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Virpi Sillanpää

Performance Measurement for Managing Welfare Services

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ABSTRACT

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Performance management of welfare services is a topical issue at the moment. Because of the major structural developments in society, versatile knowledge and new tools are needed to support the performance development and management of welfare services. This research aims to find out how the performance of welfare services can be measured and managed at different levels within a welfare service system. To achieve this goal, research questions in this dissertation examine the current state of performance measurement and management in Finnish welfare service organisations, how identified challenges related to managing and measuring performance in welfare service organisations can be overcome, and how performance management can be supported by the means of measurement in the welfare service system. The theoretical part of the research builds on different research streams focusing on performance measurement and management in welfare services.

This research can be characterized as a qualitative multiple case study. Research questions are studied through six research articles applying various research methods. Interviews and action research were the main methods employed. The empirical material of the research consists of data collected in six separate research projects related to performance measurement in welfare services at different levels of the service system. Altogether, 22 public, private and non-profit organisations operating in the welfare service sector participated the research. The most of participants provide social services.

This study contributes to prior research by providing a more holistic view of performance management and measurement by structuring performance measurement tasks at different levels within the welfare service system. This research suggests and applies practical performance measurement frameworks at different levels of the welfare service system. This research indicates that different aspects related to performance and performance management are focused as the level of analysis moves from organisations to the service system. In welfare service organisations, the focus is on the outcomes that the organisation seeks to provide to its clients and on the resources and processes needed to achieve those outcomes. As intangible aspects of the service provision are focused in welfare services, this research suggests intellectual capital management as an applicable perspective in managing performance in welfare service organisations. At the service system level, the focus shifts towards the longer-term effects on clients created by many

organisations, thus extending performance measurement activities beyond the limits of just one organisation. At the service system level, the foremost managerial task relates to ensuring cost-effective service provision, which entails measuring the impacts of different service options and managing the effectiveness of service provision. This research suggests that impact measurement at the service system level should entail measuring the qualitative impacts created to clients and also measuring the quantitative and financial impacts to the service system. According to this research, the operationalization of concepts related to performance, user participation and outside support are focal factors that facilitate performance measurement efforts in welfare services, regardless of the level of analysis.

TIIVISTELMÄ

SILLANPÄÄ, Virpi. 2016. *"Tuloksellisuuden mittaaminen hyvinvointipalveluiden johtamisen tukena".* Tiedonhallinnan ja logistiikan laitos, Tampereen teknillinen yliopisto.

Asiasanat: Tuloksellisuus, suorituskyky, tuloksellisuuden mittaaminen, aineeton pääoma, arviointi, hyvinvointipalvelut, vaikuttavuus, palvelujärjestelmä

Hyvinvointipalveluiden tuloksellisuus on ajankohtainen teema Suomessa. Sosiaali- ja terveyspalveluiden kentässä tapahtuvien rakenteellisten muutosten myötä hyvinvointipalveluiden tuloksellisuuden johtamiseen kaivataan monipuolista tietoa ja uudenlaisia työkaluja. Tämän tutkimuksen päätavoite on tarkastella miten hyvinvointipalveluiden tuloksellisuutta voidaan mitata ja johtaa palvelujärjestelmän eri tasoilla. Tutkimuksen päätavoite on jaettu kolmeen tutkimuskysymykseen, joiden avulla selvitetään tuloksellisuuden mittaamisen ja johtamisen nykytilaa suomalaisissa hyvinvointipalveluorganisaatioissa, miten alalla toimivien organisaatioiden tuloksellisuuden mittaamiseen ja johtamiseen liittyviä haasteita voidaan ratkaista, ja miten palvelujärjestelmän tuloksellisuuden johtamista voidaan tukea mittaamisen avulla. Tutkimus pyrkii luomaan kokonaiskuvaa tuloksellisuuden mittaamisesta hyvinvointipalveluissa hyödyntäen erilaisia teoreettisia näkökulmia.

Tämä tutkimus on laadullinen, monta tapausta sisältävä tapaustutkimus. Tutkimuskysymyksiin vastataan kuuden tutkimusartikkelin avulla, joissa on käytetty erilaisia tutkimusmenetelmiä. Työn keskeisimmät tutkimusmenetelmät ovat haastattelut ja toimintatutkimus. Tutkimuksen empiirinen aineisto koostuu kuudesta eri tutkimushankkeesta, jotka liittyvät hyvinvointipalveluiden tuloksellisuuden mittaamiseen ja johtamiseen palvelujärjestelmän eri tasoilla. Tutkimukseen osallistui yhteensä 22 julkisen, yksityisen ja kolmannen sektorin hyvinvointipalveluorganisaatiota, joista suurin osa edustaa sosiaalipalveluita.

Tutkimuksen keskeinen kontribuutio on kokonaisvaltaisemman kuvan muodostaminen tuloksellisuuden mittaamisesta ja siihen liittyvistä tehtävistä hyvinvointi-palvelujärjestelmän eri tasoilla. Tutkimuksessa on kehitetty ja sovellettu käytännöllisiä työkaluja tuloksellisuuden mittaamiseen palvelujärjestelmän eri tasoilla. Tutkimuksen mukaan tuloksellisuuden eri osa-alueet korostuvat palvelujärjestelmän eri tasoilla, jonka vuoksi myös tuloksellisuuden johtamisen tehtävät ja työkalut ovat erilaisia riippuen siitä onko kyseessä organisaation vai palvelujärjestelmän tuloksellisuuden mittaaminen ja johtaminen. Organisaatiotasolla tuloksellisuuden johtamisen keskiössä ovat asiakkaalle tuotetut tulokset palveluiden muodossa, sekä resurssit ja prosessit joiden avulla tulokset saavutetaan. Hyvinvointipalveluiden tuloksellisuudessa korostuu palvelutoiminnan aineettomat piirteet, ja tämän tutkimuksen mukaan aineettoman pääoman johtaminen on hyödyllinen näkökulma tuloksellisuuden johtamiseen organisaatiotasolla.

Siirryttäessä palvelujärjestelmän tasolle hyvinvointipalveluiden tuloksellisuudessa korostuvat usean organisaation yhdessä tuottamat pidempiaikaiset vaikutukset, ja tällöin myös mittaamisen painopiste siirtyy organisaatiotasolta palvelujärjestelmän tasolle. Palvelujärjestelmän tasolla keskeinen johtamistehtävä on tuottaa vaikuttavia palveluita kohtuullisin kustannuksin. Tämän tehtävän toteuttaminen edellyttää vertailuinformaatiota eri palveluratkaisujen vaikutuksista sekä johtamisen keinoja, joilla saadaan aikaan vaikuttavia palveluja. Tämän tutkimuksen mukaan vaikutusten mittaaminen palvelujärjestelmän tasolla edellyttää laadullisten vaikutusten mittaamista yksilötasolla, ja määrällisten ja taloudellisten vaikutusten mittaamista palvelujärjestelmän tasolla. Tutkimuksen mukaan tuloksellisuuden käsitteen operationalisointi, henkilöstön osallistuminen kehittämistyöhön ja ulkopuolinen tuki ovat tekijöitä, jotka edistävät hyvinvointipalveluiden tuloksellisuuden mittaamista, oli kyse yksittäisistä organisaatioista taikka verkostosta, jonka tavoitteena on tuottaa vaikuttavia palveluita.

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Writing a dissertation is not a simple task. For me this has been the major endeavor in my working life so far. These past years entailed moments of joy, enthusiasm and accomplishment, but also struggle, stress and sleepless nights. When I started at TUT, writing a dissertation was not in my plans. As the time went by and I got further with my research topic, I thought this is something I want to do, and has to be done. This has been quite a long journey with ups and downs, and there were moments when I wasn't sure if I took the right turn on my way. After all, I am happy that I made this journey, and reached the goal. However, I didn't navigate my way alone, but I had many people who guided and supported me, and walked along with me, and whom I now wish to thank.

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I. **Sillanpää, V.** (2011)
Performance measurement in welfare services: a survey of Finnish organisations, *Measuring Business Excellence*, Vol. 15, No. 4, pp. 62-70.

II. **Sillanpää, V.**, Lönnqvist, A., Koskela, N., Koivula, U-M., Koivuaho, M. & Laihonen, H. (2010)
The role of intellectual capital in non-profit elderly care organizations, *Journal of Intellectual Capital*, Vol. 11, No. 2, pp. 107-122.

III. **Sillanpää, V**. & Laihonen, H. (2012)
Managing intellectual capital in non-profit elderly care organizations, *International Journal of Information Systems in the Service Sector*, Vol. 4, No. 4, pp. 74-87.

IV. Jääskeläinen, A., **Sillanpää, V.** (2013)
Overcoming challenges in the implementation of performance measurement - Case studies in public welfare services, *International Journal of Public Sector Management*, Vol. 26, No. 6, pp. 440-454.

V. **Sillanpää, V.** (2013)
Measuring the impacts of welfare service innovations, *International Journal of Productivity and Performance Management*, Vol. 62, No. 5, pp. 474-489.

VI. **Sillanpää, V.** (2015)
Designing Measures for Managing the Effectiveness for Integrated Service Delivery – The Case of a Geriatric Outpatient Clinic, *International Journal of Public and Private Healthcare Management and Economics*, Vol. 4, No. 1, pp. 36-52.

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PART I: INTRODUCTORY ESSAY

1. INTRODUCTION

1.1. Motivation to research

Growing needs and relatively limited resources demand improvements in the performance of welfare services in Finland, requiring that new innovations and approaches be sought. The ongoing major reform of social welfare and healthcare services in Finland aims at strengthening the performance of welfare services by implementing a cost-effective, high-impact service structure (Ministry of Social Affairs and Health, 23.7.2014). Because of major structural developments in society, new tools are needed to support performance development and management in welfare services. In order to improve performance, information is needed about the current level of performance at different levels of the welfare service system. This research examines how performance measurement can support performance management in welfare services.

Welfare services have specific characteristics affecting performance management. As a sector, welfare services are diverse, including a wide variety of services in healthcare, social services and education (e.g. Jensen, 2008; Kangasharju, 2007; Rajavaara, 2009). Organisations providing welfare services range from large municipal organisations with thousands of employees to small private companies with fewer than ten employees (Hartman, 2011, 2012; Lith, 2012). In Finland, welfare services are mostly statutory services, which indicates that municipalities are obligated to arrange needed services to all inhabitants and provide the services either by themselves, in co-operation with other municipalities, or by purchasing services from non-profit or for-profit organisations. The majority of social and healthcare services are financed and provided by the public sector, but the share of private and non-profit organisations engaged in the provision of these services has grown during the past few years (Lith, 2012). Because of this, welfare services have many stakeholders, including clients receiving services, employees of the service providers, public administration, and the general public/taxpayers, who mostly pay for the services. In welfare services, both the inputs and the outcomes of operations are mostly intangible in nature (e.g. Jääskeläinen 2010, Laihonen and Lönnqvist, 2010). The objectives of welfare service organisations typically relate to qualitative aspects, like maintaining or improving clients' well-being, which complicates performance measurement (e.g. Kangasharju 2007, p. 121; Laine 2005, p. 31; Martin & Kettner 2010, p. 65).

Contextual factors and recent social developments pose various challenges in the management of welfare services (cf. Vartiainen, 2008). Identified challenges in welfare service organisations include quality problems, unsatisfied clients, insufficient management, employees' well-being, and pressures for improved productivity (e.g. Kangasharju 2007, p. 3; Kettunen, 2007; Laine 2005, p. 6; Rahkola, 2009, p. 3; Syvänen, 2003). Along with the introduction of the ideas of New Public Management (NPM),

public sector organisations are expected to be managed more like private enterprises and to become more customer-oriented, more focused on outcomes rather than inputs, and more efficient and effective (Hoque, 2008; Jansen, 2008). Thus, welfare service organisations face the demands of a higher level of performance and the means to manage it. Current performance measures in welfare services seem to focus on quantitative and financial aspects, which are not sufficient to meet the most important dimensions of performance that are mostly intangible in nature, such as the quality of services and the well-being of clients. Moreover, the welfare services and/or the value of welfare services that clients receive are produced in co-operation with various organisations. Increasing co-operation indicates that performance management at the organisational level is not sufficient to ensure high effectiveness at the *service system level*. Organisations within the service system may have goals that are contradictory to those of the larger system. This may lead to sub-optimization in the system (e.g. Vakkuri & Meklin, 2006). To avoid this, performance management activities should cover the service system level in addition to the organisational level (e.g. Callender, 2011). Welfare services cannot be arranged at any costs, but public welfare system administrators need information about the costs and effects related to various services in order to compare options for service provision and to choose the most cost-effective services (cf. Niiranen, 2008).

From a research point of view, welfare services is a challenging topic. Most research related to management and measurement of welfare services is sector-specific, concentrating on particular types of services in healthcare, social care and education, rather than outlining and discussing welfare services at a more holistic level (cf. Jensen, 2008). The body of literature that examines performance measurement of services in the welfare service sector is fragmented, and studies are published in many disciplines, including the social sciences, administrative science, health economics, operations management and medical science, using different terms, theoretical backgrounds and methods (Drummond et al., 2005; Jääskeläinen, 2010; Klassen et al., 2010; Klemola, 2015; Linna et al., 2010; Niiranen, 2008; Pinkney and Ewing, 2005; Rantanen et al., 2007; Räsänen et al., 2005; Sintonen and Pekurinen, 2009). Thus, research related to welfare services is conducted in different sectors and disciplines that have their own research traditions, experts and streams of literature. For these reasons, studying the management and measurement of welfare services at a more general level is challenging. However, taking a more general view of the sector may provide many benefits from the performance management point of view. It enables the identification of common characteristics of service provision in the sector, unifies concepts related to performance measurement and enables the development and utilization of common performance management tools for the sector.

The main objective of this research is to increase understanding of how performance of welfare services can be measured and managed at different levels of welfare service system. This research is conducted from the perspective of performance management, and

aims to contribute to management studies. This thesis is based on six academic articles and consists of two parts. Part I is the introductory essay, and it contains five chapters. Chapter 1 is the introduction for this research, including motivation, theoretical positioning and key concepts of this research. The theoretical part of the research, Chapter 2, combines the literature from different research streams related to performance measurement of welfare services, and concludes by presenting the research gap of this study. The research objective and research questions of this dissertation are presented in Chapter 3. The scope and limitation of the research, along with research methodology and structure, are also presented in Chapter 3. Chapter 4 presents the results for the research questions posed in Chapter 3. Chapter 5 summarizes the contribution of the thesis and presents remarks concerning the evaluation of the research and discusses the contribution of this work. In addition, areas for future research are suggested. Part II includes six original publications of this thesis.

1.2. Positioning of the study

This chapter presents the theoretical background and position of this research. The topic of performance measurement of welfare services has been addressed in many disciplines, including the social sciences, administrative science, health economics and business economics, using different terms, theoretical backgrounds and methods. This dissertation combines ideas and concepts from two distinct but partly overlapping research areas: performance management and measurement research, and evaluation research. In the context of welfare services, both discourses have been applied, but viewpoints, focuses and levels of analysis vary. Performance measurement literature focuses on performance measurement as a managerial activity in organisations, including motivation and practices of performance measurement and use of performance measurement information (e.g. Nurudupati et al., 2011, Behn, 2003). Recently, the scope of performance management research has extended from organisations to networks and service systems (e.g. Boland & Fowler, 2000; Busi & Bititci, 2006; Kaplan et al., 2010; Parung & Bititci, 2008; Pekkola, 2013). Evaluation research includes various models of economic evaluation that are used in assessing different service programmes and allocating resources for public service programmes (e.g. Drummond et al., 2005; Rossi et al., 2004; Vedung, 2004). The viewpoint in evaluation research applied in this research focuses on the service system level rather than on the individual organisation level.

Both approaches are applied in public services, including welfare services, to measure and improve performance using different concepts, methods and levels of analysis. In the research literature, performance measurement and evaluation are considered either competing or complimentary forms of knowledge production aiming at improving performance (e.g. Blalock, 1999; Davies, 1999; Nielsen & Ejler, 2008). This dissertation

examines how a more holistic view of performance measurement in welfare services may be gained by combining these two approaches in the context of welfare services and how these approaches can be applied in practice. The main interest of this research is to provide new information about measuring performance to support performance management in welfare services. Moreover, the central objective of this research is to provide practical frameworks and tools for managing and measuring performance in welfare services. Figure 1 illustrates the theoretical approaches of this study. The research focuses on performance management literature as a theoretical basis and combines and utilizes research conducted in different disciplines concerning the area of performance management and welfare services. Next, focal research streams related to this research and their roles in this research are discussed. The key concepts of the research are defined in more detail in Chapter 1.3.

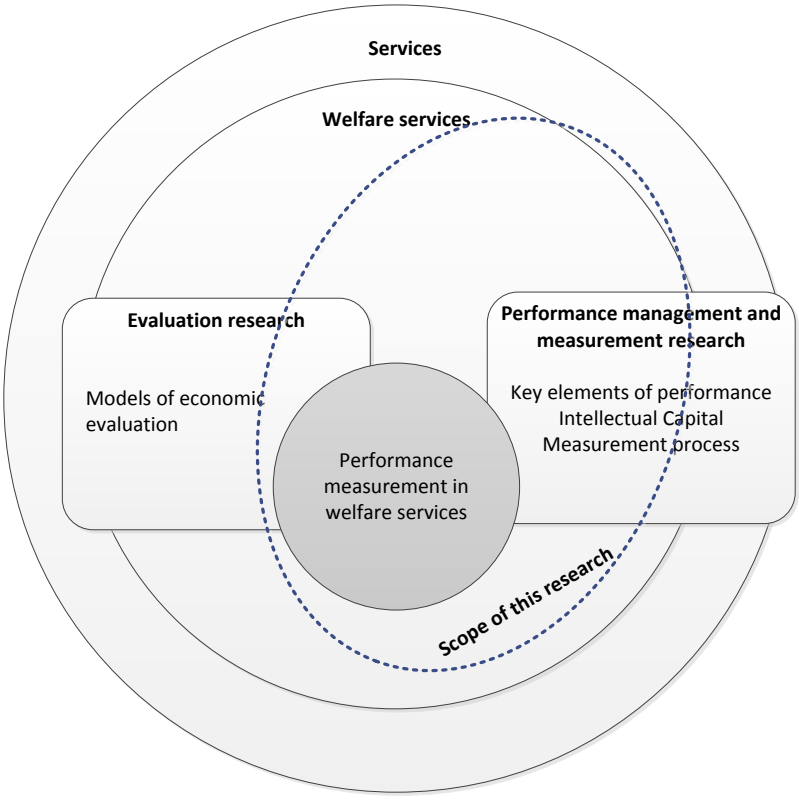

Figure 1. Positioning of the study.

Welfare services are a particular type of *services* that aim at improving the well-being of individuals and are usually produced in co-operation between different actors and organisations in public, private and non-profit sectors (e.g. Kangasharju, 2008, Lönnqvist & Laihonen, 2012). Services have been studied in various fields such as service marketing (Grönroos, 2007; Lovelock & Gummesson, 2004; Zeithaml et al., 2009) and service operations management (Johnston & Clark, 2008). Service research is a multidisciplinary research area, but recent literature suggests that service research is becoming a distinct discipline with its own body of knowledge (Edvardsson et al., 2005; Pilkington & Chai,

2008; Chesbrough & Spohrer, 2006). Literature related to services includes various themes, like characteristics and classification of services (e.g. Hill, 1977; Silvestro et al., 1992), value creation (Vargo & Lusch, 2008), the role of customers and customer satisfaction (e.g. Bitner et al., 1997), service quality (Parasuraman, 2002), productivity (Grönroos & Ojasalo, 2004; Johnston & Jones, 2004) and service systems (Vargo et al., 2008; Badinelli et al., 2012). In this research service research literature is utilized in order to understand characteristics of services that need to be taken into account when measuring welfare services.

Performance management literature offers various frameworks and practical guidelines for measuring performance of organisations. Performance measurement is a diverse and multidisciplinary research area that lacks a cohesive body of knowledge (Franco-Santos et al., 2007). In recent years, interest in performance measurement has expanded from the manufacturing industry and individual organisations to services and inter-organisational settings, like co-operatives, supply-chains, networks and service systems. According to performance measurement literature (Neely et al., 2005; Lönnqvist, 2004), an organisation's performance can be examined through success factors, which are key aspects in which the organisation's targets must be reached in order to succeed in its business objectives and strategies (Lönnqvist, 2004). Success factors may be tangible or intangible, financial or non-financial, depending on the objectives and strategies of the organisation (Lönnqvist, 2004).

In this research, performance measurement approach is applied in order to identify key elements of performance (and success factors) and practices of designing and implementing performance measurement in welfare services. Since intangible aspects are underlined in the welfare services, and recognized as key performance drivers in some sectors in welfare services (e.g. Zigan et al., 2008; Peng et al., 2007), this research utilizes **intellectual capital management** (ICM) research as one perspective in performance measurement and management of welfare service organisations. That is, ICM is used in identifying key elements of performance, and in designing performance measures for those identified key elements. Welfare services are produced increasingly by the co-operative efforts of many organisations, which underlines the need to measure performance at the service system level.

