with small modifications) by an expert in the domain of elderly services delivery (a top manager from the public sector) who had participated in the workshop session earlier.

In order to perform these tasks for value network mapping purpose, every single challenge should be analyzed carefully. First we should ponder what kind of abilities are needed to solve specific challenge, then identify which network participant has the main abilities (assets) or resources to efficiently solve that specific challenge. Efficiency in this case means to create value for other network participants. Then the assets are converted into value by analyzing how a specific asset of a participant can be converted into value to another network participant. Finally all the *value-attributes are added in the value network map*, one by one. Trying to find solutions to solve all the challenges in an efficiently way, new value will be created for all network participants, thus enhancing the value network.

The value network map obtained through the Value Network Scorecard tool is then used in performance measurement of collaboration, where the goals that are set for the collaboration process can easily be observed. From the value network map it is also easy to observe what is the predicted performance for the collaborative network, and what new value can be created for all participants if all the challenges will be solved as planned. In the following section, we show how to use the Value Network Scorecard in practice.

RESULTS: USING VALUE NETWORK SCORECARD IN PRACTICE

In this section we exemplify how we implement the performance measurement in collaboration using the Value Network Scorecard. To understand this better, we will exemplify step by step how the Value Network Scorecard can be used in practice by following the five steps described in the section Value Network Scorecard.

(1) Identifying challenges in the activity of the network

As we explained earlier, the first step in predicting and measuring performance using this tool is to identify the challenges from the activity of the network: *(a) customer related challenges* and *(b) challenges related to the collaboration process*. As we already mentioned, the list of identified challenges was very long and we divided them into small groups. *Customer related challenges* were divided in three groups: *(1) the availability of services*, *(2) the quality of services* and *(3) the prices of services and the financial support for the clients*. *The challenges related to the collaboration process* were divided into two groups: *(1) the management of service system* and *(2) the integration of service system*. The list of the challenges related to the management of service system was the longest one. For the scope of this paper, we take for the exemplification only one group of customer related challenges, those related to the quality of services. The list of challenges belonging to this group is much shorter than the others, and it is easier to understand the exemplification trough a simpler

example. Following is the list of the challenges related to the quality of services (customer-related challenges).

•*Personalization of services,* to meet the customer needs is required. The needs of people are usually very different from one person to another, according to their health situation, or the own habits. For example in the current service system, the most catering services are provided by the public sector. In order to organize the time schedule efficiently, the breakfast is provided to everyone during the same time period, daily between 8 and 9 a.m. This schedule it is not suitable to all people, because their daily rhythm is quite different from one person to another. Some of them wake up early in the morning, at 5 o'clock; others may wake up at 10 o'clock. The catering services should be personalized, according to everyone's needs.

•*More time spend with the customers is needed.* Due to the limitation of personnel resources, the public sector's personnel seem always to be in a hurry. They perform quickly their tasks and usually they do not have time to talk with the customers. If the time would not be so limited, the personnel could give more attention to the elderly, discussing about their needs, which would be very valuable information for service enhancement. But most importantly: the customers would be much more satisfied and their quality of life could be significantly enhanced that way, because most of them are lonely.

•*More activities for the elderly are required.* In elderly home care, the basic daily needs are usually covered, but there are not so many other activities organized for them during the whole day. Furthermore, during the evenings and weekends much less activities are organized for elderly people. In some communities, the third sector's organizations (e.g. the church or non-profit organizations) arrange different kind of activities for the elderly, but they are not enough and in some municipalities (or places) they are inexistent.

•*Service quality comparison* provided by different suppliers is difficult for the old people to make, because there are no specific criteria in that direction. They do not know what exactly a service should include. The quality of the services is very irregular and depends on the service supplier. Service standard regulations are needed in that sense.

•*Self-determination of clients* for service delivery is not always met, even if this principle should be complied when providing services for elderly people. If an elderly person e.g. does not have any relatives who could help in determining the need of services, the authorities decide the matter on behalf of the client. The elderly are not always satisfied with the decisions made by authorities.

(2) Identifying participants' assets and resources (intangible and tangible assets)

The strengths and resources of the network participants were identified during the workshop session, where nine persons participated, representatives of every sector. The results are included in the Table 1, below.