Principles of **evaluation** are related especially to social development policy and public administration (e.g Niiranen, 2008). In the late 1980s, Finnish public services faced demands for greater accountability and increased attention to effectiveness and performance measurement (Rajavaara, 2006). In the 1990s, the importance of evaluation as a public activity rose, along with the introduction of new public management, an economic depression and Finland's affiliation with the European Union (Virtanen, 2007). Evaluation cannot be regarded as an own discipline, but it must rather be seen as a multidisciplinary research area that applies education and the social and administrative

sciences. A variety of different evaluation situations and models are presented in the literature, ranging from professional peer-reviews to programme evaluations (e.g. Hansen, 2005; Rossi et al., 2004; Vedung, 2004). In welfare services, as in other public sectors, evaluation is usually applied in assessing the outcomes, effects or effectiveness of some action, like interventions or programmes (Vedung, 2010; Virtanen, 2007). This research utilizes principles of economic evaluation in measuring the impacts of welfare services at the service system level.

1.3. Key concepts

1.3.1. Welfare services

As mentioned earlier, welfare services are a particular type of services that aim at improving the well-being of individuals. In order to understand the focal features of welfare services that affect performance management, it is beneficial to analyze definitions and characteristics of such services in general. The literature offers several definitions and characterizations of services (e.g. Hill, 1977; Vargo & Lusch, 2004; 2008; Edvardsson et al., 2005). For example, Hill (1977) defines services as "a change in the condition of a person or good belonging to some economic unit, which results from the activity of another economic unit, with the agreement of the former", thus focusing on the outcome of the action. In their definition, Vargo & Lusch (2004) focus on the action aspect of services by defining services as "the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself". Similarly, Spohrer et al. (2008) define service "as the application of resources for the benefit of another". Traditionally services have been defined in contrast to products, ending up with four distinctive "IHIP" service characteristics: intangibility, heterogeneity, inseparability and perishability (e.g. Vargo & Lush, 2004; Edvardsson et al., 2005). Intangibility denotes that services are activities, not physical objects like products. Heterogeneity means that outputs of services are difficult to standardize. Inseparability refers to the simultaneous nature of service production and consumption, and perishability means the relative inability to inventory services (Vargo & Lush, 2004).

Services in many different fields of welfare are usually produced via the co-operation of different actors in public, private and non-profit sectors (e.g. Axelsson and Axelsson, 2006; Rhee and Rha, 2009). In welfare services, the fundamental aim is to create value to beneficiaries, clients, whose participation is crucial in the provision of those services (c.f. Bitner et al., 1997). Related to this, client-oriented service integration has received extensive attention in the social and healthcare sectors (e.g. Wistow and Dickinson, 2012; Strandberg-Larsen and Krasnik, 2009; Qvretveit et al., 2010). The *service system* approach that is connected to service dominant logic (Vargo et al. 2008) emphasizes collaboration and adaptation in value co-creation. According to Vargo et al. (2008), the

service system's function is to improve its own and other's circumstances by utilizing its own and other's resources. They consider individuals, groups, organisations, firms and governments to be service systems if they take action, apply resources and work with others in mutually beneficial ways. Similarly, Spohrer et al. (2008) define a service system as a configuration of people, technologies and other resources that interact with other service systems to create mutual value. According to them (ibid.), many sorts of things like people, companies, non-profits, cities, nations and families can be viewed as service systems. According to Vargo & Lush (2008), value is co-created through the combined efforts of firms, employees, government agencies, customers, stakeholders and other entities related to a given exchange, but it is always determined by the beneficiary (customer). Lönnqvist and Laihonen (2012) define service systems in the context of welfare services as a system of actors producing services. Moreover, the value proposition is based on combining the resources of system members to the benefit of the customer. Value created in service systems can be perceived at different levels that reflect the division into micro, meso and macro levels of analysis (e.g. Chandler & Vargo, 2011; Lepak et al., 2007). The contents of these levels differ in various classifications; for example, Lepak et al. (2007) distinguish the levels of individuals (micro), organisations (meso) and society (macro), whereas Provan & Milward (2001) propose levels of organisation/participant, network and community.

There are various definitions related to *welfare services*. Depending on the definition, welfare services may include a wide variety of services, ranging from healthcare to movie theatres and gyms, provided by public, private or non-profit organisations. According to some definitions (e.g. Knapp 1984, p. 3) welfare services may refer to the whole system of public service provision in a welfare state. The definition of the term "welfare services" and its relation to other terms like "basic services" seem to be somewhat unclear. It seems that the definitions of welfare services and basic services resemble each other; both terms involve social services, health services and education, but they have different extensions and orientations (Rajavaara, 2009). Whereas the term "basic services" focuses on the public sector's responsibility in securing adequate services to all citizens and the role of public sector as a service provider, the term "welfare services" takes into account individuals' responsibility and acknowledges the roles of non-profit and private organisations in the provision of services, and extends the term towards wellness (ibid). The definition of OECD divides welfare services into healthcare, education and social services (Lönnqvist et al., 2010, p. 49). In the English literature, the term "human services" resembles the contents of social services (e.g. Packard, 2010; Martin & Kettner, 2010). For the purposes of this research, human services are considered as part of welfare services.

In the provision of public services, Finland represents the "Nordic model", which is characterized by extensive social legislation that provides a safety-net "from cradle to grave", involving large public sector services financed collectively with taxes,

redistributive welfare services and egalitarianism (e.g. Hiilamo et. al., 2013; Johnsen et al., 2006; Rahkola, 2009). In Finland, welfare services are mostly statutory services, which indicates that municipalities are obligated to arrange needed services for all inhabitants and to provide the services either by themselves, in co-operation with other municipalities, or by purchasing services from non-profit or for-profit organisations[1].

Because the output of welfare services is difficult to measure, measures related to total costs and number of personnel are usually used to indirectly describe the output and magnitude of the sector. For example, in 2010 the total output (cost) of social services was 8,9 billion euros, and social services employed 183,700 persons. For the healthcare sector, these figures were 14,4 billion euros and 177,500 employees, respectively (Lith 2012, p. 55, 66). At the same time, public sector accounted for 69.2 % of social service production, whereas the share of the third sector was 15.8 % and the private sector 15%. In healthcare services, the share of public sector production was 76.4 %, the third sector 3.7 %, and the private sector 19.8 % (ibid.). Welfare services are mainly financed by the public sector; for example, in 2012 the total cost of health and social services was about 26 billion euros, and the public sector accounted for 80 % of it (Pekurinen & Seppälä, 2014). Thus, welfare services are mostly provided by public organisations, although the role of third sector and especially private organisations has increased recently. The majority of private companies operating in the sector are small; for example, 84 % of companies in the social services sector had fewer than 10 employees in 2010 (Hartman, 2012).

In this research, the term "welfare services" means services in health, social and education that are provided by public, private or third sector organisations. The focus of this research is on social and healthcare services. In line with earlier definitions (c.f. Lönnqvist & Laihonen, 2012; Spohrer et al., 2008; Vargo et al., 2008) and the contextual characteristics of service provision in Finland, "*welfare service system"* in this research is defined as the configuration of organisations in public, non-profit and private sectors that take action, apply resources and work together to produce services to increase or maintain the well-being of customers. *This research distinguishes two main levels of analysis* when measuring performance in welfare services: the organisational level and the service system level. As the overall aim of welfare services is to provide value for clients, the customer's perspective is considered crucial in both levels of analysis.

[1] At the time of the writing of this dissertation, the Finnish government published more information about its policies on the reform package on healthcare, social welfare and autonomous regions, and on how these will be divided. There will be 18 autonomous regions in the country, each of which will organise healthcare and social services in their own areas. Responsibility for the organisation of healthcare and social services will be transferred to the autonomous regions on January 2019 (Government Communications Department, 6.4.2016).

1.3.2. Performance in welfare services

Performance is a topic that is discussed in many disciplines. Performance is a widely used concept in management research literature, and it has many different definitions. Performance of an organisation is considered a multidimensional umbrella concept covering all aspects related to the success of an organisation and its activities (Tangen, 2005). It includes efficiency, effectiveness, quality, productivity, quality of work life, innovations and profitability (Sink in Hannula, 1999). This further complicates the definition of performance, since there is no common agreement on the contents of these sub-concepts, e.g. different types of definitions have been proposed for the concept of productivity (e.g. Grönroos & Ojasalo, 2004; Johnston & Jones, 2004, Klassen et al., 1998). Performance and productivity are often confused and considered to be interchangeable (Tangen, 2005). Also, performance and effectiveness are concepts that are easily confused. The aim of this section is to illustrate the concept of performance in welfare services.

Performance can be seen from many perspectives. For example, performance can be considered actual results or outputs of activities, or how an activity is carried out. It may also refer to the organisation's ability to achieve results in the future, or it can be seen as a broad concept covering all aspects related to the success of an organisation. Performance is difficult to define; its definition depends on the perspectives and levels of the examination. Regarding measurement, performance may be defined as the ability of the object measured to achieve objectives defined (Lönnqvist, 2004).

In many definitions, performance consists of four main aspects: factors related to inputs, processes, outputs and outcomes. However, terminology related to results of activity (the fourth phase) is somewhat ambiguous; the terms "outcomes", "effects" and "impacts" are used interchangeably (e.g. Vaarama 1995, p. 39; Jääskeläinen, 2010, p. 8; Laine, 2005, p. 29). The components of each of the four concepts related to performance and their relationships are illustrated in Figure 2. In the figure, productivity examines the output of a production process, including the quantity and quality of products and services in relation to inputs. Efficiency is related to the internal performance of a process entailing utilization of inputs and doing things right (Hannula, 1999; Jääskeläinen, 2010). Effectiveness relates to the external performance of the organisation and is connected to outcomes and benefits achieved in relation to the organisation's objectives and customer/stakeholder needs (e.g. Boland & Fowler, 2000; Hannula, 1999; Vaarama, 1995, p. 293), while profitability refers to the relationship between revenue and costs. The concept of effectiveness in welfare service is analyzed in more detail in the next section. Performance is a broad concept which includes all sub-concepts in the figure. Next, focal concepts related to performance in welfare services are discussed and defined.

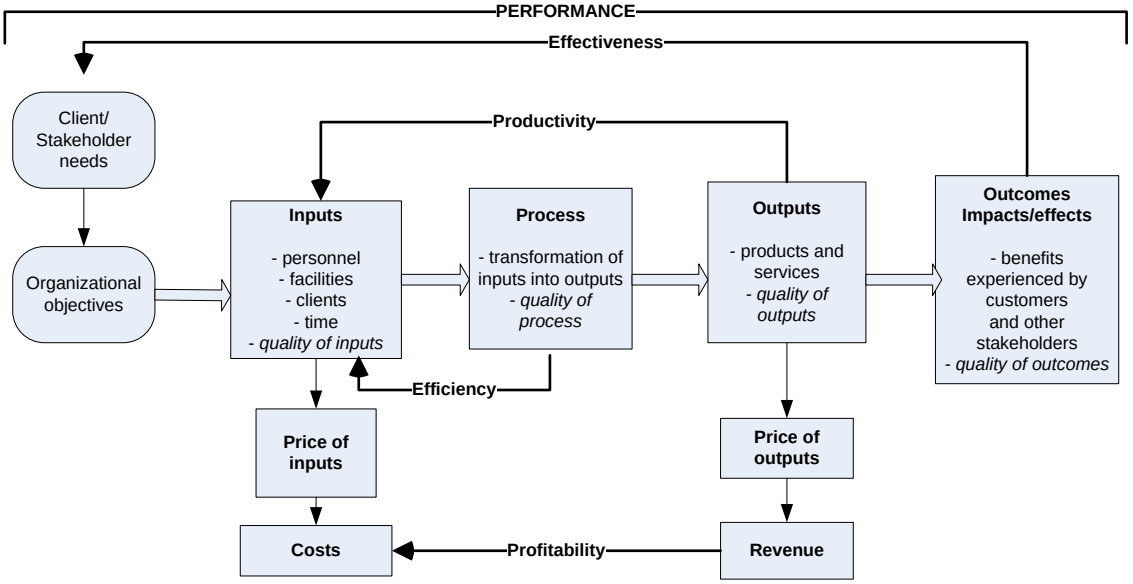

Figure 2. Linkages between performance and related concepts (modified from Kangasharju, 2008; Jääskeläinen, 2010; Vaarama, 1995).

Quality is a focal dimension of services (e.g. Grönroos, 1984; Grönroos & Ojasalo, 2004; Parasuraman, 2002), and it can be attached to different aspects of performance. For example, Grönroos (1984) identified three dimensions of quality related to service provision: technical quality refers to the output or outcome of a service; functional quality is related to the service production process (i.e. fluency of the process); and perceived service quality is a function of perceived and expected quality. According to Grönroos & Ojasalo (2004), clients filter experiences of those two dimensions (processes, outputs) through the image of an organisation, leading to customer-perceived service quality. In healthcare services, three quality dimensions have been distinguished (Donabedian, 1988 in Laine 2005, p. 33-34; Qvretveit 1998, p. 240): structural quality (related to inputs/resources), process quality and quality of outcomes. Structural quality relates to characteristics of resources in the service provision, for example, competence of personnel and physical assets (e.g. facilities). Process quality relates to operational processes of the organisation, including care practices and the functionality of multi-professional co-operation. Quality of outcomes includes client satisfaction, the well-being of clients and optimal use of resources. In addition, attributes of quality depend on the perspective from which quality is analyzed; for example, the quality model proposed by Qvretveit (1998, p. 240) distinguishes the perspectives of the client, the personnel delivering the services, and the service management. Rhee & Rha (2009) have taken a broader view of service quality by examining quality in the public service provision and by taking into account different stakeholders: final customers (beneficiaries) and intermediary customers (social workers). They identified four main qualities of public services: process quality, outcome quality, design quality and relationship quality. Design quality indicates how well a public policy or service is developed at the policymaking or

service design stage. Relationship quality refers to the depth and climate of the relationship between the parties in the service delivery process. Process and outcome qualities are defined in line with Grönroos (1984). Research suggests that the crucial attributes of public service quality for customer satisfaction differ according to the types of customers in the public sector. End users of services prioritize process and outcome qualities, whereas intermediary customers (the personnel of service organisations) appreciate design and relationship qualities. In this research, quality is seen as a focal aspect of performance related to inputs, processes, outputs and outcomes (Figure 2).

In welfare services, performance can be examined at different levels. Kangasharju (2008) defines two levels of productivity in the context of public welfare services: level of service production and level of welfare productivity. Level of service production examines the outputs of service production (e.g. quantity of care days, lessons) in relation to inputs used. However, the main target in welfare services is to generate effects/impacts to clients' well-being, and quantitative outputs are only the means to achieve these targets, not the targets themselves. Thus the level of welfare productivity, which examines the relation of effects to inputs (effects/inputs), is offered as a more appropriate overall definition of productivity in the welfare context. According to Kangasharju (2008), the performance of welfare services consists of fulfilling the needs of clients in a high-quality and cost-effective way. From a service demand point of view, service production is successful when services are offered to those who need them most. In other words, welfare services are performing well when high-quality, cost-effective, timely services are provided to clients who need them most.

Laihonen and Lönnqvist (2012) have defined productivity in a welfare service system as follows: "welfare service system productivity refers to the ratio between the services offered to the service user and the resources consumed by all organisations involved in the service process." Thus, the productivity of activities of each member organisation of the system affects the welfare service system productivity. Co-operation, clearly defined and communicated roles and agreed-upon system level objectives among participants form the foundation of system-level productivity. System-level productivity stresses the client perspective and focuses on outcomes instead of outputs of a service. Thus, productivity definitions in the welfare service sector are broader and more ambiguous compared to traditional productivity definitions presented, for example, in the manufacturing sector (outputs/ inputs) (Lönnqvist & Laihonen, 2012). *In this research the concept of performance is seen as a collective concept encompassing sub-concepts like productivity and effectiveness.* Further, this research recognizes that performance in welfare services can be approached from different levels of analysis, which indicates that different elements/aspects of performance may be focused depending on the level of analysis.

Effectiveness is central concept related to performance of welfare services (e.g. Kangasharju, 2008; Kettunen, 2012, 2014; Konu et al., 2009; Laine 2005; Vaarama,1995; Linna et al., 2010; Lönnqvist & Laihonen, 2012; Porter, 2010; Provan & Milward, 2001). Like performance, effectiveness is a multidimensional term that is difficult to quantify. Effectiveness may be defined as "the ability to reach a desired objective" or "the degree to which desired results are achieved" (Tangen, 2005). According to Klassen et al. (1998), effectiveness measures the relationship of outputs to goals rather than outputs to inputs, and thus differs from the concept of productivity. Neely et al. (2005) underline the customer perspective by stating that "effectiveness refers to the extent to which customer requirements are met". According to Boland and Fowler (2000), in public services effectiveness relates to assessing outcomes – "intangible, multidimensional attributes which are of real concern" – relative to stakeholder needs. Also, in welfare services effectiveness is usually defined as the relationship between targets and outcomes of activity (e.g. Kettunen, 2012; Sund, 2005). Targets are usually related to improving the well-being of clients (e.g. Vaarama, 1995, p. 37; Laine, 2005; Kangasharju, 2008). Vaarama (1995, p. 39) defines the effectiveness in the social and healthcare sector as the capability of service production to create outcomes that either fulfill clients' needs or at least targets set to fulfill clients' needs. Further, the terms "impacts" and "effects" resemble the term "effectiveness", and it is difficult to specify the differences between these concepts.

Fulfilling clients' needs is undoubtedly the most central criteria of effectiveness in welfare services. However, the welfare service context entails many other stakeholders whose expectations those services should fulfill in order to be effective. Thus, effectiveness is a challenging concept in welfare services, since its content varies among stakeholders and with the level of analysis. There is a broad range of key stakeholders, ranging from individual clients (beneficiaries) to employees of service provider organisations to taxpayers; the service system must fulfill these frequently conflicting needs and goals in order to be effective. Klassen et al. (2010) define effectiveness as the "extent to which a service achieves the desired result(s) or outcome(s), at the client, population or organisational level". Effectiveness of welfare services is multidimensional concept, and earlier literature (e.g. Crook et al., 2009; Provan & Milward 2001; Strandberg-Larsen, 2009; Vaarama, 1995) underlines the importance of differentiating effectiveness at different levels of a service system.

In this research, effectiveness is seen as a capability of welfare service production to fulfill targeted objectives. In welfare services, the most focal objectives relate to fulfilling clients' needs, but effectiveness entails also fulfilling objectives from other stakeholders' points of view. Thus, the criteria/focus of effectiveness may differ, depending on the perspective of the analysis.

1.3.3. Intellectual Capital

Intellectual capital research provides one approach for determining those key elements of the performance or success factors of an organisation which are intangible in nature. Since the mid-1990s, the significance of intellectual capital (IC) for companies' success has raised attention as a performance driver among both researchers and corporate managers (e.g. Marr et al., 2004; Nahapiet & Ghoshal, 1998; Teece, 2000). Intellectual capital is recognized as a source of competitive advantage in non-profit organisations (Kong & Prior, 2008) and as a key performance driver in the healthcare sector (Peng et al., 2007; Zigan et al., 2008). As noted earlier, intangibility is also one of the 'IHIP' characteristics of services, which underlines the need to acknowledge the role of IC as a performance driver in service provision. Two key approaches to intellectual capital can be classified as the static approach and the dynamic approach. In the static approach, IC is considered as a collection of stocks or assets controlled by the organisation, whereas the dynamic approach relates to the activities thorough which IC is created, managed and coordinated (e.g. Kianto et al., 2010; Kujansivu, 2008; Lönnqvist et al., 2005).

The concept of intellectual capital refers to various non-physical sources of value of organisations, such as employees' expertise, the values of an organisation and its reputation (Lev, 2001; Kujansivu, 2008). Although this approach has received much attention, there still is no universally accepted definition of IC and its components (Kujansivu, 2008; Pew Tan et al., 2008). For example, in the literature the terms "intangible assets", "knowledge assets", and "intangibles" have been used interchangeably with the term "intellectual capital" (Kujansivu, 2008). The lack of consensus on a definition has led to the development of various classifications of IC. Usually IC is divided into three main categories (e.g. Jacobsen et al., 2005; Kujansivu, 2008; Sveiby, 1997; Wallace & Sait-Onge, 2002): 1) human capital, concerning human resources of the organisation including competencies, employee knowledge and attitudes, 2) structural capital, concerning the internal structure of the organisation including business processes, documented information, immaterial properties and working atmosphere, organisational values and culture, and 3) relational capital concerning external relationships including relationships, contracts and agreements with stakeholders, and the organisation's image and brands. *Intellectual capital management* (ICM) refers to the *managerial activity* that takes into account strategically important intangible resources as a whole in order to support value creation and improve performance (Kujansivu, 2008). Managerial activities include such tasks as identifying, measuring, valuing and reporting IC.

This research applies Kujansivu's (2008) *definition of intellectual capital*, in which "intellectual capital is composed of various intangible sources - related to employees' capabilities, relationships with stakeholders and organisational resources and processes –

that create value at present and in the future. It is classified into human, relational and structural capital."

1.3.4. Performance management and measurement

Performance management has many different applications, depending on the purpose and the level of the organisational setting (e.g. operations unit, one organisation, network) in which it is utilized. While performance management is a widely used term, there is no single established definition of it (e.g. Hannula & Lönnqvist, 2002). Radnor and Barnes (2007) define performance management as an action, based on performance measures and reporting, which results in improvements in behavior, motivation and processes and promotes innovation. According to Poister (2003, p. 12), performance management in the context of public and non-profit organisations refers to the process of directing and controlling employees and work units in an organisation and motivating them to perform at higher levels. This definition has a strong focus on human resources; it further emphasizes the role of feedback provided by performance measures to employees about their performance. Bititci et al. (1997) define performance management as the process by which the company manages its performance in line with its corporate and functional strategies and objectives. They continue that the objective of performance management is to provide a proactive closed-loop control system, where the corporate and functional strategies are deployed to all business processes, activities, tasks and personnel, and feedback is obtained through performance measurement system to enable appropriate management decisions.

Performance management can be considered as a part of the management control system of organisation (e.g. Carenys, 2012; Hared et al., 2013). Simons (2000) has divided management control systems into diagnostic and interactive control systems based on the use of the system. Diagnostic control systems are characterized as the management-by-exception systems, and managers use them (e.g. profit plans, cost-accounting systems) to monitor organisational outcomes and correct deviations from targeted standards of performance. Interactive control systems are used to create debate and dialogue in all levels of the organisation, focusing on strategic uncertainties. By using interactive control systems, managers guide the search for new opportunities and utilize a bottom-up approach in generating rapid responses when strategic uncertainties require a search for disruptive changes and opportunities, while maintaining control over situations that could otherwise become chaotic. Malmi and Brown (2008) perceive management control systems as a package that is structured around ways in which control is exercised, and it broadly maps the tools, systems and practices managers have available to formally and informally direct employee behavior. Their conceptual framework of a management control systems package includes five types of controls: cultural controls (e.g. organisational values, symbols), planning (long-term and short-term planning), cybernetic controls (i.e. measurement systems), rewards and compensation, and

administrative controls (e.g. organisational structure, policies and procedures). They make the distinction between decision-support systems and control systems: control system mechanisms are used to monitor subordinates' achievements, while other systems are considered decision-support systems.

Hannula and Lönnqvist (2002) have proposed a practical definition of performance management as management based on the information provided by performance measurement. According to their definition, performance management involves the systematic use of measurement for managing and developing the performance of different organisational activities.

As can be seen in the definitions above, *performance measurement* is a crucial element of performance management. In general, performance measurement can be seen as monitoring that shows where change is required and which will in turn create the desired behavior that will produce improved performance (Fryer et al., 2009). According to performance measurement literature (Neely et al., 2005; Lönnqvist, 2004), an organisation's performance can be examined through success factors, which are key areas in which the organisation's targets must be reached in order to succeed in its business objectives and strategies. Success factors may be tangible, intangible, financial or non-financial, depending on the objectives and strategies of the organisation (Lönnqvist, 2004). In general, the purpose of measurement should be linked to organisation's objectives (e.g. Bourne et al., 2000; Neely et al., 2005).

The terms "performance management" and "performance measurement" are sometimes used interchangeably, but they are to be considered as different entities. For example, Fryer et al. (2009) distinguish these two by stating that performance measurement is about the past, but performance management extrapolates the data to provide information about the future. Performance measurement can be considered as a managerial tool and process in which measures are constructed based on managerially relevant success factors, and then used to facilitate implementation of strategies and objectives, and finally measurement results are analyzed to provide feedback for formulating new organisational objectives (Lönnqvist 2004, p. 31). According to Neely et al. (2005), performance measurement can be defined as the process of quantifying the efficiency and effectiveness of an action. Lönnqvist (2004, p. 31) defines performance measurement as a process used to determine the status of an attribute or attributes of the measurement object. According to Radnor and Barnes (2007) performance measurement is quantifying, either quantitatively or qualitatively, the input, output or level of activity of an event or process. Poister (2003, p. 1) defines performance measurement in public and non-profit organisations as the process of defining, monitoring, and using objective indicators of the performance of organisations and programmes on a regular basis.

Usually performance measurement is carried out through *performance measurement systems*. Performance measurement systems can be defined as management systems that track selected performance measures regularly to assess performance and enhance decision making, performance and accountability (Poister, 2001, p. 15; Simons, 2000; p. 7). Performance measurement is a multi-disciplinary research area with contributions from various fields of management, like strategy management, operations management, human resources, organisational behavior and management accounting, which has led to the lack of a cohesive body of literature and numerous definitions for the concept of a performance measurement system (Franco-Santos et al., 2007). In their conceptual analysis, Franco-Santos et al. (2007) identify five categories of roles of performance measurement systems: 1) performance measurement, including monitoring the progress of an action, 2) strategy management, comprising planning, strategy formulation, implementation, execution, and focusing attention, 3) communication, including internal and external communication, benchmarking and compliance with regulations, 4) influencing behavior, comprising compensation, management of relationships and control, and 5) learning and improvement, including feedback, double-loop learning and performance improvement. According to Neely et al. (2005), a performance measurement system can be defined simply as the set of metrics used to quantify both the efficiency and effectiveness of actions. Lönnqvist (2004, p. 33) defines a performance measurement system as a set of measures which are used to determine the status of attributes of the measurement objects.

As can be concluded from these earlier definitions, performance management and measurement are based on defining, implementing and using performance measures that are connected to relevant (business) objectives. Thus performance measures form the core of performance measurement and management. A *performance measure* can be defined as a metric used to quantify the efficiency and/or effectiveness of an action (Neely et al., 2005). Lönnqvist (2004) defines a performance measure as the means for determining the status of an attribute or attributes of a measurement object. Consequently, performance measure and measurement object are not synonyms. Measurement objects are usually success factors of the organisation, like customer satisfaction, whereas a single performance measure is able to capture only some dimension of the success factor. For example, in the case of customer satisfaction, timely delivery could be a one of the performance measures for customer satisfaction. Validity refers to the ability of a measure to measure the object it is supposed to measure, and thus concerns the appropriateness of the measure, i.e., the extent to which a measure represents the performance dimension of interest (e.g. Emory, 1985; Hannula, 2002; Poister, 2003; p. 88). In addition to validity, other important criteria for sound performance measures (and measurement systems) include reliability, relevance and practicality. Reliability means the consistency of measurement results, including accuracy and precision. Relevance refers to the value and usefulness of a measure, i.e., the meaning of the measure for the users. Practicality is defined as cost-effectiveness, the benefit-burden ratio of the measurement, i.e., if

performance measurement is worth the effort it takes (Hannula, 2002; Lönnqvist et al., 2006; Poister, 2003; p. 87-88, 101).

There are various types of performance measures, and the literature presents many ways in which performance measures can be categorized (e.g. Neely et al., 2005; Kaydos 1999; Poister 2003, p. 47-54). Profitability is the final measure for the overall productivity of a company (Hannula, 1999). However, since profitability cannot be a major performance criterion in public and non-profit welfare services, a more comprehensive perspective taking into account different factors affecting the performance of an organisation should be used when measuring performance (cf. ibid). For example, according to Poister (2003), the relevant types of performance measures in non-profit and public organisations include measures of resources, output, productivity, efficiency, service quality, effectiveness, cost-effectiveness, and customer satisfaction. Selection of appropriate measures depends on the needs of an organisation and the particular decision-making situation (ibid.). Performance measures also can be classified according to their characteristics into the following categories (Kaydos 1999, p. 19; Lönnqvist 2004, p. 32-33; Macpherson, 2001):

- Qualitative vs. quantitative measures
- Monetary vs. non-monetary measures
- Direct vs. indirect measures
- Leading vs. lagging measures
- Subjective vs. objective measures
- Cause vs. result measures

In this research, *performance management* is defined, in agreement with Bititci et al. (1997) and Lönnqvist and Hannula (2002), as the process by which the organisation or managerial unit manages its performance in line with its strategies and objectives, based on the information provided by performance measurement. Consistent with Lönnqvist (2004) and Poister (2003), *performance measurement* is defined as a managerial tool and process of designing, implementing and monitoring managerially relevant performance measures. For performance measures and performance measurement system this research applies slightly modified definitions proposed by Lönnqvist (2004): *performance measures* are defined as means for determining status of an attribute or attributes of success factors of organisation or managerial unit, and *performance measurement system* is defined as a set of measures which are used to determine the status of the attributes of the measurement objects. Managerial unit may refer to an entity (other than an organisation) that has shared objectives, for example, service provided by the co-operation of various organisational units.

1.3.5. Evaluation

The concepts performance measurement and evaluation are sometimes used interchangeably in the research literature, which causes difficulties in drawing lines between these two. Initially, performance management and measurement have been considered as managerial tools in private sector organisations, but during the past few decades, the ideas of performance management and measurement have spread to the public sector, which has caused some tension about their role in relation to evaluation (Blalock, 1999). An ongoing debate has particularly arisen in the evaluation community in the public sector concerning the benefits of performance management, how it differs from evaluation, and how evaluation can strengthen performance measurement and vice versa (e.g. Blalock, 1999; Davies, 1999; Nielsen & Ejler, 2008, van Helden et al., 2012).

There are various definitions for the concept of evaluation. According to Rossi et al., (2004, p. 2), in the broadest meaning, *to evaluate* means to ascertain the worth of or to fix a value to some object. They (Rossi et al., 2004, p. 29) define programme evaluation or evaluation research as the use of social research methods to systematically investigate the effectiveness of social interventions and programmes in ways that are adapted to their political and organisational environments and are designed to inform social action in ways that improve social conditions. In that definition, the focus is on social programmes because they are considered as a particularly significant and active area of evaluation. Social programmes, in turn, are defined as "an organised, planned, and ongoing effort designed to ameliorate a social problem or improve social conditions" (ibid.). Evaluation has become a widely applied mode of systematic inquiry for making judgements about public policies, and it is seen as an integral part of social policy and public administration (i.e. Niiranen, 2008; Virtanen & Uusikylä, 2004). Vedung (2010) defines evaluation as careful retrospective assessment of public-sector interventions, their organisation, content, implementation and outputs or outcomes, which is intended to play role in future practical situations. This definition is limited to interventions and to ex-post evaluation, which indicates that evaluation concerns adopted, ongoing or finished interventions. Ex-ante evaluations, which concern appraisals of the consequences of proposed interventions and are conducted before interventions are put into practice, are excluded. On the other hand, Vedung's (2010) definition is wide, since it is not limited only to effects of interventions and activities at the outcome level, but contains also outputs, processes, content and organisation (ibid.).

The literature presents a variety of evaluation models and classifications of models (e.g. Davies, 1999; Hansen, 2005; Rossi et al., 2004; Vedung, 2004). For example, Hansen (2005) has divided evaluation models into six categories according to evaluation questions and criteria for assessment: results models, process models, system models, economic models, actor models and programme theory models. According to Virtanen and Uusikylä (2004), program evaluations have been used 1) ex-ante, for testing the coherence and applicability of the policy, 2) ex nunc, for assessing the implementation

and intermediate results of the policy, and 3) ex-post, in analyzing the final results of the policy. In addition to service programs, evaluation can be carried out in organisations, usually focusing on organisational outcomes and effectiveness (e.g. Hansen, 2005; Rouse & Putterill, 2003). Vedung's (2004) taxonomy of evaluation models in the welfare sector based on the "fundamental value criteria" divides evaluation models into three main categories: substance-only models, economic models and procedural models. Blalock (1999) has identified four types of evaluations based on evaluation questions: process evaluations, gross outcome evaluations, net impact evaluations and cost/benefit evaluations.

Performance measurement and evaluation are differentiated in relation to various features, like the nature of questions each approach addresses, the frequency of activity, how data is obtained and analyzed, who conducts the assessment, how data is utilized and so on. Evaluation is usually considered as individual systematic (science-based) studies conducted by external or internal evaluators, whereas performance measurements are undertaken frequently and reporting of accomplishments are carried out by internal managers. Performance measurement focuses on inputs, processes, outputs and outcomes, covering aspects like quality assurance, customer satisfaction and continuous improvement, whereas the main interest of evaluation is to measure impacts, effectiveness and sustainability of a programme or service, aiming to judge the value of that programme or service (e.g. Blalock, 1999; Davies, 1999; Nielsen and Ejler, 2008).

To sum up, there are various definitions for evaluation and various types of evaluation models in the literature that are designed for different purposes. *In this research, evaluation is seen as the retrospective episodic assessment of a service innovation's (or a service's) impacts.* As a systematic assessment method, evaluation aims at investigating the effectiveness of a service or service innovation, and it is conducted by external or internal evaluator. In this research, evaluation is considered *as a method of measuring/assessing impacts of a service/service innovation at the service system level, and its focus is on economic evaluation models (cost-effectiveness)*, because in the Finnish welfare sector, costs along with effects are focal aspects when assessing different options in providing services. Thus, in the context of this research, evaluation is seen as one aspect of performance management.

2. THEORETICAL BACKGROUND

2.1. Factors affecting performance measurement in welfare services

Performance measurement is affected by various organisational and contextual factors like external environment, strategy, culture, organisational structure, size and ownership structure (e.g. Ferreira and Otley, 2009). The contingency approach to performance management is based on the concept that there is no universally appropriate performance measurement system that applies equally to all organisations in all conditions, but rather that particular features of performance measurement system and its effectiveness depend on specific organisational and contextual factors (e.g. Wadongo & Abdel-Kader, 2014). Based on that approach, the research literature (e.g. Jääskeläinen et al., 2012; Jääskeläinen & Laihonen, 2014; Wadongo & Abdel-Kader, 2014) has recognized various contingency factors or variables affecting performance measurement in general or services in particular. According to Jääskeläinen et al. (2012), general contingency factors affecting performance measurement should be acknowledged; these include considerations such as organisational size and structure, industry sector, external factors like the political environment and industry competitiveness, strategy, purposes and needs for measurement, resources available for development, organisational level, social practices and organisational culture, and existing measurement and information systems. Because services cannot be regarded as a homogeneous group and cannot be measured in the same way, the research literature has proposed service-specific contingency factors (Jääskeläinen et al., 2012; Jääskeläinen & Laihonen, 2014) that affect performance measurement in services: customers' involvement in service provision, the role of intangible inputs, variation in the level of demand, complexity of outputs, focus on impacts, and repetitiveness of service processes. This chapter outlines contingency factors affecting performance measurement in welfare services.

Welfare services constitute a broad sector including many types of organisations — public, non-profit and private — that produce a wide variety of services in the areas of healthcare, social services and education, and produce a wide range of services from schools to long-term institutional care. Thus, services in the welfare sector are heterogeneous. However, there are some common features related to the context or the features of services that affect performance management in the welfare sector. Those features are also discussed in this section.

Welfare services as a sector is facing extensive challenges (e.g. Vartiainen, 2008). As in many other European countries, an aging population creates challenges for the welfare service sector in Finland. In the future, this demographic trend will bring the greatest pressure for change in all welfare services (Kangasharju, 2007). In Europe, the number of people aged 80 or older will triple by the year 2060 (Giannakouris, 2008). If the demand and the provision structure of welfare services remain at their current levels, the

need for workers in this sector in Finland will increase from 520,000 employees to more than 700,000 employees by the year 2040. This need for nearly 200,000 more employees poses a serious challenge for the economy in a situation where the working-age population is decreasing (e.g. Kangasharju, 2007). The productivity of welfare services is relatively low and has decreased further in the early twenty-first century (Kangasharju, 2007; Lönnqvist et al., 2010). At the same time, with an increasing demand on the quantity of welfare services, many quality problems in the sector have been reported (Laine, 2005).

Many types of managerial needs related to performance measurement can be identified in welfare service organisations. The implementation of the New Public Management has increased the need for welfare service organisations to demonstrate their value and achievements to various stakeholders, like purchasers of services, public administration and taxpayers (Greiling, 2010; Packard, 2010). New Public Management introduced new basic premises to the public sector (Hood, 1991; Vedung, 2010), like:

- the employment of professional managers,
- explicit standards and measures of performance,
- greater emphasis on output controls,
- decentralization,
- privatization and outsourcing,
- management by objectives,
- increased competition between organisations and units,
- application of private sector management styles,
- increased cost awareness in resource use/requirement of increased productivity, and
- customer and citizen orientation, including client choice among providers, client rights, service guarantees to clients, client satisfaction and client representation in decision making.

The implementation of the New Public Management model in the Finnish public sector has increased the use of the so-called purchaser-provider model in the provision of welfare services, as municipalities outsource a growing portion of welfare services. This sets requirements for non-profit and private organisations, since they have to be able to demonstrate their performance in the tendering process. In addition, the majority of private organisations in the social and healthcare sector in Finland are small, with inadequate managerial resources (Hartman, 2012), which indicates that application of New Public Management in practice is challenging. Also, in public sector welfare services (in social services), managers' financial and managerial skills require development (Sinkkonen, 2008).

There are various classifications of the reasons for performance measurement in public and non-profit organisations. Behn (2003) lists eight reasons for public managers to

measure performance: to 1) evaluate, 2) control, 3) budget, 4) motivate, 5) promote, 6) celebrate, 7) learn and 8) improve. These are the basic purposes of performance measurement, and other usually cited motivations like planning, decision making, setting performance targets, modifying programmes, comparing and recognizing good performance, informing stakeholders and promoting accountability, are sub-purposes of these basic reasons. For example, planning, decision-making and modifying can be included in two basic purposes of budgeting and improving. The underlying reason managers plan, make decisions or modify programmes is either to reallocate resources or to improve future performance. Behn (2003) adds that the public manager's real and only purpose is to improve performance, and the other seven are just means to for achieving that ultimate goal.

According to Moxham (2008), drivers for measuring the performance in non-profit organisations include financial reporting, demonstration of achievements, operational control, and facilitating continuous improvement. In the public sector, purposes for performance measurement include budgeting and resource allocation, reporting, performance comparisons with targets and with other organisations, programme management, communication with the public, enhancing transparency, organisational learning and contract management (Jääskeläinen, 2010; Pollanen, 2005). In general, the central purpose of performance measurement is to provide information for managerial purposes, e.g. for strategic planning and decision making, which is also one of the uses of performance measurement in the non-profit and public sectors (Greiling, 2010; LeRoux and Wright, 2010; Jääskeläinen, 2010).

In services, value is created in the interaction between service provider and customer, and customers have a central role in service provision (Bitner et al., 1997; Grönroos & Ojasalo, 2004). Welfare services entail a high level of customer participation (e.g. Bitner et al., 1997; Hill, 1977; Nordgren, 2009). Typically, welfare services cannot be created apart from the customer, but customers' inputs are mandatory for the service provision. Thus, customers can be seen as *productive resources* for the service provision. For example, if patients in the healthcare organisation provide accurate information about their condition in a timely fashion, physicians will be more efficient and accurate in their diagnoses. On the other hand, the services provided by physicians often consist of no more than the provision of advice, and the achievement of targeted outcomes depends on the patient's own actions. The same principle applies to other welfare services, like education and many social services. In welfare services *customers are contributors* to their own satisfaction and to the ultimate outcome of the service. Thus, customers have essential production roles in welfare services, and if these are not fulfilled, it will affect the nature of the service outcome (Bitner et al., 1997; Hill, 1977). To summarize, in welfare services, value is co-created with customers to their benefit, and customers have many roles in the service provision. Thus, the understanding of value creation from the customer's perspective is important in welfare services (e.g. Nordgren, 2009).

Earlier literature indicates that intangibility is a key characteristic of services, and the role of intellectual capital is central in service organisations (e.g. Kianto et al., 2010; Laihonen and Lönnqvist, 2010). In welfare services, the major objectives and desired outcomes of operations relate to changes in people's health, well-being or quality of life achieved through care or service (e.g. Eddy, 1998; Packard, 2010; Laine, 2005). Thus, major outcomes and objectives in welfare services are mainly intangible, rather than tangible or financial. In Vaarama's research (1995), focal factors distinguishing high-performing municipalities from low-performers in provision of elderly care services were related to intangible aspects, like attitudes, organisational culture, leadership and questions related to work units. Welfare service processes entail high customer interaction, where personnel-related intangible inputs play a key role in service provision (Peng et. al., 2007; Zigan et al., 2008), thus underlining the role of employee characteristics such as competence and motivation. In welfare services, a customer's ability to participate in the service production process contributes to the customer's own satisfaction and value received, but also to the organisation's performance (Bitner et al., 1997; Grönroos & Ojasalo, 2004; Parasuraman, 2002). Clients' ability and willingness to participate in the service production varies substantially in different welfare services (e.g. Packard, 2010), which further underlines the role of employee characteristics in the service provision. Thus in welfare services, many focal aspects related to inputs, processes and outcomes of operations are *intangible in nature* (e.g. Jääskeläinen 2010, Laihonen & Lönnqvist, 2010). This fact accentuates the need to manage the intangible aspects of the service provision, which is a challenging task.