Table 1: The strengths and resources, by sector

Public sector's assets	**Private sector's assets**	**Third sector's assets**
Certainty of activity	Innovativeness	Timetable flexibility
Certainty of service delivery	Customer-oriented services	Regional know-how
Nearness of services to customers	Collaborative capacity	Human resources
Democratic service supply	Advanced welfare services	Customer-oriented services
Responsibility to organize services (quality control)	High educational level and technology know-how	Church is expert in spiritual needs and crisis situations
Financing/funding opportunities	Flexibility of open times	Light organization structure
Taxing power	Effectiveness of action	Free labor (volunteers)
Continuity of activity	Financing know-how	Special know-how
Legitimacy know-how, law regulation, law making	Transparency of earnings and expenses	Big collective facilities (of non-governmental organizations)
Wide collaboration network	Individuality/quality of services	Big collective spaces
Opportunity to govern the cost of the process	Well defined core tasks	The pioneer role in many concepts development
The ethic of public services	-	Ideology is value based
Variety of know-how	-	-

(3) Establishing roles for participants, according to their assets, in order to solve the challenges

At this step every challenge should be taken separately for analyses. Representatives of every participant organization ponder together, during a workshop session, how the challenges could be solved in the most efficient way. It should also be analyzed which network participant has the best capabilities or resources to solve the specific challenge with minimum effort,thus creating value to other network participants, as well as to customers. The network participants' roles and responsibilities are defined during this session. For the purpose of this paper, this task was performed by the research team. Following, *every challenge is analyzed individually* and the results are explained.

• *Personalization of services*

In order to find solutions to solve a challenge, the participant who has the more suitable resources or capabilities to solve it must first be identified. After looking at the table where the assets of every participant are listed, we decided that private and third sectors have the best capabilities to solve this challenge. Private sector has the assets of providing advanced welfare services to elderly and it is effective in its activity. Third sector's asset is that it provides customer oriented services to elderly, according to their needs. Another important asset of third sector is its special know-how. The elderly people are usually very confident of the personnel of third sector organizations (church, voluntary or non-profit organizations). That is why the third sector knows the needs of elderly people much better than the other sectors. Through an effective collaboration together with the private and third sectors, the public sector could organize and provide personalized services to elderly, according to their special needs. The private and third sectors could offer consultancy to the public sector, which is responsible for services providing for the elderly. Furthermore, in many situations, depending on the area every sector operates and the customer needs, personalized services could be provided by third or private sectors. According to these analyses and decisions made by the participants of the analysis session (in our case the research team), the *roles* of providing personalized services are attributed to the private and third sectors, depending on the areas where they operate. Additionally, the private and third sectors play the role of consultants for the public sector. By doing so, new value is created to customers by private and third sectors, offering them personalized services. The same way private and third sectors create new value to the public sector, offering consultancy to it, but they can offer consultancy to one another, because every organization owns different kind of knowledge that may be valuable for everyone. Alternatively, private and third sectors could fulfill the public sector's needs by helping it to provide customer oriented services and also advanced welfare services.

- *More time spend with the customers is needed*

Due to the limitation of this paper we will explain shortly about the analysis of the next challenges. When looking into the table with sectors' strength and resources, analyzing this data, it was decide that the private and third sectors have capabilities and resources to solve this challenge. With private sector's assets "Quality of services" and "Flexibility of open times", and alternatively the third sector's assets "Ideology/empathy value-based", "Flexibility of timetables" and "Human resources" this challenge could be solved. So the private and third sectors have the roles of providing high quality services to the special segment of elderly people who require more attention and also providing them homogeneity of service delivery during the whole day. Especially the third sector human resources (voluntary workers) may be a huge help in this case, because there are no need for qualified personnel to be able to discuss with elderly people.

- *More activities for the elderly are required*

Similarly to the earlier explanations, the role of solving this challenge could be attributed to the third sector, based on their assets "Human resources" and "Ideology/empathy value-based". Recreational services could be provided by the third sector through the voluntary workers if the collaboration is well managed and organized.

- *Service quality comparison*

Public sector has the capability of solving this challenge through its asset of "Law regulation". Service quality standards could be created by the public sector through law regulations. These would help private and third sectors in comparing the service quality when competing for services but also customers by being knowledgeable about what kind of tasks or activities the services should include.

- *Self-determination of clients*

Looking and analyzing the data from the table with sectors' assets, it was decided that the role to solve this challenge to be attributed to the third sector. By putting third sector's assets into action ("Regional know-how", "Ideology/empathy value-base" and "Human resources") elderly people who have no relatives, could be helped by third sector's personnel (e.g. voluntary workers, church) to determine the need and the planning of services.