Since the 1990s, increased attention has been paid to co-operation as a means to achieve more effective and efficient public sector services (e.g. Kurunmäki & Miller, 2011). Effectiveness of services has become a focal performance criterion in health and social services (Lönnqvist & Laihonen, 2012; Porter, 2010; Provan & Milward, 2001; Klemola et al., 2014). One reason for this has been the above-mentioned New Public Management, which emphasizes the need to modernize the public sector. Public organisations are expected to be managed more like enterprises and to become more customer-oriented, more focused on outcomes rather than inputs, and more efficient and effective (Barretta & Busco, 2011; Jansen, 2008).

Along with these recent developments, outcomes and effectiveness in many fields of welfare are increasingly produced via the co-operation of several specialized organisations in health and social sectors (e.g. Axelsson & Axelsson, 2006; Hansson et al., 2010). This co-operation can be considered an inter-agency supply chain, a network or a welfare service system that creates value for clients (Callender, 2011; Porter, 2010; Lönnqvist & Laihonen, 2012). *At the service system level* tasks related to performance management and measurement differ from tasks at the organisational level. Increasing co-operation in welfare services indicates that performance management at the organisational level is not sufficient to ensure high performance of the service system.

Organisations may have conflicting goals and focus primarily on their own performance, rather than the overall ability of the system to serve customers. This puts performance management activities in a new perspective. Decision makers in welfare service organisations and public administration need information on *system-level performance* (e.g. Boland & Fowler, 2001; Callender, 2011; Provan & Milward, 2001). Because welfare services are mainly financed by public funds, the fundamental challenge/task regarding welfare services for public administration at the service system level is to decide how to use scarce resources in order to produce effective services for clients, i.e. how to use limited public funds as efficiently as possible. In other words, management of the welfare services at the service system level requires the consideration of two focal aspects: having services that are capable to create positive effects on the well-being of clients, and arranging/producing services without wasting public money. Thus, at the service system level, there is a need for information about the impacts of various services.

Service integration has become an important issue in welfare services (e.g. Axelsson & Axelsson, 2006; Hansson et al., 2010). Integrated service delivery strategies are regarded as a solution to rising costs, low quality of care and dissatisfied clients (Evans and Baker, 2012), and in recent years much research on collaboration (e.g. Qvretveit, 2002) and the evaluation of integration of services has been conducted (e.g. Ahlgren & Axelsson, 2005; Axelsson & Axelsson, 2006; Standberg-Larsen & Krasnik, 2009). Due to challenges in the management and coordination of intra- and inter-organisational co-operation, research usually aims to find concrete tools and guidelines for collaboration and service integration (e.g. Qvretveit, 2002; Hansson et al., 2010). Better tools for managing integration are needed, since many integration efforts have failed (Qvretveit et al., 2010; Wistow & Dickinson, 2012). However, there may be concern that service integration has become an end in itself. It seems that the academic literature emphasizes integration activities (process) rather than outcomes in initiatives to apply service integration in practice, producing relatively scant evidence of the outcomes and effectiveness of integration (Wistow & Dickinson, 2012). From a managerial point of view, a more holistic approach and managerial tools that focus on outcomes and the effectiveness of co-operation are needed.

To summarize, various factors affect performance management and measurement of welfare services. Welfare services are a heterogeneous group of services provided by different types of organisations (e.g. large public organisations, micro-size companies), but some common features affecting performance measurement can be identified. Based on the previous literature, this research has identified the following characteristics affecting performance measurement in welfare services:

- pressure for a higher level of performance
- requirements arising from the implementation of New Public Management, such as the need for explicit measures of performance, an emphasis on outcomes rather than inputs, direction towards management by objectives, the application of private sector management styles, increased competition, and increased client orientation
- heightened focus on customers' role in service provision
- considerable role of intangibility in the service provision
- recognition of various stakeholders
- effectiveness as an important performance criterion in the sector
- various managerial needs for performance measurement at different levels in the welfare service system

Next, performance measurement approaches, both generally applied in welfare services and potential, are discussed.

2.2. Different approaches to performance measurement in welfare services

Performance measurement and management of welfare service organisations are affected by many factors, like those related to services and the industry in general, as noted in Section 2.1. Requirements of various stakeholders add to the complexity of performance measurement and set requirements for a multi-dimensional approach. There are not many studies in the literature about performance measurement approaches in the overall welfare service sector. Klassen et al. (2010) conducted an analysis of performance measurement and improvement frameworks in health, education and social services. They identified a total of 111 different frameworks focusing on performance and quality of services applied in human services. Frameworks varied in complexity, from simple frameworks designed to measure only few dimensions of quality to complex models of health system performance. According to the research, the healthcare sector was the most progressive in terms of applying performance measurement frameworks; 97 frameworks were developed for the health sector, eight for education, one for social services and five were multi-sector frameworks applied to both health and social services. In addition to sectors, researchers identified three levels of analysis: service/unit/department, organisation and service system.

Of the frameworks developed for different purposes and applied in different sectors and levels of application, Klassen et al. (2010) identified five dimensions of performance that were common to all:

- *Collaboration*
- *Learning and innovation*
    - Creating and using knowledge
    - Quality improvement processes
    - Workforce development/support
- *Management perspective*
    - Leadership/governance
    - Infrastructural capacity (e.g. physical facilities, fiscal resources, human resources, IT)
    - Business/financial management
- *Service provision*
    - Equity/fairness (provision of services of equal quality that are distributed fairly across populations)
    - Availability/accessibility
    - Comprehensiveness (sufficiently broad services provided to meet client needs)
    - Appropriateness (services represent best fit with client needs, based on established standards)
    - Client orientation
    - Coordination (provision of services that are continuous, integrated and organised around the client)
    - Client safety
- *Outcome*
    - Effectiveness
    - Client perspective (extent to which the client perspective and experience of a service are measured and valued as an outcome of service delivery)

The research reveals that while some dimensions (infrastructural capacity, business/financial management, availability/accessibility, client orientation) were included in most of frameworks at all three levels, other performance dimensions vary depending on the level of application. For example, the dimension of equity/fairness was included in 38 % of system level frameworks, but in only 4 % of organisational level frameworks. Effectiveness as performance dimension was included in 85 % of system level frameworks, but in only 44 % of frameworks at the level of units, and comprehensiveness was included only in system level frameworks. Coordination was included in 56 % of unit level frameworks, but in only 21 % organisational frameworks, and in 35 % of system level frameworks. Finally, leadership was included in 54 % of organisational level frameworks, but in only 19 % of individual programme/unit level frameworks. *These results indicate differences in managerial needs and tasks at different levels of the welfare service system*. In addition, researchers noticed differences in service sectors: the healthcare sector is active in applying frameworks for performance and quality improvement purposes, whereas only view frameworks for the education and social service sectors were identified. Next, performance measurement and management approaches at two levels of the welfare service system utilized in this study – organisational level and service system level – are discussed.

2.2.1. Performance measurement in welfare service organisations

The revolution of performance measurement started in the late 1970s and early 1980s, concurrent with growing dissatisfaction with traditional backward-looking financial accounting systems. Since then, several frameworks, tools and techniques have been developed for designing performance measurement. Now performance management literature offers various frameworks and practical guidelines for measuring performance of organisations. In these frameworks, non-financial factors such as quality, customer satisfaction, cycle time and innovation are recognized as the leading drivers for financial performance. Of the frameworks presented in the literature, the Balanced Scorecard (BSC), Performance Prism and EFQM models are among the ones that have made a significant impact on designing performance measures in practice (Nudurupati et al., 2011).

Performance management literature suggests various types of management and measurement approaches for welfare services (e.g. Jääskeläinen, 2010; Sahay, 2005; Moullin et al., 2007). Balanced Scorecard and productivity matrix are examples of multi-dimensional performance measurement frameworks applied in non-profit and public sector organisations, and examples of implementation of these frameworks in welfare services exist in the literature (e.g. Greiling, 2010; Jääskeläinen, 2010; Kaplan, 2001; Moullin et al., 2007). The literature suggests that BSC or some modification of it is the most commonly used multi-dimensional framework in welfare services (e.g. Klassen et al., 2010; Moullin et al., 2007). BSC was developed for private sector organisations to complement financial measures with operational measures from three other perspectives: the perspective of the customer, internal processes, and learning and growth, which are considered as the drivers of future financial performance (Kaplan & Norton, 1992). In the BSC, the financial perspective is decisive in determining the overall performance of organisation, which restricts its usability in non-profit organisations; in non-profits, financial aspects (e.g. keeping within budgets) are important but not decisive in measuring how well an organisation has performed. Later on, BSC was modified to meet the needs of non-profits and public organisations by placing an organisational mission or strategy at the top of the scorecard (Kaplan, 2001; Moullin et al., 2007). In addition, the customer perspective has been modified to include both service users and other stakeholders (e.g. sponsors of services, donors). According to the survey conducted in Finland in 2003-2004, Balanced Scorecard or some modification of it is widely used in Finnish municipalities providing welfare services; about 90 % of municipalities in the survey (n= 19) reported using BSC (Silvennoinen-Nuora et al., 2005) as a measurement framework. However, most employees aside from those engaged in management accounting were unfamiliar with the framework, which indicates that it has not been communicated to employees in organisations.

The literature suggests that, rather than utilizing specific multidimensional performance measurement frameworks, welfare service organisations prefer sets of separate measures

in performance measurement (e.g. LeRoux & Wright, 2010; Linna et al. 2010). Dawson (2010) notices the effect of an organisation's size on performance measurement; large and medium sized non-profits utilize BSC, whereas smaller organisations prefer informal assessment methods. According to LeRoux and Wright (2010), the most common measures used by non-profits operating in the welfare sector include workload and output indicators, unit cost and efficiency measures, outcomes and effectiveness measures, client or customer satisfaction, external audits, and industry standards and benchmarks. In the hospital environment, client satisfaction was considered as the best measure of performance, followed by employee satisfaction, the organisation's ability to adapt to changes in the community, and accomplishment of goals and objectives (Packard, 2010). Another example from the hospital sector underlines the importance of financial measures like operating efficiency and cost control as measures of performance (Peng et al., 2007). According to Linna et al. (2010), measurement of productivity and effectiveness in public welfare services is based on financial figures (to fulfill the requirement to stay within the budget), sector-specific national monitoring results, such as hospital productivity, placement in further education, numbers of outputs, customer feedback and surveys of customer satisfaction. Recent research of performance measurement and management of healthcare services (Saunila et al., 2010) further underlines the strong role of financial measures; managers of basic social and healthcare sectors use mostly financial measures in their decision making.

As noted in Section 2.1., intangible aspects have focal role in service provision in general and in welfare services particular. The importance of *intellectual capital (IC)* for the success of companies is widely acknowledged, and IC has become one of the key determinants for companies' business performance (Marr et al., 2004; Schiuma et al. 2007). Intellectual capital is recognized as a source of competitive advantage in non-profit organisations (Kong & Prior, 2008) and as a key performance driver in the healthcare sector (Zigan et al., 2008; Peng et al., 2007), which suggests the need to focus on managing IC in non-profit welfare services. The management of IC concerns the control and alignment of organisations' intangible assets and the processes through which these transform into other resources and, finally, into customer value (Petty & Gutherie, 2000; Choo & Bontis, 2002). IC forms an important basis for value creation and should therefore be systematically managed (e.g. Andriessen, 2004; Rastogi, 2003).

Intellectual capital research started within the business sector, but during the last few years, the IC approach has been connected to both non-profit sector (e.g. Fletcher et al., 2003; Guthrie et al., 2009; Kong, 2007; Kong, 2010; Kong & Prior, 2008; Brozetti & Veltri, 2013) and public sector organisations (Ramirez, 2010; Whyte & Zyngier, 2013; Schneider & Samkin, 2010, Dumay & Rooney, 2011). Many of the research projects conducted in non-profit and public sectors focus on the reporting of intellectual capital (e.g. Brozetti & Veltri, 2013; Guthrie et al., 2009; Schneider & Samkin, 2010), which is natural, since these organisations have various stakeholders to whom they must report on

their operations and results. However, external reporting does not necessarily promote management/development of intellectual capital (Brozetti & Veltri, 2013). Similarly, effective management of IC does not necessitate external reporting of IC (Dumay & Rooney, 2011).

Kong and Prior (2008) present a conceptual IC framework that highlights knowledge as a key resource in non-profit organisations. The model forms a conceptual basis for understanding and analyzing the role of different elements of IC in non-profit organisations, and their interaction and role in value creation. However, there are not many examples of IC management in welfare services. Currently, there are empirical examples of identifying and measuring of IC mainly for external reporting purposes in the healthcare sector (Habersam & Piber, 2003; Peng et al., 2007; Zigan et al., 2008) and education (Ramirez & Gordillo, 2014), but there seems to be a lack of examples of the development of IC in non-profit welfare service organisations. Empirical research from the business sector proposes various benefits that an application of intellectual capital management entails, for example, improved knowledge of IC (learning), increased understanding of a company's IC components and their relations to business goals and increased managerial attention towards IC development (e.g. Lönnqvist et al., 2009). Similarly, in the public sector, application of the intellectual capital perspective has facilitated identifying knowledge-related needs and resources and in navigating change (Whyte & Zyngier, 2014). In the research literature, an IC approach is analyzed and compared with other performance management systems, like Balanced Scorecard and excellence models (e.g. Kong, 2010; Martin-Castilla & Rodriques-Ruiz, 2008; Mouritsen et al., 2005). The intellectual capital approach and Balanced Scorecard entail many similarities, like the importance of non-financial measures as a means of complementing financial measures, the role of strategy as an explicit part of a performance measurement system, and attention to intangibles and knowledge (Mouritsen et al., 2005; Petty & Guthrie, 2000). The research literature also indicates that a balanced performance measurement system can be an integral element of intellectual capital management, i.e. intellectual capital management can be carried out by supplementing balanced performance measurement systems (e.g. Kujansivu, 2008). However, some authors argue against integrating Balanced Scorecard and intellectual capital, due to fundamental differences in the strategies they are built upon: BSC is based on a competitive advantage strategy, while IC builds on a competency strategy (Mouritsen et al., 2005). It is understood that BSC is not able to address important aspects of non-profit strategy such as the social dimensions, the human resource elements and the distinctive nature of competition and collaboration, and that BSC focuses on financial measures. Therefore, the intellectual capital perspective is suggested as superior for organisations operating in non-profit sectors (Kong, 2010). Compared to the service management literature, the IC approach provides a more comprehensive and systematic view of different kinds of intangible resources and intangible output elements (Laihonen & Lönnqvist, 2010).

Measurement process. Performance measurement is perceived as a challenging task in public and non-profit sector organisations (e.g. Goh, 2012; Moxham, 2009; Packard, 2010; Pollanen, 2005; Rantanen et al., 2007; Saunila et al., 2010). Performance measurement implementation is usually divided into three main phases: the design, implementation and use of measures (e.g. Bourne et al., 2000). The design phase is critical in the development of a performance measurement system, since it forms the foundation for the implementation and actual use of measures. Problems in the design phase may entail more problems later on (e.g. Jääskeläinen & Lönnqvist, 2009; Rantanen et al., 2007). In public organisations, many types of obstacles that can hamper the acceptance and application of performance measures have been identified, like institutional (e.g. mistrust of measurement and resistance to reporting bad news), pragmatic (like lack of credibility and usefulness), technical (lack of standards and timelines), and financial obstacles. Resistance of top management and employees are identified as major obstacles to performance measurement development (Foltin, 1999). In addition, problems can arise from difficulties in defining the concept of performance in public services (Pollanen, 2005).

Rantanen et al. (2007) have identified four underlying reasons that cause several problems in the design and implementation of performance measurement in Finnish public sector organisations. First, many stakeholders with conflicting needs cause conflicts when deciding what should be measured. Second, undefined end products and goals (efficiency vs. effectiveness) lead to difficulties in target setting (i.e. it is not clear what the goal of the operations should be). Third, lack of ownership enables representatives of different stakeholder groups to influence the development of individual measures on a too-detailed level. Lack of ownership is also seen as a reason why personnel do not understand the objectives of the measure development. Fourth, poor management skills lead to development projects with too many responsible persons, which in turn leads to non-responsibility. Because of inadequate management skills, personnel do not perceive the usefulness of performance measurement project for their work and thus resist it. Poor management leads also to situations where there are various overlapping projects ongoing, and there are not enough resources for each project.

Non-profit organisations face similar challenges in their performance measurement efforts. Challenges identified in non-profit organisations include the intangibility of services, immeasurability of missions, unknowable outcomes, the variety of interests and standards of stakeholders, underdeveloped and resource intensive performance measurement systems, inadequate information systems, use of inconsistent assessment criteria, and lack of standardized measures (e.g. Beamon & Balcik, 2009; Eddy, 1998; Moxham, 2009; Packard, 2010). In non-profit organisations, stakeholders determine performance measurement, which indicates that performance measurement criteria are generally developed by stakeholders, e.g. derived from governmental policy or stipulated by regulators or funding organisations. Thus, non-profits are required to collect certain

types of data for their stakeholders, but managerial usability of data appears limited (Moxham, 2009)

In addition to problems in deciding measurement targets, public sector organisations have difficulties in identifying appropriate measures (Jääskeläinen et al. 2009; Pollanen, 2005). Public sector welfare service organisations have many measures in use (Jääskeläinen, 2010; Linna et al., 2010), and selecting appropriate measures out of existing ones or developing new measures is challenging. In addition, in the welfare service context, financial measures play a dominant role (Saunila et al., 2012) even though most focal measurement objects in health and social services relate to qualitative, intangible issues (e.g. satisfaction and well-being of clients, quality of life) that are difficult to measure and not measurable in financial terms.

To summarize, welfare services organisations seem to require a multidimensional approach for performance measurement and management, and there are various performance measurement approaches available in the literature. However, research literature indicates that welfare service organisations are not very advanced in the application of available approaches/frameworks. It seems that financial information is still a major aspect in decision making, even though most focal outcomes are not directed toward financial profits. Also, decision-making and management in both non-profit and public sectors are not traditionally performance-oriented, with the focus instead being on inputs, indicating that performance measurement culture in welfare service organisations is still in its infancy (Fryer et al. 2009; Jansen, 2001; Jääskeläinen, 2010).

2.2.2. Performance measurement in the welfare service system

Along with the increasing co-operation in service provision and the increasing role of effectiveness that is produced by the co-operative efforts of many organisations, research literature has proposed that performance management activities in the public sector should be moved to the system level (e.g. Boland & Fowler, 2000; Callender, 2011). Effectiveness or impacts of public services is usually measured by utilizing different types of evaluation approaches. The role of economic analysis is established especially in evaluation of healthcare programmes (Drummond et al., 2005; Brazier et al., 2007), but it is also utilized in programmes related to social services (e.g. Beecham et al, 1997; Flatau & Zaretzky, 2008; Jones et al., 1994; Mansell et al., 2007; Pinkney & Ewing, 2005; Rossi et al., 2004). Evaluation methodologies have been developed in many different administrative and scientific contexts, and there are various models and purposes for different types of evaluations (Hansen, 2005; Niiranen, 2008; Rajavaara, 2006; Vedung, 2004; Virtanen & Uusikylä, 2004).

Because welfare services are mainly financed by public funds in Finland, the main challenge regarding welfare services in the public administration in the service system is to decide how to use scarce resources in order to produce effective services for clients,

i.e. how to use (limited) public funds as efficiently as possible (cf. Drummond et al., 2005). Thus, an underlying requirement in welfare services relates to value for money, i.e. how to use tax revenue in an optimal way (e.g Meklin, 1997). Of the various evaluation approaches, economic evaluations provide information for this kind of managerial needs/situations; therefore, different types of economic evaluations seem to have a focal role in assessing the impacts of services and interventions (e.g. Clark et al., 1998; Drummond et al., 2005; Flatau & Zaretzky, 2008; Jones et al., 1994; Pinkney & Ewing, 2005; Räsänen et al., 2005). A key motivation for conducting economic evaluation is its ability to provide systematic analysis of different alternatives for decision making in service production. Without systematic analysis, it is difficult to identify the relevant alternatives. Economic analyses seek to identify and to make explicit a set of criteria that is useful in deciding among different uses of scarce resources.

Key features of economic evaluations, regardless of the area in which they are applied, focus on inclusion of costs and consequences of activities (Drummond et al., 2005). Thus, the rationale behind economic evaluations is to provide a systematic means of comparing the costs of an activity or programme with its outcomes. According to Blalock (1999), a set of logical scientific steps involved in planning and conducting evaluations includes conceptualization, measurement and methodology. Conceptualization involves identification and definition of the major variables and relationships of interest. After that, measures (quantitative, qualitative or both) are identified. Methodology includes the selection of appropriate research designs and methods for sampling, collecting data, and data analysis.

In the literature, there are different types of economic evaluations, such as cost analysis, cost utility, cost-benefit and cost-effectiveness analysis (see Table 1). The key feature that distinguishes one technique of economic evaluation from another is the way the consequences of programmes are measured and valued (Drummond et al, 2005). Cost analysis includes only costs related to the intervention, not consequences. Thus, cost analysis is usable only in comparing costs of different programmes or interventions without assessing outcomes related to them. In cost-effectiveness analysis, consequences are measured in "natural" units, e.g. life-years gained, and there is no attempt to value the consequences, but it implicitly assumes that output concerned is in some sense valuable (Drummond et al., 2005). Some cost-effectiveness analysis may present an array of outputs alongside cost and leave it to decision-makers to form their own view of the relative importance of these. This type of economic analysis is also called cost-consequences analysis (Drummond et al, 2005; Brazier et al., 2007). In cost-utility analysis, the consequences of programmes are adjusted by health state preference scores or utility weights. In general, this means that the quality aspect of life is added to the evaluation of consequences, not just the number of years gained. The most common measure of consequences in cost-utility analysis is the quality-adjusted life year (QUALY) (Brazier et al., 2007). The key feature of cost-benefit analysis is its attempt to

value all consequences - including intangible outcomes, such as survival and value - of programmes or interventions in monetary terms. While this approach may ascertain whether the beneficial consequences of the programme justify the costs, problems in valuing the intangible aspects of consequences limits its applicability in health and social services (Drummond et al., 2005). In most forms of economic evaluation, the general approach is to compare the consequences of programmes or interventions with their costs. Drummond et al. (2005) point out that in real life, distinctions between different types of evaluation techniques are blurred, and evaluation in practice is a mixture of the different types presented in the Table 1.

Table 1. Techniques of economic evaluation (Drummond et al., 2005).

Technique of economic evaluation	**Measurement/valuation of costs**	**Identification of consequences**	**Measurement/valuation of consequences**
Cost-analysis	Monetary units	None	None
Cost-effectiveness analysis	Monetary units	Single effect of interest, common to both alternatives, but achieved to different degrees	Natural units (e.g. life-years gained, disability-days saved etc.)
Cost-utility analysis	Monetary units	Single or multiple effects, not necessary common to both alternatives	Healthy years (typically measured as quality adjusted life-years)
Cost-benefit analysis	Monetary units	Single or multiple effects, not necessary common to both alternatives	Monetary units

While there is a long history in economic analysis of attempting to value healthcare benefits through the use of monetary measures, economic evaluation based on cost-effectiveness remains the most popular approach (Drummond et al., 2005). One of the reasons for this is the difficulty in valuing outcomes (e.g. what is the value of improved health, quality of life) as is required in cost-benefit analysis (e.g. McGuire, 2001). Features of economic evaluation include focus on a specific intervention or programme, involvement of a systematic assessment of both costs and outcomes, inclusion of comparison (before – after, control groups), and combining costs and outcomes in the final analysis. In economic evaluations of services (e.g. service innovations or interventions), costs are usually calculated based on service consumption in different sectors by multiplying quantities used by their relevant prices. In this phase, it is crucial to understand a cost impact that the service programme is generating for other sectors,

not just in the sector it is representing, in order to ascertain the total costs of the service (Drummond et al., 2005).

In economic evaluations, a wide variety of outcome measures are in use. Probably the most standardized outcome measures can be found in healthcare services focusing on health-related outcomes like QUALY, EuroQol, 15D, and Health Utilities Index, whereas outcome measures in social services appear to be more ambiguous (e.g. Konu et al., 2009; Pinkney & Scott, 2005; Räsänen et al., 2005; Simonen et al., 2011). In social services, an evaluation of effectiveness essentially examines whether actions made have benefited the client's lives by meeting their needs for change and improving their resources and overall life situation. There are some questionnaire-based tools available to measure outcomes in social services (e.g. ASCOT) (Linnosmaa, 2012). User perspective is fundamental in evaluating welfare services, and these aspects are emphasized in many evaluation models applied in the welfare services sector (e.g. Krogstrup, 2004; Sandell, 2004). However, the task of the public sector is not just to satisfy particular needs of users, but it must also consider the general interest of the society, which entails that welfare services have to be performed within the framework of political objectives, budgets and legislation (Kronstrup, 2004).

The need for evaluation of outcomes, effectiveness and cost-effectiveness is recognized in Finnish welfare services, and studies related to this topic have been carried out, especially the in healthcare sector (e.g. Konu et al., 2009; Räsänen et al., 2005). Konu et al. (2009) point out that regardless of the amount of studies related to the topic in the healthcare sector, the concept of effectiveness is rarely defined, and measures of it are often vague or nonexistent. The outcome indicators are usually disease-specific, and indicators related to quality of life are rarely used. Räsänen's et al. (2005) research about measuring the cost-effectiveness of secondary healthcare indicates that effectiveness data can be relatively easily collected and used to complement the already available cost data to produce estimates of cost-effectiveness of various interventions.

From a performance measurement point of view, there are not many practical frameworks and guidelines for measuring impacts or cost-effectiveness of welfare services in Finland (e.g. Julkunen, 2006; Sinkkonen, 2008). Rautiainen (2012) has developed a cost-effectiveness index for social work to be used in planning, comparing and evaluating social work projects and operations in Finnish municipalities. The index measures changes in a client's quality of life in relation to changes in costs related to the client's service use (change in quality of life/service costs + probable change in costs related to client's service use in the future). In the model, the client's quality of life is evaluated by five dimensions: the client's employment, social relations, health status, income level, and ability to function (education, etc.). A basic assumption in the model is that costs related to the client remain positive in the long run; the model cannot be applied if the client's service use creates savings in the future (the nominator of the index would be negative).

Klemola (2015) has built a social and healthcare service utilization model (SHC service utilization model) for continuous evaluation of productivity, effectiveness and cost effectiveness of regional social and healthcare services. In the model, the effectiveness of intervention is evaluated with the changes in amount of social and healthcare service utilization and cost-effectiveness with the changes in the costs of social and healthcare service utilization. The model can be used in evaluating impacts of services to certain client groups' service use and costs, but the model excludes the evaluation of qualitative changes that service has entailed for clients' lives, which indicates that the model adopts cost-benefit analysis approach.

Performance management and measurement literature underlines the need to extend the scope of performance management from focusing on one organisation to inter-organisational relationships, networks and service systems (e.g. Busi & Bititci, 2006; Kaplan et al., 2010; Laihonen et al., 2014), and including many levels of service systems instead of focusing on one (e.g. Provan & Milward, 2001). The performance focus has shifted from improving processes and outputs to improving longer-term outcomes and impacts and to increasing the value that co-operative service delivery creates for its clients (e.g. Barretta & Busco, 2011; Halligan et al., 2012; Porter 2010). Laihonen et al. (2014) propose that performance measurement of a service system should be approached from three perspectives: the performance of individual organisations, the internal performance of the service network, and the customer-perceived performance of service operations produced by the network. This type of performance management and measurement is challenging, with few empirical examples yet available to demonstrate how to conduct it in practice. Examples from earlier research have identified certain steps and success factors related to the design of performance measures for business networks (e.g. Kulmala & Lönnqvist, 2006; Pekkola, 2013). For example, Kulmala and Lönnqvist (2006) propose a three-step approach for designing performance measures for business networks that starts by identifying success factors in the network from the end-user's point of view; it then defines network-level performance measures for those success factors, and finally extends performance measurement to the level of the network's member organisations. However, these examples from business are not necessarily applicable to public sector services for many reasons; for example, in the public sector, partnerships and networks are usually imposed by superior authority, rather than resulting from voluntary co-operation, which may affect participants' motivation and interest (Halligan et al. 2012). As mentioned earlier, common challenges in social and healthcare service networks include unclear roles and responsibilities (e.g. Hansson et al., 2010), which challenges the start of performance measurement in inter-organisational co-operation.

2.3. Research gap

Welfare services include various types of organisations, and there are different types of managerial tasks and needs within the sector. Current developments in the welfare service sector set requirements for performance measurement and management. Research literature of performance measurement and management in welfare services provides a somewhat fragmented and contradictory picture of the state of performance measurement and management in the sector. On one hand, there are examples of implementation of multidimensional measurement models (e.g. Greiling, 2010; Jääskeläinen, 2010), but on the other hand, the research literature also indicates the use of separate measures (LeRoux & Wright, 2010; Linna et al., 2009) with limited managerial use (Moxham, 2009). Performance measurement and management research of Finnish welfare services with empirical examination is relatively scant, including research on designing and implementing measures of productivity (e.g. Jääskeläinen et al., 2009; Linna et al., 2010) and challenges related to performance measurement and management (Saunila et al., 2012). The research already conducted is mainly case studies focusing on certain services or organisations in the public sector, whereas surveys or interviews with a broader scope are missing. As mentioned earlier, welfare services include various types of organisations, ranging from large public organisations with thousands of employees to small private organisations with fewer than ten employees. Private organisations in the sector are mainly micro organisations with insufficient managerial resources (Hartman, 2011; Hartman, 2012). This indicates that welfare service organisations are a heterogeneous group with different managerial resources and needs, which inevitably affects current performance measurement needs and practices. Thus, it seems that there is not a clear picture of the current state of performance measurement or development needs regarding performance measurement in Finnish welfare service organisations.

Earlier research literature indicates that performance measurement and management in welfare service organisations is challenging task. One set of challenges relates to the notification that in welfare services major outcomes, objectives and resources are intangible in nature and because of that are difficult to measure. Intellectual capital research presents various IC management models for measuring and managing intellectual capital of organisations, and earlier literature suggests an IC management approach for non-profit services (Kong, 2007; Kong, 2010). As mentioned earlier, IC is recognized as a focal factor affecting performance in non-profit organisations (Kong & Prior, 2008) and in the healthcare sector (Zigan et al., 2008; Peng et al., 2007), which suggests the need to focus on managing IC in non-profit welfare services. Current IC management research in the field of welfare services has focused on external reporting of intellectual capital to stakeholders (e.g. Brozetti & Veltri, 2013; Guthrie et al., 2009; Schneider & Samkin, 2010), whereas examination of IC management to support performance management of welfare service organisations with empirical findings is limited. There are some examples of the successful application of IC management models

in the Finnish business sector (e.g. Lönnqvist et al., 2009), but there is not empirical knowledge of their usability in welfare services in Finland.

Another set of challenges relates to the design and implementation of performance measurement systems in the context of welfare services. The earlier literature presents various problems and challenges that hinder design and implementation of performance measurement in welfare services (e.g. Pollanen, 2005; Rantanen et al., 2007; Saunila et al., 2010). However, little is currently known about factors that facilitate the design and implementation of performance measurement in this context.

Welfare services are produced increasingly in co-operation among different organisations in the health and social sectors (e.g. Axelsson & Axelsson, 2006; Hansson et al., 2010). Increasing co-operation and integration in healthcare and other welfare services indicate that performance management at the organisational level is not sufficient to ensure high performance of the service system. At the service system level, different types of approaches are needed in order to manage performance. Organisations may have conflicting goals and focus primarily on their own performance rather than the overall ability of the system to serve customers. This puts performance management activities in a new perspective. Information on system-level performance is needed (e.g. Boland & Fowler, 2000; Callender, 2011; Laihonen et al., 2014).

At the service system level, different types of information needs can be identified. First, service system level decision makers (public administration) need information about costs and effects of different service options. Effectiveness has become a central performance criterion in health and social services. The ultimate goal in welfare services is to satisfy client needs, but it cannot be done with any costs. As welfare services are mainly financed by public funds, the focal challenge regarding welfare services in public administration at the service system level is to decide how to use limited public funds in order to produce effective services for clients. This type of decision making requires information about the impacts of different service options in order to compare solutions in service provision and to select the most effective ones. In the research literature, cost-effectiveness analysis is a widely used approach in evaluating different services, especially in healthcare services. Although cost-effectiveness research particularly concerns this type of decision making situation, there seems to be a shortage of frameworks and guidelines for measuring multidimensional (quantitative, financial and qualitative) impacts of welfare services in practice (e.g. Julkunen, 2004, p. 10; Sinkkonen, 2008).

As outlined earlier, there is a need to extend the scope of performance management from organisations to inter-organisational relationships, networks and service systems (e.g. Busi & Bititci, 2006; Kaplan et al., 2010; Laihonen et al., 2014), and to include many levels of the service system instead of focusing on just one (e.g. Provan & Milward, 2001). Simultaneously, the focus in performance management is currently on longer-term outcomes, impacts and the value that co-operative services create for their clients. This

type of performance management and measurement is challenging, with few empirical examples available to show how to conduct it in practice. In public service networks with various stakeholders and levels of analysis, even the content of performance appears unclear (e.g. Barretta & Busco, 2011; Conaty, 2012; Lönnqvist & Laihonen, 2012). Little is currently known about practical ways to develop performance measurement in inter-organisational co-operative settings within the welfare sector. There are not many frameworks or guidelines for performance measurement design for networks in general or for welfare services in particular. While the earlier literature acknowledges the need for performance measurement addressing outcomes and effectiveness of service integration, not enough is known about applying such measurement practices. From a managerial point of view, a more holistic approach and managerial tools that focus on outcomes and the effectiveness of co-operation are needed.

To summarize, this research has identified following research gaps regarding performance measurement in welfare services:

- A more comprehensive view of the current stage of performance measurement in Finnish welfare service organisations or development needs related to performance measurement in the sector is missing.
- The role of intellectual capital is pivotal in service provision, and the literature offers various models for intellectual capital management. However, the literature lacks information about the usability of the intellectual capital management approach in welfare services.
- Earlier research identifies challenges related to design and implementation of performance measurement systems in welfare services, but there seems to be limited information about factors that facilitate the design and implementation of performance measurement in this context.
- At the service system level, an economic evaluation approach appears useful in measuring impacts of different options in service provision. However, there seems to be a shortage of practical tools, guidelines and experiences in measuring impacts of welfare services both at service system and client levels in Finland, including quantitative, financial and qualitative aspects.
- Welfare services are increasingly produced through the co-operation of various organisations, but current research literature lacks information about how to develop performance measurement in inter-organisational co-operative settings in the welfare sector.

3. RESEARCH DESIGN

3.1. Research objective and research questions

Welfare services are a broad sector consisting of different types of services, organisations and stakeholders. The sector includes various challenges that experts from many different disciplines focusing on different perspectives of activity are trying to solve. Approaches for performance measurement for welfare services include measurement and management of particular organisations and economic evaluations at the service system level. Because of the complexity of the sector, a single model for performance measurement and management is difficult to construct. However, it would be beneficial to identify different perspectives related to performance measurement in the welfare service sector to provide a more comprehensive picture of performance measurement in the sector and practical tools for performance measurement.

To address research gaps described in Chapter 2.3., this research aims at drawing a more holistic view of performance and performance measurement in welfare services by approaching the topic at different levels in the welfare service system. *The main objective of this research is to increase understanding of how the performance of welfare services can be measured and managed at different levels of welfare service system.* In addition, this research aims at providing a more structured view of performance measurement in the context of welfare services.

Research questions of this dissertation are:

1. What is the current state of performance measurement and management in Finnish welfare service organisations?
2. How to overcome challenges in managing and measuring performance in welfare service organisations?
    a. How can the intellectual capital approach facilitate performance measurement and management in welfare service organisations?
    b. What factors facilitate success in the development of performance measurement in welfare service organisations?
3. How can performance management be supported by the means of measurement in the welfare service system?
    a. How to measure the impacts of welfare services?
    b. How to design performance measurement system to support the management of effectiveness in welfare services?

The first research question addresses the need to explore the current stage of performance measurement and management in Finnish welfare service organisations. Currently, there is a lack of information about how managers perceive the concept of performance in welfare service organisations, which is a prerequisite to determining what aspects should

be measured and managed. In addition, the first research question addresses why and how performance is currently measured in welfare service organisations and what are development needs regarding performance measurement in welfare service organisations. The second research question aims to find answers to two identified challenges related to performance measurement in welfare services. In the first sub-question, the aim is to find out how intangible aspects of service provision could be better captured in performance management, and in the second sub-question the aim is to identify tools and practices that facilitate success in the development of performance measurement. The third research question aims at adding knowledge about performance measurement in the service system level with respect to two identified managerial aspects: how to measure impacts of welfare services, and how to design a performance measurement system that supports performance management of service provision in a co-operative network.

3.2. Scope and limitations of the research

As discussed earlier, welfare services contain a wide variety of different types of services that aim at improving or maintaining the well-being of people. Typically, welfare services are divided into three groups: healthcare services, social services and education. This research concerns mainly services in the social services and healthcare sectors. This is mainly due to practical reasons, since most of the research projects in this study concern health and social services. In addition, health and social services are usually interconnected in service provision, which indicates that it is beneficial to study both areas. The majority of the empirical data of this research represent social services.

Performance management and measurement of welfare services is multidisciplinary topic that has been addressed in many disciplines, including social sciences, administrative science and health economics. As described earlier in Chapter 1.2, the research topic is addressed from a managerial perspective. The theoretical background of this research is built mainly on performance management and measurement literature. However, the research applies evaluation models developed in the field of health economics and administrative science in studying performance measurement at the service system level.

This research focuses on the service provider's perspective in managing and measuring performance in welfare services. Employee-related aspects, like a shortage of employees and employee well-being at work, are central factors that form one set of challenges in the sector. In this research, employees' well-being is addressed indirectly (e.g. by analyzing employee roles in performance measurement development), but more precise aspects related to human resource management are not within the scope of this research. This research focuses on intellectual capital at the organisational level. The role of financial resources and facilities are evident in the provision of welfare services. However, since the current research literature and performance measures seem to cover these aspects relatively well, this research focuses on intangible aspects that have not been

focused earlier. This study concerns design and implementation of performance measurement systems. Information about the use and impacts of performance measurement systems designed during the research would have been beneficial. Because of practical reasons (i.e. a relatively long time is required before impacts and user experiences are realized), the scope of this research is limited to the design and implementation of measurement.

In general, this research focuses on designing and implementing measures/information that can be used in decision making, aiming at improving performance in welfare services. In measuring the impacts of welfare services, the focus moves from organisations to the service system level, and information provided by this research may be utilized in comparing different types of services in the same context. However, questions related to prioritization of services or questions related to willingness to pay, values or political aspects related to decision making are not in the scope of this study.

Although this research is conducted in Finland, the results of the study may be utilized in other European countries, especially in Nordic countries, where the basic principles in arranging welfare services resemble the Finnish context (Hiilamo et al., 2013; Johnsen et al., 2006). Performance measurement solutions developed in this research focus on service provision in welfare services, which indicate that they may be applicable in welfare services with similar preconditions (e.g. focus on well-being of clients rather than on financial profits) in other countries.

Next, research strategy, including research setting and research process, methodological approach, research methods and empirical data used in the research are described.

3.3. Research setting and process

The research setting and research process in the empirical context of the study is described in this section. Welfare services are described as a heterogeneous group of services with various challenges related to performance measurement and management (see Chapter 2.1.). In this research, many separate research projects including various research methods and data were conducted in order to address different challenges related to performance measurement and management, and to fulfill identified research gaps.

The empirical material of this research consists of data collected in six separate research projects that the author has participated during years 2008 – 2013. Figure 3 illustrates the time and duration of the research projects undertaken within this time frame. All research projects have their own themes, objectives and data (see Table 2). However, there are many similarities among the research projects included in this work. First of all, all six projects relate to performance management in welfare services. The motivation of all six research projects is related primarily to the practical managerial needs to demonstrate the performance of services to different stakeholders and/or the need to develop tools for

managing performance. In most projects, the objective entailed the development of managerial tools, for example performance measures or measurement system. Thus, the motivation for the research arose from the needs of the welfare service sector, whether from organisations' or programmes' needs to find new ways of managing and demonstrating their performance. The empirical research carried out in many different research projects offers rich, versatile empirical data for the research. The results of the empirical findings are reported in six research papers that are included in the second part of this dissertation.

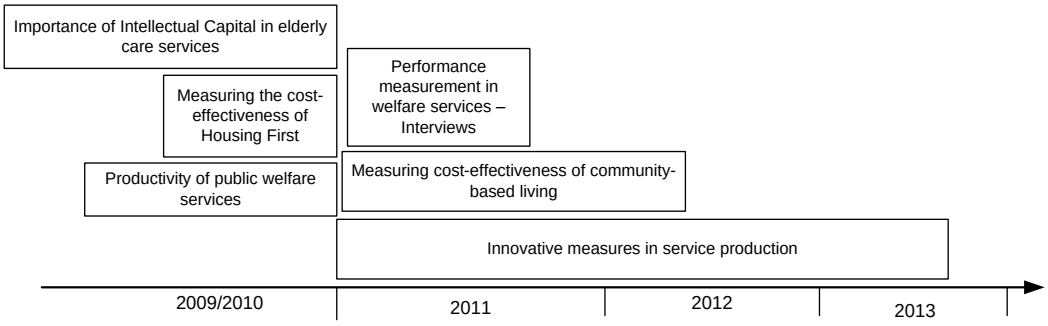

Figure 3. Research projects.