(4) Converting the assets into value in order to enhance the value network (codifying the data).

After all the challenges were analyzed and the attribution of roles was defined, the data we got at the previous step should be codified, in order to be able to introduce all the information into value network map. The codified data is in the Table 2, below. The table is organized into three columns and every challenge's analysis is on the same row. The most important data is in the third column *("Converting asset into value").* There it can be seen what new value-attributes could be created in the network while trying to solve specific challenge. The value-attributes are written in bold type, and below it is specified who offers the value and to whom is offered. For example the first value-attribute in the table ("*Advanced welfare services*") is created (offered) by private sector to the public sector (Private->Public).

Table 2: Converting assets into value to solve challenges related to the *quality of services*

Challenge	Asset to respond to challenge **(Whose sector asset)** **Roles assessment**	CONVERTING ASSET INTO VALUE **Value** Who offers value ->To whose
• *Personalization of services*	Advanced welfare services **(Private)** Effective activity **(Private)** Customer oriented services **(Private, Third)** Special know-how **(Third)**	**Advanced welfare services** Private->Public **Customer oriented services** Private->Public, Third->Public **Service organization consultancy** Third->Public, Third->Private, Private->Public, Private->Third **Personalized services** Private->Customers, Third->Customers
• *Too short time spend with the clients*	Quality of services **(Private)** Ideology /empathy value-based **(Third)** Flexibility of open times **(Private)** Flexibility of timetable **(Third)** Human resources **(Third)**	**Service quality** Private->Public, Third->Public **High quality services** Private->Customers, Third->Customers **Homogeneity of service delivery during the hole day** Private->Public, Third->Public **Wide range of services** Private->Customers, Third->Customers
• *More activities for the elderly are required*	Ideology /empathy value-based **(Third)** Human resources **(Third)**	**Recreational services** Third->Public **Recreational services** Third->Customers
• *Difficulty in comparing service quality*	Law regulation **(Public)**	**Service quality standards** Public->Private, Public->Third, Public->Customers
• *Self-determination of clients for service delivery is not meat*	Regional know-how **(Third)** Ideological/empathy value-based **(Third)** Human resources **(Third)**	**Consultancy in individualized service planning** Third->Public, Third->Private **Self-determination of service planning** Third->Customers

(5)Adding the value-attributes into value network map

This is the final step in value network mapping. The map will be drawn based on the data from the third column of Table 2. All the participants in the network (in our case public, private and third sector, plus the customers) are identified from the table and put on the map using the ovals. After that all the value-attributes are introduced on the map, one by one, using the arrows. The intangible value-attributes are represented with dashed lines, and tangible value-attributes are represented with continuing lines . From the table it can be observed who is offering the value to whom (the arrow indicates the direction on the map). The value-attributes are labeled with rectangles. Because we have a lot of information in Table 2 it would be difficult to fit all the information on the same map. To get a clear map, we decided to put all the information on two different pictures: on the first map (Figure 4) to illustrate only the value network between network participants and on the second map (Figure 5) to illustrate the new value created to the customers through collaboration. We used Microsoft Word to draw the maps. With a better drawing tool a single picture of the entire value network could be obtained which would be a more illustrative picture.