Figure 4 illustrates the connections between different research projects, empirical material utilized in this research and research articles of the thesis. The research process started by exploring the role of intellectual capital in the provision of elderly care services in Multiple Case Study B. This research project started from the perception that intangible aspects are focal in the non-profit elderly care sector, but there are no means to make them visible or manage them in practice. The research project began with interviews of managers of three non-profit elderly care organisations in 2008. Managers were interviewed in order to map current IC management tools and future needs concerning IC management. Case organisations and results of the interviews are described in Paper II. The research process continued as action research in the form of individual IC development projects in three case organisations during 2009. The purpose of these development projects was to gather information about the intangible resources of non-profit elderly care organisations (to supplement managerial interviews) and to develop useful IC measures and management methods for the purposes of each case organisation. In addition, information about success factors and challenges related to the development process, as well as benefits and outcomes of the project, was gathered. Results of the development projects are reported in Paper III.

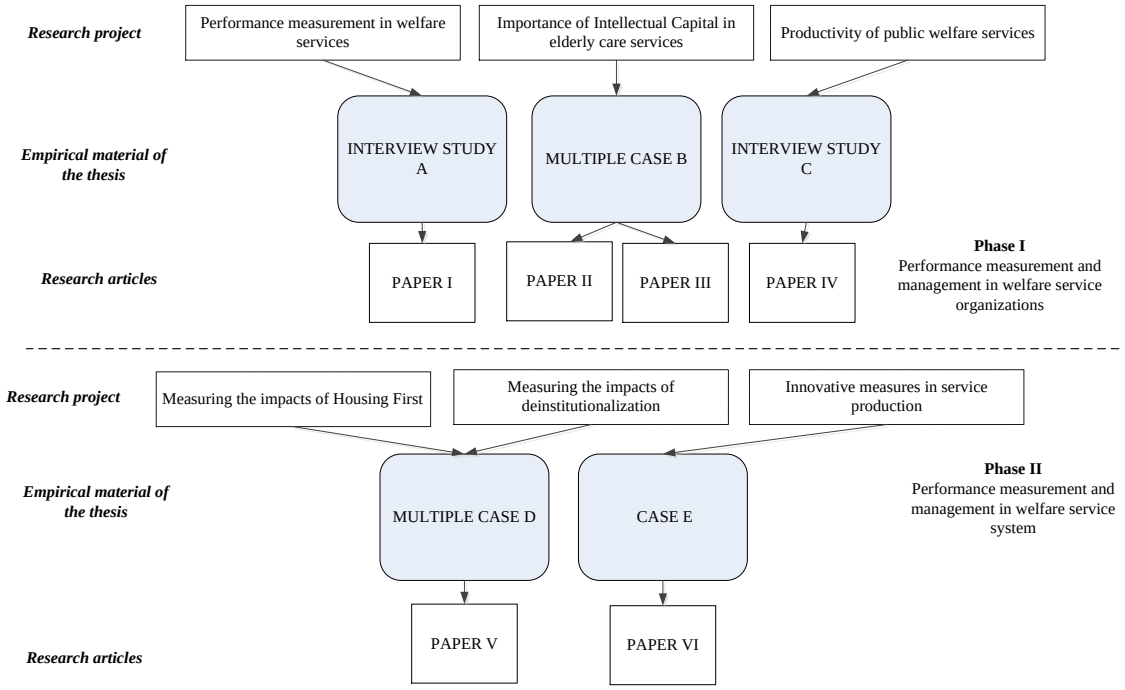

Figure 4. The research process

Multiple Case Study B offered initial understanding about factors that are important for performance of welfare service organisations, especially from an intellectual capital management point of view. Multiple Case Study B also offered initial understanding about success factors and challenges related to performance measurement development projects in welfare service organisations. In order to gain a more thorough understanding of key elements of performance in welfare services more widely, the state of performance measurement and management, and needs related to performance management in welfare services, a separate survey in the form of Interview Study A was conducted in 2011. Interview study contained 15 private, public and non-profit organisations operating in the welfare service sector. Results of Interview Study A (Paper I) strengthened and complemented the initial understanding of key elements of performance in welfare services. Concurrent with Multiple Case Study B, the researcher conducted Interview Study C to explore and deepen the understanding of factors affecting the success of performance measurement system implementation carried out in a large organisation in the welfare service sector (Paper IV).

In the first phase, research projects and empirical data (Multiple Case Study B, Interview Studies A and C) concerned performance and performance management and measurement of welfare services in service organisations. The initial idea of the research was to focus on performance measurement and management of *welfare service organisations*, illustrated as Phase I in Figure 4. However, results of the research conducted indicated that measuring and managing performance at an organisational level gives only a partial view of the phenomena. One of the discovered needs in performance

measurement related to measuring the impacts of services in the welfare sector. These findings, along with practical needs arising from the field (Multiple Case D) offered the researcher the possibility to study how to measure impacts of new types of services. At that point, the scope of measurement moved from organisational level to the *service system level*.

Multiple Case Study D compiles two cases of measuring impacts of service innovations in welfare services. In the first case, the impacts of a new type of accommodation model, Housing First for homeless people, were measured in 2010. In the second case, the impacts of deinstitutionalization of disabled people were measured in 2011. During the research, the theoretical framework and sequential process model for measuring multidimensional impacts of newly established services was constructed and applied. Both case studies included measuring impacts at the service system level and at the individual client level. Measuring impacts at the service system level related to changes in the quantity and cost of services used and entailed quantitative data collection from client databases administrated by various authorities. Impact measurement at the individual level that included changes in the qualitative aspects related to clients' lives was conducted by interviewing clients or family members in both cases (see Paper V for more details of cases).

The framework presented in Multiple Case Study D may serve as a tool for decision makers (i.e. public administration) for assessing the impacts of different options to provide services in the welfare service sector. However, it has limitations related to its usability as a managerial tool; for example, impact measurement is usually conducted by an outside expert and is non-recurring and retrospective. For managing effectiveness in services provided by inter-organisational co-operation, different types of approaches are needed. Case Study E (Paper VI) illustrates the development of a performance measurement system that supports performance management of the welfare service system in practice, especially in terms of effectiveness. In this study, a performance measurement system focusing on the management of effectiveness of elderly care services provided through the co-operation of various organisations was designed.

The empirical research process of this thesis in many ways represents the case study approach proposed by Eisenhardt (1989). In this research, theoretically useful cases were chosen; for most of the research process, multiple researchers were involved; research included both qualitative and quantitative data; and flexibility within the research allowed the study to change course (i.e. expand to the service system level) as themes emerged during the process.

3.4. Methodological approach

Various methodological considerations affect the researcher's choices while conducting research. This research examines how the performance of welfare services can be measured at different levels of the welfare service system. In addition, this research aims at providing a more structured conceptual view of performance measurement in the context of welfare services and practical managerial tools for measuring and managing performance in welfare services. As the main interest of this research is to provide new information about performance measurement in welfare services to support performance management in the stated context, the starting point of this research is practical rather than theoretical. Overall objectives and research questions of this dissertation are more practically than theoretically oriented, aiming at finding solutions to real life situations (understanding and improving performance in welfare services), which indicates that this research is applied rather than basic research and represents a hermeneutic paradigm rather than positivistic (Gummesson 2000, p.178, Olkkonen, 1994). As the research questions of this research necessitate multiple views, the focus is on practical applied research that aims at finding solutions to real-life problems and integrating different perspectives in interpreting the data, and the research utilizes multiple method designs, the research philosophy in this research can be characterized as presenting *pragmatism* (Laitinen et al., 2014, p. 10; Saunders et al. 2009, p. 119).

At the starting point, the researcher did not have extensive prior knowledge about the phenomena under study. There also was not a sound theoretical base (i.e. one certain theory) for the research. The objectives and starting point of this thesis necessitated a research approach that is able to provide rich, in-depth understanding of the phenomena (performance, its measurement and management) in its context. *A qualitative research approach* is considered suitable in situations such as this, where the aim of the research seeks to add knowledge/understanding about phenomena with limited prior knowledge, and the research problem focuses on organisations, groups and individuals (Ghauri et al., 2005, p. 110-111, Gummesson, 2000). Traditionally qualitative research is widely used in social and behavioral sciences, but qualitative methods also have become increasingly widespread in management research (Gummesson 2000, Voss et al., 2002).

The understanding and knowledge of the researcher have developed during the research process, leading to research questions and results that were not planned or intended in the beginning of the process (see Chapter 3.3. for more details about the research setting and process in the empirical context). In this research, many separate research projects were carried out to address various challenges and needs related to performance measurement and management in the welfare services sector. This was considered an appropriate research approach; with many smaller research projects, the researcher was able to investigate performance measurement in various situations and was able to use different methods and data to achieve a rather versatile picture of the topic.

Research projects and needs arising from the welfare sector had focal role in the research process. Thus, this research process can be characterized *as a hermeneutical spiral*, an iterative process in which each stage of the research (research projects) provides the researcher with knowledge creating a different level of preunderstanding at each stage of the research (Gummesson, 2009, p. 70). The theoretical framework of the research has evolved along with the research process. This is typical for systematic combining, where the researcher is not able to identify all the relevant literature beforehand, since the empirical fieldwork parallels the theoretical conceptualization (Dubois & Gadde, 2002). Thus, the need for theory/relevant theoretical background is identified during the process. This type of research approach can be characterized as an abductive approach. Whereas a deductive approach is concerned with developing propositions from current theory and makes them testable in the real world, and an inductive approach generates theory systematically from data, an *abductive approach* underlines the continuous interplay between theory and empirical observations. An abductive approach, like the approach of this research, stresses theory development rather than generating new theory (Dubois & Gadde, 2002).

It is challenging to find an unambiguous definition for qualitative research. As a term, qualitative research may be perceived as an umbrella concept including a wide variety of different types of interpretative techniques aiming at describing, decoding, translating or otherwise studying the meaning, not the frequency, of phenomena in the social world (Ghauri et al. 2005, p. 202; Tuomi & Sarajärvi, 2009, p. 9). Usually qualitative research is defined in relation to quantitative research. Qualitative research is more explorative and unstructured, with an emphasis on understanding, while quantitative research emphasizes more descriptions and testing of hypotheses (Ghauri et al., 2005, p. 202). Usually the procedure of the research is considered the main difference in quantitative and qualitative research. In quantitative research, data is in numeral form, and findings are arrived at by use of statistical methods, whereas in qualitative research, data may be presented in many forms (words, picture, video clips), and research methods are more flexible and unstructured (Ghauri et al. 2005, p. 109). This research represents qualitative research, aiming at answering research questions typical for qualitative research and utilizing a rich variety of data collection methods, including interviews, participant observation in workshops, and databases/archives.

The case study was chosen as a research method for this research. According to Yin (2009), "case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident". The case study comprises a comprehensive method that covers the logic of design, data collection techniques, and specific approaches to data analysis (Yin 2009, p. 18). Similarly, Saunders et al. (2009 p. 145-146) cites the case study as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life

context using multiple sources of evidence". There are various research methods that a researcher can choose from. Yin (2009, p. 6-9) points out that the selection of a research method should be determined by three conditions: the type of research question, the control investigator has over actual behavioral events and the focus on contemporary as opposed to historical phenomena. Case studies can be used to attain various aims: to provide description, test theory, or generate theory (Eisenhardt, 1989). In this research, the aim is to provide description and develop theory rather than testing existing theories. The use of the case study in management research has increased in past decades, and it has become increasingly accepted as a scientific tool in management research (Barratt et al., 2011; Gummesson, 2000)

There are various reasons why the case study was considered as a suitable research method for this thesis. In this research, the aim is to find out how the performance of welfare services can be measured and managed at different levels of the welfare service system. Case studies are the preferred method in studies like this when "how, why and what" questions are posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon in a real-life context. As indicated earlier, understanding contextual factors is important in measuring performance in welfare services. The case study method allows researchers to gain rich understanding of the context of the research and the processes conducted (Yin 2009, p. 2; Saunders et al., 2009, p. 146), which supports its suitability as a research method for this study. To summarize, Voss et al. (2002) have cited three focal strengths of case research: 1) it allows studying phenomena in its natural setting and developing relevant theory from the understanding gained through observing actual practice; 2) the case method enables the questions of why, what and how to be answered with a relatively full understanding of the nature and complexity of the complete phenomenon; and 3) the method is suitable to early, exploratory research where the variables are not known and the phenomenon is not yet understood.

As a whole, this research can be categorized as a *multiple case study*, involving both single- and multiple-case designs. Compared to single-case research, the evidence from multiple cases is usually considered more compelling, and the overall study is therefore regarded as being more robust. In case studies, the selection of cases is based on theoretical sampling, which means that cases are selected because they are particularly suitable for illustrating and extending relationships and logic among constructs (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). In multiple-case studies, replication logic in the form of either literal replication (cases predicts similar results) or a theoretical replication (cases predicts contrasting results for anticipated reasons) is used in selecting cases (Yin 2009, p. 54). In this research theoretical replication logics have been used. In addition, sufficient access to data through several research projects was the focal aspect affecting the selection of cases. The research process in empirical context and reasons for case selection was described in Chapter 3.3. The benefits of multiple-case study relate to

the fact that analytic conclusion arising independently from two or more cases are more powerful than ones coming from a single case. On the other hand, multiple-case studies are expensive and time-consuming to conduct (Yin 2009, p. 61). This research includes two multiple-case studies, Multiple Case Study B including three non-profit elderly care organisations and Multiple Case Study D including impact measurement of new types of welfare services in two cases.

The single-case design is appropriate in many situations, depending on the purpose of the research. A single case can represent the critical case in testing theory, it can be an extreme or unique case, a representative or typical case or a revelatory case (Yin 2009, p. 47-49). The benefits of a single-case study include the opportunity for depth of observation. On the other hand, the generalizability of conclusions drawn from a single case is limited (e.g. Voss et al., 2002). This research involves Single Case Study E that can be characterized as a representative or typical case of inter-organisational co-operation in welfare services.

An action research approach is applied in this research in developing performance measurement solutions with participating organisations (in Multiple Case Study B and Case Study E). Action research is considered as "an orientation to knowledge creation that arises in a context of practice and requires researchers to work with practitioners" (Huang, 2010). Action research is a pragmatic approach that aims both at solving current practical problem (and taking action) while learning from outcomes and expanding scientific knowledge and theory (e.g. Coughlan & Coghlan, 2002). Action research was chosen as a method of examination for the process of developing performance measures in this study, because it offered access to a real-life situation and data as the researcher participated in design processes as a facilitator. The borderline between action research and management consultancy may become blurred. Theoretical goals of the research, along with quality criteria used in assessing the results, are focal aspects that differentiate it from consultancy. In action research, goals of the research relate to contributing to scientific knowledge, and assessment/qualification of results is done by a scientific community, whereas in consulting the aim is to solve a client's problems, and assessment of results is conducted by the client (Coughlan & Coghlan, 2002; Gummesson, 2000, p. 172).

Action research may be defined as an iterative process involving researchers and practitioners acting together on problem diagnosis, action and reflective learning. In action research, members of the system (personnel) participate the action and are not objects of the research, as is true in traditional research (Coughlan & Coghlan, 2002). In action research, the role of researchers differs from the traditional role of researchers; in action research they act as participants "on site" rather than as outside observers, thereby gaining insights into unstructured situations and variables/issues that may not initially be apparent (Westbrook, 1995). So action research is not just interviewing or observation that takes place in an organisation, but rather joint action aiming at solving actual real-

life problems. Thus, action research is research in action rather than research about action, using a scientific approach to resolve social or organisational issues together with those who experience these issues. Usually the aim of action research is to improve or develop the situation in some aspect in the target organisation (Coughlan & Coghlan, 2002). The focal strength of action research relates to its ability to provide managerially relevant outputs, since the relevance of action research is guaranteed by working with management on issue the organisation itself wants to address (Westbrook, 1995). In this research, action research was carried out in the form of workshops facilitated by researchers. Workshops are described in more detail in the next chapter.

To sum up, the core features of action research include working in the context of action, which indicates that researchers have to get into an organisation and be engaged with the practitioners there (Huang, 2010). As an iterative process, action research requires co-operation between researchers and practitioners and continuous adjustment to new information and new events (Gummesson, 2000, p. 119). This is apparent especially in Multiple Case Study B (Paper III) of this research; the starting point of measurement development was similar in all cases, but measurement solutions developed were very different in each case, since development work (empirical research project) was adjusted to the needs of each organisation.

In many cases (in Papers III, V, VI) frameworks were constructed in order to support performance measurement and management in different managerial situations in welfare services, which indicates that the research has features of **constructive research** (cf. Kasanen et al., 1993; Labro & Tuomela, 2003). Especially Multiple Case Study D (Paper V) represents constructive research in many ways; the aim was to construct a framework to measure the multidimensional impacts of welfare service innovations. The framework was implemented in two cases, and its applicability to measure impacts in welfare services was analyzed. However, as a whole this research cannot be regarded as constructive research. Since the aim of this research was not to construct a framework for measuring performance in welfare services, the scope of the research is descriptive rather than normative, and the research did not follow the required steps of constructive research (cf. Kasanen et al., 1993).

This research involves a **survey** carried out as an interview study (Interview Study A) including 15 welfare service organisations in the public, private and non-profit sectors. Interviews as a data collection method are described in more detail in Chapter 3.5.1. A survey was conducted in order to get a broader overview of performance measurement and management in the Finnish welfare service sector. Except for Interview Study A, all other interviews were related to case studies that focused on specific managerial aspects identified in the welfare service organisations or in the service system. The role of the survey in this research was to map key elements of performance and the current state and development needs related to performance measurement and management in the Finnish welfare service sector.

Figure 5 illustrates the research philosophy and the overall decisions regarding the research strategy of this study based on the "research onion" concept developed by Saunders et al. (2009, p. 108). As stated earlier, this research applies pragmatic research philosophy. While there was continuous interplay between empirical observations and theory, this study was considered as abductive, rather than inductive or deductive, research. This research utilizes many research strategies; as a whole, this research was considered as a multiple case study, involving both single- and multiple-case designs. However, this research also entails action research (in Multiple Case Study B and Case Study E), a survey (Interview A), and archival research has a focal role in the Multiple Case Study D. For the most part, this research is qualitative research, but it also combines quantitative and qualitative data collection methods and analysis procedures (Multiple Case Study D), which indicates that this research can be characterized as mixed methods research. For the most part, this research concerns performance measurement at a particular point in time, and it can be considered cross-sectional research. However, Multiple Case Study D concerns measuring impacts of a new type of services, which entailed consideration of changes in the service use and costs over a certain period of time, thus representing longitudinal research.

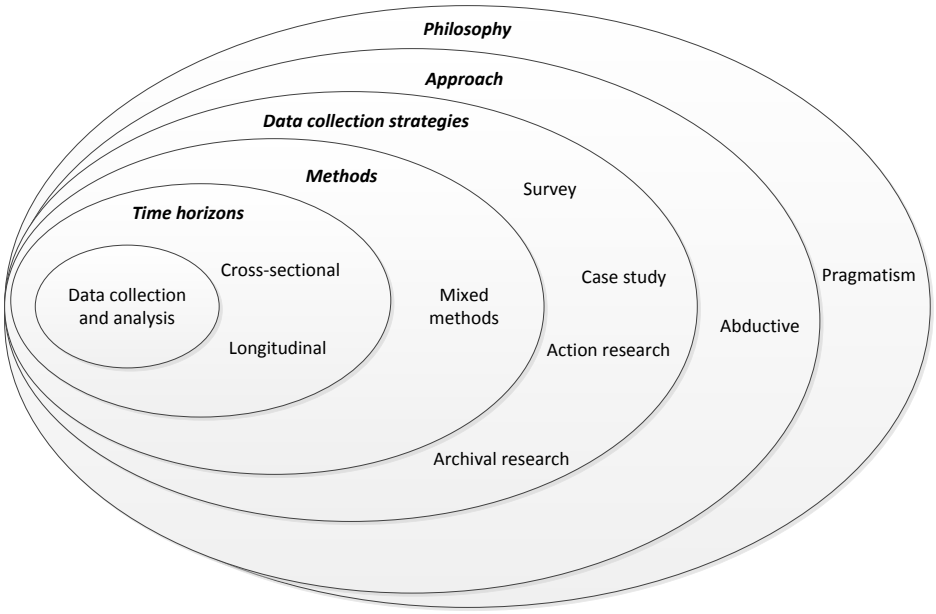

Figure 5. The research strategy.

3.5. Data collection methods

Various data collection methods can be used in case studies (Eisenhardt, 1989; Gummesson, 2000). The most central data collection methods in this research are interviews, participant observation in workshops, use of archival records and utilization of different types of documentation, which are typical sources of evidence in case studies (Yin 2009, p. 101). Usually case studies conducted in organisations include collection of some type of documents, such as internal reports, proposals, e-mail correspondence, news reports and articles, and possibly earlier studies of the same community. In all case studies in this research, documentation related to the organisation (e.g. presentations about the organisations, earlier projects, and current management systems) was utilized. This documentation was especially helpful in the beginning of the case studies in order to get a preliminary understanding about the organisation and its operations. Archival records include both statistical data available publicly and organisational data with restricted availability. Archival records (client databases) form an important part of the data in Multiple-Case Study D.

Table 2. Summary of the empirical material.

	Interview study A	**Multiple case B**	**Interview study C**	**Multiple case D**	**Case E**
Research project	Performance measurement in welfare services	Importance of Intellectual Capital in elderly care services	Productivity of public welfare services	Measuring the impacts of Housing First Measuring the impacts of deinstitutionalization	Innovative measures in service production
Objective of the research	To identify elements of performance in welfare services, current measurement practices and needs	To develop measures of intellectual capital	To identify success factors in implementing performance measurement system	To measure impacts of welfare service innovation	To design performance measurement system for measuring effectiveness.
Phase of measurement	-	Design	Implementation	Design and implementation	Design
Number of units in the data	15 welfare service organisations, 15 interviews	3 welfare service organisations	One case organisation Two service units	2 organisations	One case organisation
Services	elderly care (4) healthcare (4) rehabilitation services (4) education (3) *(8 social, 4 healthcare services, 3 education)*	Elderly care services *(social services)*	Day care Elderly care *(education, social services)*	Housing service for homeless people Community-based living for disabled people *(social services)*	Elderly care services (geriatric outpatient clinic) *(social services, healthcare services)*
Sector	public (8), non-profit (3), private (4)	non-profit	public	non-profit	public
Period	2011	2008 – 2010	2009	2010 2011	2011 – 2013
Data collection methods	Interviews of managers (15)	Interviews of managers (6) Action research	Interviews of managers (10)	Interviews of managers (3) Interviews of clients (12) Quantitative data collection (client data bases)	Group interview Action research

Figure 6 illustrates how individual studies of this research represent different types of welfare services. The Interview Study A includes organisations from all three sectors in welfare services; healthcare, education and social services. Services provided by case organisations in Multiple Case Study B (elderly care services) and D (housing and care) represent social services. The Interview study C included two types of services, elderly care and child day care, which indicates that study C can be placed in the intersection of education and social services. Services provided by geriatric outpatient clinic in the Case Study E include both healthcare and social services. Thus, the most of individual studies of this research represent social services. However, many times services within welfare services are interconnected, for example in the Case Study E, services of geriatric outpatient clinic includes both healthcare services (e.g. geriatricians) and social services (home care), which indicates that services are difficult to be categorized in certain areas.

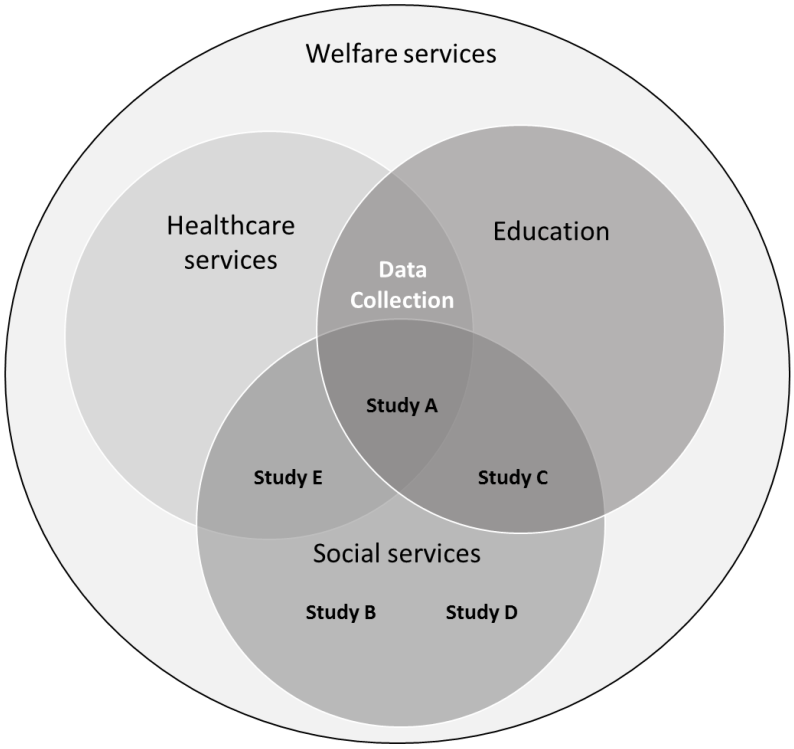

Figure 6. Empirical data of research in the context of welfare services.

3.5.1. Interviews

Interviews along with action research are the most important data collection methods in this dissertation. This research contains a total of 47 interviews (see Table 2). An interview can be defined as a "purposeful discussion between two or more people" (Saunders et al., 2009, p. 318). The interview is one of the most important sources in case studies and is often considered the best data collection method (Yin 2009, p. 106). Based

on the level of formality and structure, interviews may be divided into three categories: structured, semi-structured and unstructured (in-depth) interviews. Interviews in this study are semi-structured interviews. Semi-structured interviews are used to answer are "what", "how" and "why" types of research questions. In semi-structured interviews, the researcher has a list of themes or questions to be covered, but the order of questions may be varied, and additional questions may be posed if needed, which makes a semi-structured interview a flexible method for data collection (Saunders et al. 2009, p. 320-321). In this research, themes and questions of semi-structured interviews were based on literature reviews conducted and, in some cases, on the information the researcher had gained through earlier empirical research projects. Interviews can be done by mail, email, telephone or in person (Ghauri et al. 2005, p. 132). In this research, most of the interviews (40) were individual face-to-face interviews.

In the beginning of **Multiple Case Study B**, managers of three elderly care organisations were interviewed in order to gain understanding about of the role of intellectual capital, existing practices regarding IC management and measurement, and needs regarding IC management (Paper II). Interviews were carried out at the preliminary stage of the case study when interviewees were not yet very familiar with the concept of IC. Thus, rather than asking directly about intellectual capital or intangible assets, the interviewees were asked to identify success factors, challenges and risks related to their organisation and operations. In addition, interviewees were asked to identify eligible outcomes of the organisation from the perspectives of various stakeholders. In each case organisation, two managers, the managing director and another person in a managerial position were interviewed. This was considered suitable in order to receive a broad perspective on the resources, functions and overall management of organisations. Interviews were semi-structured, face-to-face interviews and lasted from one to two-and-one-half hours. Interviews were tape recorded and transcribed later. This resulted in about nine hours of taped material and 39 pages of written notes.

In the **Interview Study A**, 15 managers of Finnish welfare service organisations in non-profit, for-profit and public sectors were interviewed in order to gain a comprehensive understanding about key elements of performance in welfare services, the state of performance measurement and management, and needs related to performance management in welfare services (Paper I). The themes of the semi-structured interviews in the study partly overlapped with the interviews conducted in the Multiple Case Study B. The managers represented different types of organisations in welfare services, ranging from elementary schools to health centres and long-term intensive care units (see Table 2 and Paper I for more detailed information). Both purchasers and providers of welfare services were interviewed. Eight interviewees represented the public sector, three of them being purchasers, four the private sector and three the non-profit sector. Organisation size varied substantially, from an elderly care organisation with 35 employees and a budget of 1 million euros to a municipal education organisation of 60,000 pupils, 6,000

employees and a budget of 600 million euros. All persons were interviewed individually, and most of the interviews were face-to-face; five were conducted by telephone. The duration of interviews varied from half an hour to an hour-and-a-half. The interviews were audio recorded and transcribed later, resulting in over 13 hours of taped discussions, which corresponds to about 60 pages of written notes.

In **Interview Study C,** users of a newly established performance measurement system (productivity matrix) in the Social Services Department in the city of Helsinki were interviewed in order to obtain information about technical and organisational success factors supporting measurement system implementation (Paper III). Interviews were related to a productivity measurement system development project carried out in the Department during 2007-2008, during which mew measurement systems for child day care and elderly care were developed. Ten persons working in two different services (child day care and elderly care) were interviewed, and interviews were carried out by a researcher who had not been involved in the earlier development of the measurement systems. Interviews were individual face-to-face interviews. The duration of each interview was approximately one hour and they were recorded and transcribed later.

In **Multiple Case Study D** (Paper V), managers of service units were interviewed in the beginning of the research projects in order become acquainted with the context and the service innovations in question. In addition, in the case of Housing First, the representative of the municipality was interviewed in order to gain an initial understanding about the new type of accommodation unit and about the phenomena of homelessness in general. In Multiple Case Study D, interviews of clients formed the focal point of the research data. In both cases, clients of the new type of services were interviewed in order to find out what qualitative impacts newly introduced welfare services have on clients' quality of life. In Case A, the aim was to measure the impacts of the new type of accommodation model, Housing First (HF) for homeless people. In that case, six former homeless persons who had moved to the HF unit were interviewed by two researchers. In Case B, the impacts of deinstitutionalization (community-based living) of disabled people were measured. In Case B, family members of five clients were interviewed because the clients themselves were mostly unable to speak. One researcher conducted interviews in Case B, and most of them (4), like all interviews in Case A, were face-to-face interviews. One of the clients in Case B participated in the interview, and in that case the interview was conducted by a nurse. One of the interviews was conducted by telephone. In both cases, the themes of semi-structured interviews were based on the literature review conducted prior to the interviews (see Paper V for more details about themes and questions of interviews).

In **Case Study E** (Paper VI), a group interview with the project group was carried out prior to the actual development work (workshops). The project group (5 persons) was interviewed in June 2011 in order to get information about the organisation and services it provides, current measurement procedures, and needs and expectations regarding the

development work. The interview was conducted by two researchers who acted as facilitators in the workshops later on. The interview lasted approximately two hours, and researchers made notes about the interview that were analyzed afterwards and used as a starting point for the workshops.

3.5.2. Workshops

This research involves four action research projects altogether (see Table 2) that included workshops facilitated by two researchers. Each action research project had both practical and scientific goals. In **Multiple Case Study B**, development projects including four to seven workshops were carried out in three case organisations during 2009 (Paper III). The purpose of these workshops was to collect information about the intangible resources of non-profit elderly care organisations and to develop useful measures and management methods for the purposes of each case organisation. The structure of the development work was based on two well-known models for IC management: the Danish guidelines (Danish Agency for Trade and Industry, 2000) and Meritum Guidelines (Meritum, 2001). In practice, the stages of these development projects included the identification of strategic targets and proceeded to the recognition of key intangible resources, ending up developing measures for intangible resources from the value creation point of view. Project groups consisted of five to ten participants, most of whom were in managerial positions. About six months after the development project, evaluation workshops were held in order to get participants' assessments of the development project, its benefits and outcomes.

In **Case Study E**, an action research project including five workshops was carried out in 2011-2013 (Paper VI). The practical aim of the development work was to design a performance measurement system to support performance management of Geripol (service provided by the co-operation of various organisations) especially in terms of effectiveness. The scientific goal of this action research was to examine how the conceptual framework of effectiveness based on the research literature could be operationalized and to determine if the performance measurement design process is applicable in the context of inter-organisational co-operation in welfare services. The working group consisted of seven persons, all in managerial positions in different organisations in the co-operative setting, representing both service providers and purchasers of elderly care services in a large Finnish municipality.

The main data collection method in all workshops was participant observation, where the researcher is not merely a passive observer, but in this case acts as a facilitator (Tuomi & Sarajärvi, 2009, p. 82; Yin, 2009, p. 111). Both of the researchers worked as facilitators, but adapted slightly different roles; one focused more actively on facilitating the conversation, while the other focused on collecting data by making notes on conversations during the workshop.

3.5.3. Quantitative data collection

In Multiple Case Study D (Paper V), client databases administrated by various authorities, (e.g. the city social and healthcare office, the police services and hospital districts) formed the focal data of the research. This type of research can be characterized as archival research, which utilizes secondary data that is originally gathered for other purposes than this particular research (e.g. Saunders et. al., 2009, p. 150). In the research, the extent and cost of service utilization for a certain period of time before and after the intervention were calculated. Services examined varied between two cases, since homeless people and disabled people have different service needs. However, in both cases health and social services formed the main groups of services under study. In the case of homeless people, legal services (police) were also needed. Since the information on service utilization of health, social, and legal services at the individual level is strictly confidential, obtaining the information required permission from both the individuals under study and the relevant authorities.

3.6. Data analysis

Data analysis includes examining, categorizing, tabulating, testing or otherwise structuring evidence to draw empirically based conclusions (Yin, 2009, p. 126). The aim of qualitative data analysis is to increase the value of information by creating meaningful and coherent information out of scattered data. Thus, analysis is used to clarify the data, which is a precondition for drawing explicit and reliable conclusions (Tuomi & Sarajärvi, 2009, p. 108). In qualitative research, data collection and analysis are often carried out simultaneously in an interactive process in which collected data are analyzed, initiating new questions and further data collection (Ghauri et al. 2005, 203).

Interviews included in this research are semi-structured, and themes of the interviews are based on research questions and literature reviews related to each study. The answers compiled from the interviews were categorized according to themes generated by literature reviews. This phase can be characterized as data reduction, which refers to the process of selecting, focusing, simplifying and abstracting the data (Miles & Huberman, 1994). In each study, transcribed data from interviews was gathered in one chart based on themes of interviews. This type of data display was helpful in the data analysis; the compact form assisted the researcher identifying common themes in the answers, as well as in coding and quantifying the data.

Each workshop was analyzed by two researchers. After each workshop, the researchers discussed and analyzed the notes and made summaries of the results of workshops that were discussed with participants at the beginning of the next workshop session. Thus participants had an opportunity to comment on the researchers' observations and analyses, and data collection and analysis was an iterative process that continued

throughout the development work. The author was one of the facilitators in all four action research projects described above.

In Multiple Case Study D, quantitative data acquired from various authorities was analyzed by the author. Data from different authorities was collected into one excel-database, and participants' use of various services before and after the intervention was traced and analyzed individually based on their social security numbers. Data collection and analysis was part of the implementation of the measurement framework designed in the research. Data collection provided the researcher with valuable information about challenges and possibilities related to implementation of the measurement.

3.7. Research structure

This research is comprised of six academic articles. Figure 7 illustrates how the empirical data of the research is linked to publications I – VI, and how the publications address the research questions of this study.

Survey -type of Interview Study A outlines the starting point of the research by mapping the key elements of performance, the state of performance measurement and management and the needs related to performance measurement in welfare services. Case studies and Interview Study C focus on themes related to performance measurement and management in welfare services that were considered focal based on the survey and needs arising from the field.

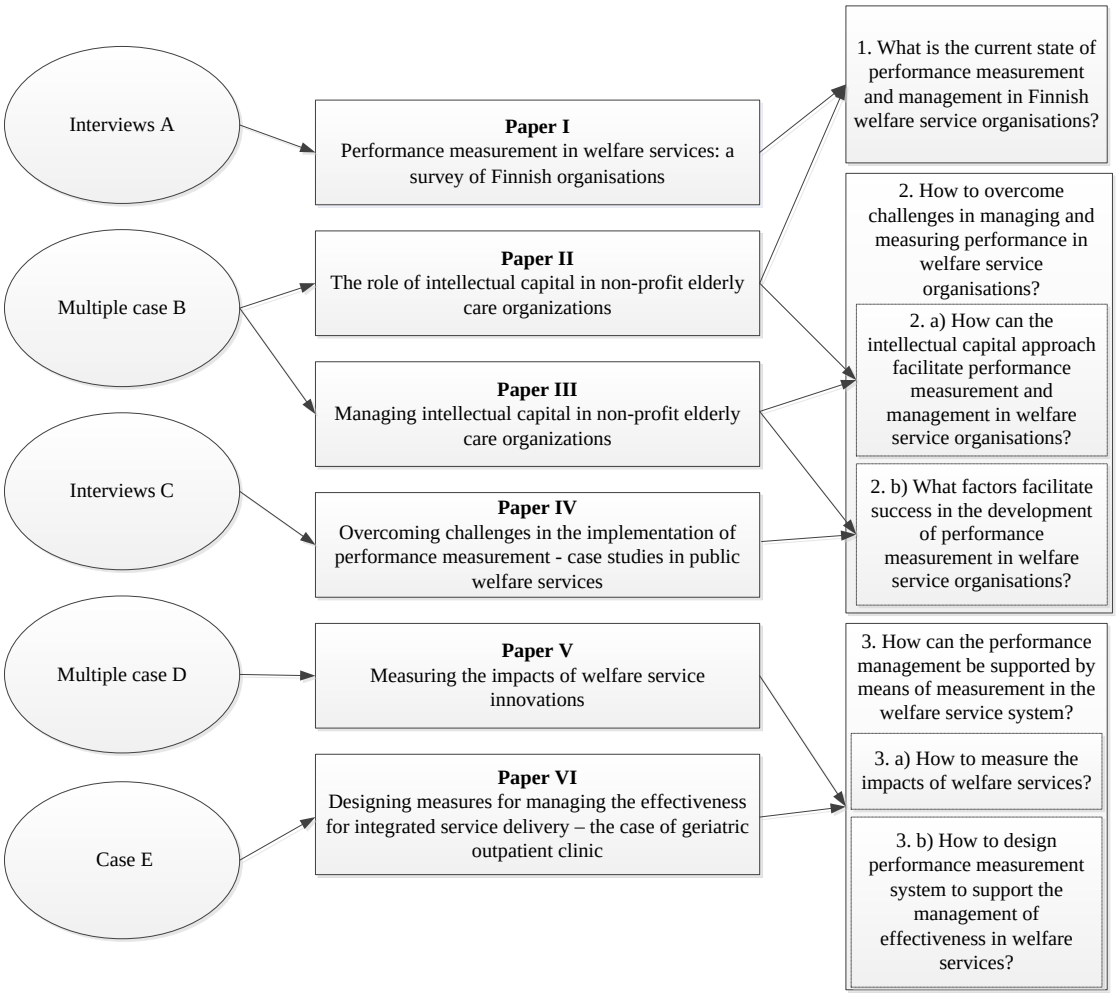

Figure 7. Structure of the research.

Table 3 summarizes the following information for each publication in this dissertation: the theme, the empirical data utilized, and the purpose.

Table 3. Publications

Paper	Focus	Empirical data	Purpose
I: *Performance measurement in welfare services: a survey of Finnish organisations*	Elements of performance in welfare service organisations; non-profit, private and public sectors, *organisational level*	*Interviews* of 15 managers of Finnish welfare organisations	Identifying elements of performance in Finnish welfare service organisations, how performance is measured in welfare services, and what are management needs regarding performance measurement.
II: *The role of intellectual capital in non-profit elderly care organizations*	Intellectual capital, non-profit/third sector organisations, service providers *organisational level*	Multiple case study research, three case-organisations; *interviews* (6) with managers of case organisations	To identify the central intangible resources in the operations of non-profit organisations, IC management practices and needs in IC management.
III: *Managing intellectual capital in non-profit elderly care organizations*	Intellectual capital management (performance management), service providers *organisational level*	Multiple case study research, *action research*, three case organisations.	To study how IC management can be applied in non-profit elderly care organisations.
IV: *Overcoming challenges in the implementation of performance measurement – Case studies in public welfare services*	Success factors of the measurement system implementation. public welfare services	*Interviews* of 10 persons in managerial positions	Evaluating factors affecting the success of the measurement system implementation.
V: *Measuring the impacts of welfare service innovations*	Impact measurement on service system level and on individual level. *service system level, individual level*	Multiple case study, two cases *interviews* of clients (12) and managers (3), quantitative data (archives)	Measuring impacts of welfare service innovations and reporting the empirical results from two case studies.
VI: *Designing measures for managing effectiveness for integrated service delivery – The case of a geriatric outpatient clinic*	Effectiveness, *service system level*	Case study, *action research*, one case organisation	Designing a performance measurement system focusing effectiveness of a service provided in co-operation.

3.8. Summaries of publications

This thesis is comprised of six academic articles published in journals focusing on areas of performance measurement and management, knowledge management, services and information systems, management in the public sector, and management in healthcare. This section presents summaries of these publications and specifies the authors' role in three co-written publications.

Summaries of the six publications:

I. Performance measurement in welfare services: a survey of Finnish organisations

Sillanpää, V. (2011)

Measuring Business Excellence, Vol. 15, No. 4, pp. 62-70.

The paper outlines focal elements of performance in Finnish welfare service organisations, and current measurement practices and needs in performance measurement. In the research, 15 managers of Finnish welfare service organisations in public, non-profit and private sectors were interviewed. The research elaborates the concept of performance as perceived by welfare service managers, and it describes current practices and needs in performance measurement in welfare service organisations.

II. The role of intellectual capital in non-profit elderly care organizations

Sillanpää, V., Lönnqvist, A., Koskela, N., Koivula, U-M., Koivuaho, M. & Laihonen, H. (2010)

Journal of Intellectual Capital, Vol. 11, No. 2, pp. 107-122.

This paper examines how intellectual capital could be taken into account in non-profit elderly care organisations. The starting point of the paper is the observation that while IC might be a promising managerial approach for non-profit elderly care organisations, there is little empirical research about IC in the sector. The paper reports qualitative case studies of three case organisations, providing new empirical information about the importance of IC in the operations of non-profit elderly care organisations, existing practices in managing IC, and needs in IC management. In the empirical research, managers of three non-profit elderly care organisations were interviewed. This research contributes to previous IC research by empirically illustrating the role of IC in non-profit elderly care organisations and the way these organisations manage IC, as well as managerial needs related to IC.