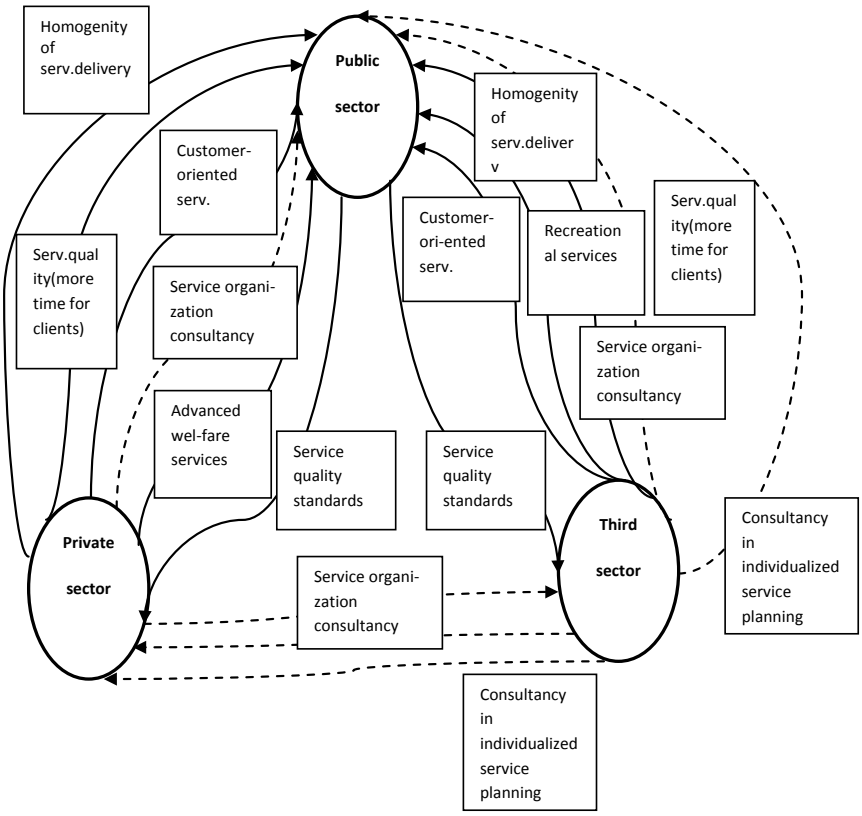

Figure 4: Value Network map (*part 1*): Flow of value between network participants resulted while trying to solve challenges related to the quality of services through collaboration

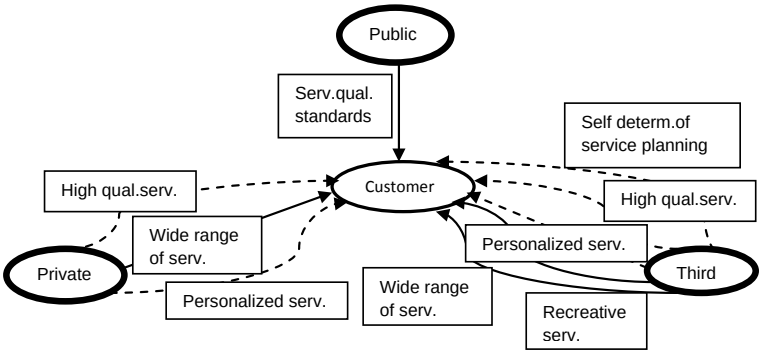

Figure 5: Value Network map (*part 2*): New value created for customers while trying to solve challenges related to the quality of services through collaboration

DISCUSSION AND CONCLUSIONS

In this paper, it was illustrated how to use Value Network Scorecard in practice, through a case study example. The Value Network Scorecard is a tool for performance measurement and performance prediction that can be used in collaborative networks. Following the logic of Balanced Scorecard, Value Network Scorecard jumps to a higher level of organization, the network level. Instead of the traditional way in performance measuring, when the aim is to measure and improve the financial results, Value Network Scorecard aims to create new value for all network participants, while trying to solve the challenge in the collaboration process. The main task in performance measurement and performance prediction, using this tool, is to map the value network. From the value network map it can be easily seen what new value can be created during collaboration process, or, more exactly, what is the value network potential. If the collaboration process is well managed, the value network potential is huge, as can be seen from the value network map (Figure 4 and 5).

Based on value network analysis, the roles in the network can be easily assigned. From our example, looking and analyzing the map, it can be observed that private and third sectors may have important roles in enhancing the quality of services in elderly care if the collaboration process is well managed. They are able to create new value to customers, by providing them with high quality services that could fulfill the gaps in the current service system. Furthermore, private and third sectors can create new value for the public sector, providing consultancy to it, regarding the enhancement of quality of services. Additionally, indirectly the same value that private and third sectors create to customer they create it to the public sector as well, because public sector is responsible for services providing. Without the collaboration between all three sectors, the enhancement of service quality would be not possible, due to the limitation of resources. Using Value Network Scorecard for performance measurement of collaboration, every network participant can get great benefits from collaborative activities, in one way or another. New value can be created to all participants only if the collaboration process is well managed. Value Network Scorecard is a tool that helps managers to perform this task.

In performance measurement and performance prediction with Value Network Scorecard, value network mapping is just a first big step. In order to follow if the goals are fulfilled in the future as it was predicted with Value Network Scorecard, new actions should be planed. It has to be specified exactly how every single goal should be met. What actions are required in order to create the value predicted in the Value Network Scorecard? This is a topic for the future research in that scope.

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