III. Managing intellectual capital in non-profit elderly care organizations

Sillanpää, V. & Laihonen, H. (2012)

International Journal of Information Systems in the Service Sector, Vol. 4, No. 4, pp. 74-87.

This paper starts with the literature review of IC management and its role in value creation in non-profit elderly care organisations. Based on the literature, IC management is considered a highly promising approach for non-profit organisations, but the literature lacks empirical experience of IC management in the sector. In this paper, a modified IC management model is applied in three non-profit elderly care organisations. An IC development project, including identification of objectives of organisations, key IC related to achieving those objectives and managerial tools (measures) was carried out in three case organisations. The paper contributes to the IC literature by providing empirical understanding about the possibilities, benefits and limitations of applying IC management in the sector.

IV. Overcoming challenges in the implementation of performance measurement - Case studies in public welfare services

Jääskeläinen, A., Sillanpää, V. (2013)

International Journal of Public Sector Management, Vol. 26, No. 6, pp. 440-454.

The paper analyzes factors affecting the success of the measurement system implementation. The literature review of the paper discusses challenges and success factors related to the implementation of a performance measurement system. Based on the literature, technical and organisational factors affecting the success of performance measurement system implementation are outlined. In the empirical part of the research, the role of technical and organisational success factors related to implementation of the new performance measurement system is examined by interviewing users of the new measurement system in public welfare services.

V. Measuring the impacts of welfare service innovations

Sillanpää, V. (2013)

International Journal of Productivity and Performance Management, Vol. 62, No. 5, pp. 474-489.

This paper discusses impact measurement in welfare service context. The literature review identifies factors related to the impact measurement in welfare services and outlines current practices in impact measurement in the sector. At the end of the literature review, a conceptual framework for measuring impacts of welfare service innovations is presented. In the empirical part of the paper, the framework is applied in two cases to measure impacts of service innovations in the welfare service context. The aim of the

case studies was to assess and illustrate the usefulness of the framework. The paper contributes to performance measurement research by introducing a new framework for assessing impacts of welfare service innovations both at service system and individual levels.

VI. Designing measures for managing the effectiveness for integrated service delivery – The case of a geriatric outpatient clinic

Sillanpää, V. (2015)

International Journal of Public and Private Healthcare Management and Economics, Vol. 4, No. 1, pp. 36-52.

This paper is based on the notion that health and social services are increasingly produced in co-operation among several specialized organisations, which has increased the importance of service integration in the sector. While the literature acknowledges the need for performance measurement addressing outcomes and effectiveness of service integration, not enough is known about applying such measurement practices. This paper examines the design of a performance measurement system to support the effectiveness management of an integrated service delivery. The research identifies three aspects of effectiveness – community, client and network level. Empirical examination reveals that success factors for the design of measures for integrated service delivery include consensus on the targets, coordination and fluent co-operation among actors in the network. The paper contributes to performance measurement literature by illustrating how the design of system level measurement is carried out in practice and by analyzing the lessons learned.

Three of the research papers have been written in co-operation with other researchers and/or organisational participants. Table 4 describes the role of the author in co-authored papers.

Table 4. The role of author in co-authored papers.

Paper	Role of the author
II *The role of intellectual capital in non-profit elderly care organizations*	• Designed the study with the first co-author • Carried out interviews • Analyzed and reported the empirical data • Wrote the empirical part of the paper • Coordinated the writing process of the paper • Wrote the paper together with co-authors
III *Managing intellectual capital in non-profit elderly care organizations*	• Planned the case study with the co-author • Worked as a facilitator in all three case studies • Collected and analyzed data together with the co-author • Wrote the paper together with the co-author
IV *Overcoming challenges in the implementation of performance measurement - Case studies in public welfare services*	• Planned the interview with the co-author • Carried out interviews • Analyzed and reported the empirical data • Wrote the paper together with the co-author, focusing the empirical results and analysis

4. RESULTS

4.1. What is the current state of performance measurement and management in Finnish welfare service organisations?

The first research question addresses the perceived need to obtain the general view of the state of performance measurement and management in welfare service organisations in Finland. Earlier research literature appears contradictory regarding the state of performance measurement in the sector; while some studies report extensive use of multidimensional performance measurement frameworks (BSC) in general, others claim that organisations rely still on financial measures, and performance measurement culture is still in its infancy (Fryer et al., 2009; Hartman, 2012; Niiranen et al., 2005; Rantanen et al., 2007; Saunila et al., 2012). To elicit the current state of performance measurement and management in welfare service organisations, it is beneficial first to understand how managers in Finnish welfare service organisations perceive the key elements of performance, i.e. what elements constitute the performance that should be measured and managed. Next, the key elements of performance perceived by welfare service managers, currently applied performance measures and measurement systems, reasons for performance measurement and development needs in performance measurement in welfare services are outlined.

Elements of performance in welfare service organisations

As discussed in Chapter 1.3.2, performance can be considered as a multidimensional umbrella concept covering all aspects related to the success of an organisation and its activities (Tangen, 2005). Thus, performance may be an ambiguous concept in welfare service organisations. In this research, a focal task was to find how welfare service managers perceive the key elements of performance. The examination of key elements of performance was based on the conceptual framework derived from the literature, dividing the performance into four categories: resources, processes, outputs and outcomes.

Table 5 summarizes empirical results of the key elements of performance and performance measures or measurement objects in welfare service organisations in this study. Results are based on managerial interviews of a total of 18 organisations (Papers I and II).

Table 5. Elements of performance and performance measures or measurement objects in Finnish welfare service organisations.

Elements of performance in welfare service organisations		*Performance measures or measurement objects*[2]
Resources	Employees - motivation - commitment - competence; both professional competence and social/interaction skills - tacit knowledge Working atmosphere/environment Clients Financial resources Facilities and equipment	Employee satisfaction Competence level Employee turnover Number of sick days Well-being at work Sufficiency of financial resources Utilization rate of facilities
Processes	Client referral processes Customer service processes - reservation systems - treatment plans Management processes	Queuing times Speed of appointment system Number of deviations and accidents (quality of services) Follow-up of treatment plans
Outputs	-	Financial measures: average cost/service provided Quantitative measures: e.g. number of customer visits, care days, residential days
Outcomes	Well-being of clients High quality of services Effects on service system level Fulfilling stakeholder expectations	Changes in clients' capacity/well-being, e.g. RAI, learning outcomes Customer satisfaction surveys Placements after the service period (after graduation, rehabilitation)

Employees and their competence, along with motivation and commitment, form a central part of *resources* of organisations operating in the sector. In addition to professional competence, employees' social and interaction skills are focal resources related to personnel. Clients in welfare services can be divided into three groups: actual end-users of services (e.g. patients), family members of end-users and organisational customers, who usually pay for the services. Clients are informants and actors in the service production, and their role in the overall service provision was considered essential in many organisations. Organisational clients (municipalities) are important especially for private and non-profit organisations, since they purchase services for actual end-users.

[2] The aim of the interviews was to draw an overall picture of the current state of performance measurement; it was not possible to create a more detailed listing of actual measures because of practical limitations (time).

The role of financial resources is considered central to enabling the operations, especially in recruiting employees. Tangible resources, such as facilities and equipment, were considered important resources, especially in healthcare and long-term rehabilitation services. Factors listed in Table 5 are common to all types of welfare service organisations (public, third-sector and private). In third and private sector organisations some additional resources were emphasized. Volunteers' role as a resource is acknowledged in third sector organisations. In addition, managerial resources and organisational factors, e.g. values, a positive working atmosphere and low hierarchy, which enables rapid decision making and flexibility, were emphasized in third-sector organisations. Private and third sector organisations also stressed factors related to reputation, image and brand, and co-operative partners and networks as essential resources to an organisation.

The functionality of customer service *processes* is closely related to achievement of the targets of the organisation, and thus form a notable element of performance. Processes related to direct customer service, like client referral processes, the appointment system and treatment plans ensuring timely and appropriate services were considered crucial processes of organisations. Only a few managers cited managerial processes, like those related to information sharing and motivating employees, as eminently central processes.

In this research, empirical examination of outcomes was based on managers' perceptions of organisations' intended targets. Direct outputs, like the quantity of services provided, were not outlined as focal elements of performance in an empirical examination of this research. The most focal *outcomes* related to clients, like the well-being of clients, promotion of well-being and client satisfaction. High service quality emerged as a focal outcome in almost all organisations. Some organisations outlined outcomes and effects on the service system level and the overall level of society, like decreasing the recurrent misuse of more expensive services, and the reduction of loneliness. Private and third sector organisations also identified commercial objectives related to market position/competitive position, like being the leading service provider, success in competition, profitability and profitable growth, reasonable pricing, expanding the supply of services and efficient capacity utilization.

Performance measurement in welfare services

Welfare service organisations in this study use mainly *separate measures related to elements of performance* rather than some measurement framework. All organisations in the study had sets of different types of measures including financial, quantitative and qualitative measures in use. Those applying some specific framework mainly applied Balanced Scorecard or a modification of it; about 40 % (7/18) of organisations utilized BSC or a modification of it. Quality systems (e.g. EFQM) were used in few organisations.

As employees were identified as the most important resource, most organisations had measures related to employee characteristics, like employee satisfaction, competence level, employee turnover, and number of sick days in use (see Table 5). Besides the

factors related to employees, sufficiency of financial resources was a critical measurement object in welfare service organisations. The smoothness of service processes was assessed by many measures, like queuing times and fluency of the appointment system. The quality of service processes was assessed with measures like deviations and accidents at work and by monitoring measures related to implementation of treatment plans (how well plans were implemented).

Although outputs were not considered a key element of performance, welfare service organisations have many kinds of *output measures* in use. The most essential financial output measures relate to assessing the average cost per service unit provided. Quantitative measures describing service production, like number of customer visits, care days and residential days are commonly collected and usually claimed by stakeholders (ministry, municipalities) in welfare services, and many times called "statistics". *Outcomes* in welfare services are measured by many different practices. For example, elderly care organisations monitor changes in clients' well-being by applying different clinical measures, like the Resident Assessment Instrument (RAI) and other mental and physical tests of clients. In educational institutions, outcomes were measured by assessing learning outcomes (grades), placements after graduation, and employment opportunities. Customer satisfaction (both individual and organisational customers) is a focal part of outcomes in welfare services and is commonly measured in organisations operating in the sector. Clinical outcome measures can be considered as more objective measures, while customer satisfaction, which is commonly measured by surveys, is a subjective measure related to outcomes.

This research indicates that measurement function in welfare services is largely conducted by managers. However, in many services (e.g. elderly care and education) employees have a focal role in conducting measurements related to outcomes of services (e.g. RAI assessments, grades). Employees' attitudes towards measurement vary across organisations and also within organisations; some are motivated, while others considered it an additional burden.

Reasons for performance measurement in welfare service organisations

In this research, two main reasons for performance measurement in welfare service organisations can be identified. First, performance is measured for *managerial purposes*, like information needs for resource allocation and development of operations, enhancing transparency of operations, comparison of units and assessment of organisations' implications. Second, the *need to report to external stakeholders*, like authorities (Social Insurance Institution, State Treasury Office, National Institute for Health and Welfare), financiers (like Finland's Slot Machine Association), purchasers of services (municipalities) and citizens were among the key reasons for measuring performance. Financial and quantitative output measures are especially reported regularly to stakeholders. Purchasers of services have set certain requirements for availability and for

costs and quality of services, and they require information on measures stipulated in the terms of service contracts. Some managers pointed out that most of the information reported to stakeholders were "statistics" that had low managerial value. For purchaser organisations (e.g. municipalities), one of the main reasons for measurement was the need to show taxpayers how their money was used and what was achieved. Third sector organisations in this research particularly utilized performance measurement in their marketing efforts, but it cannot be considered as the main reason for performance measurement.

Development needs in performance measurement

In this research (Paper I), current performance measures are considered useful and the quantity of measures is appropriate. However, in some large public organisations the number of measures was considered excessive, e.g. managers did not know the precise number of measures in use, but estimated this at about one hundred. *The main development needs* relate to measures of quality and long-term effects of services provided. Current quality measures were considered rudimentary with poor reliability, or current measures were not accepted by employees. A need for new measures regarding implications of services was emphasized in many organisations. There was also a need for measures converting service effects into monetary terms (in third sector organisations), which would illustrate the value of the organisation's operations to purchasers and other stakeholders. Besides getting new measures for implications, there were significant challenges and development needs regarding information systems and the availability of information. Incompatibility of information systems appears to be a common challenge among welfare service organisations, especially in the public sector. In general, the support of information systems for performance measurement was considered poor. Organisations in the private sector were more content with their information systems than were other organisations. Although factors related to employees were actively measured in welfare service organisations in general, especially third sector organisations (Paper II) reported the need for more information regarding employees, e.g. employee competence and well-being.

Nearly all welfare service organisations (Paper I) reported inadequate resources for developing performance measurement. In most organisations development work was done alongside all other responsibilities, which complicated and delayed the development work. Usually development was accomplished via separate projects in co-operation with educational institutions whose students did part of the development work. Private organisations reported better development resources than organisations in the public and third sectors.

To sum up, Finnish welfare service organisations seem to be active in measuring performance. Managerial needs and the need to report to stakeholders are the main motivations for performance measurement. Employees (employee characteristics,

competence and motivation), clients and financial resources, along with fluent customer service processes, are considered focal in service provision. Targeted outcomes (objectives) relate to client well-being and high service quality. The research reveals that welfare service organisations utilize various financial, quantitative and qualitative measures related to elements of performance. However, multidimensional performance measurement frameworks were not widely in use, and if utilized, Balanced Scorecard or some modification of it is the preferred framework. Development needs in performance measurement involved measures for impacts and quality of services. In addition, the absence of performance measurement frameworks suggests that organisations need more systematic approaches that link key elements of performance to targeted outcomes and impacts. These results support earlier research in many ways. For example, the motivation to performance measurement, the use of various separate measures rather than measurement frameworks, BSC as the most common framework, as well as the need for measures related to longer-term impacts were all identified in earlier research (e.g. Niiranen et al., 2005; Linna et al., 2010; Rantanen et al., 2007; Saunila et al. 2012).

4.2. How to overcome challenges in managing and measuring performance in welfare service organisations?

4.2.1. How can the intellectual capital approach facilitate performance measurement and management in welfare service organisations?

In Table 6, identified key elements of performance related to resources and processes are placed into the IC framework. Compared to the results in the previous section all key elements, except financial resources and facilities, can be characterized as intangible resources or activities. This empirical result supports the assumption drawn from the earlier literature (e.g. Zigan et al., 2008; Peng et al. 2007), that the most focal resources in welfare services are intangible in nature.

Table 6. Identified key elements of performance in IC framework.

Human capital (HC)	*Relational capital (RC)*	*Structural capital (SC)*
Employees - motivation - competence; both professional competence and social/interaction skills, tacit knowledge	Clients Volunteers Reputation/Image/Brand Co-operative partners and networks	Working atmosphere/environment Organisational/managerial resources: values, low hierarchy Client referral processes Customer service processes - reservation systems - treatment plans Management processes

To answer the research question 2 a, the Multiple Case Study B applies the IC management approach in three non-profit elderly care organisations. IC management was applied by carrying out IC development projects (action research) based on two well-known models for IC management: the Danish guidelines (Danish Agency for Trade and Industry, 2000) and Meritum Guidelines (Meritum, 2001). The primary purposes of the models are somewhat different; Meritum Guidelines were developed for IC management and reporting purposes, whereas the Danish guidelines as "a guideline for intellectual capital statements" focuses reporting of IC to external stakeholders. However, both models are applied successfully for IC management purposes (e.g. Lönnqvist & Kujansivu, 2007; Lönnqvist et al., 2009), and the basic logics of the models are similar. For example, both models suggest that organisation-specific intangible resources related to organisational objectives should be identified and managed, even though the way resources are identified differs in the models. These models were combined into a relatively simple framework (Figure 8) utilized in the IC measurement development in three case organisations. The Danish guidelines were considered useful since its clear visual structure provides a simple and understandable overview of the significance of IC, and it links the measures with the organisational targets. The benefits of the Meritum Guidelines relate to the overall structure of the IC development process: it begins with the identification of strategic targets and proceeds to the recognition of key intangible resources. Finally, it ends up presenting measures for these intangible resources from the viewpoint of value creation.

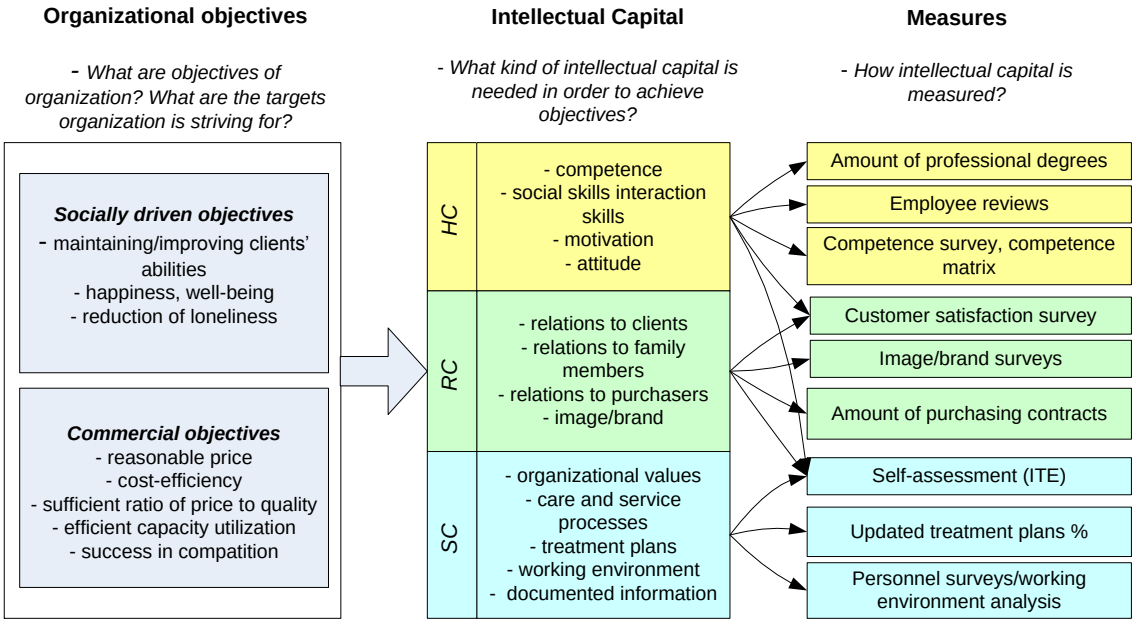

Figure 8. Framework of IC measurement development

In practice, development projects included the identification of strategic targets and proceeded to the recognition of key intangible resources, ending up by developing measures for intangible resources from the value creation point of view. Development projects were carried out in the form of workshops (four to seven workshops in each

organisation) facilitated by two researchers. Project groups in each organisation consisted of five to ten participants, most in managerial positions (see Paper III for more details about development projects). Figure 8 depicts examples of identified strategic targets, intangible resources needed to achieve those targets, and measures that support management of IC. Objectives were divided into two groups based on the conceptual framework (see Paper III): socially driven objectives and commercial objectives. Socially driven objectives were the primary targets in each organisation. However, commercial objectives were also focused in order to secure the continuity of operations. Identifying links between strategic objectives and intangible resources was difficult in practice. Therefore, strategic objectives were broken down into more practical and operational targets and, further, to everyday activities and intangible resources that are needed in achieving these targets. This facilitated the identification of causal relationships between intangible resources and value creation by constituting an overall picture of the significance of IC in the organisation.

After identifying the essential intangible resources, measures to assess their status were designed. Acknowledging the limited resources these organisations have for management, the aim was to utilize existing measures, managerial tools and procedures whenever possible. Organisations utilized several practices for managing IC resources and processes related to them (see Paper II). Typically, many of the existing methods and managerial tools also can be efficiently utilized for the purposes of IC management (e.g. Ki et al., 2009; Kujansivu, 2008). Because the IC measures and managerial tools developed were highly case-specific, the individual measures in each organisation are not discussed here in detail (see Paper III for more details about measures). During the project, a relatively large number of potential new IC measures were recognized and proposed in each organisation. However, the number of measures implemented was reduced in each organisation due to the lack of resources for measuring IC after the project. Most of the measures used for IC management focus on IC resources and can be considered subjective measures that are based on information gathered through different types of surveys (e.g. customer satisfaction survey, competence survey). Objective measures were also utilized whenever possible. However, it seems that IC measurement necessitates and relies heavily on the use of subjective measures.

The applied IC approach had various *benefits* from the performance measurement point of view. As noted in earlier research literature (Chapter 2.1.) and supported in the findings of this research (Table 6), intellectual resources are significant for welfare service organisations, which highlights the need to manage intellectual capital more systematically. The proposed approach concentrates on measuring and managing intellectual capital. In each organisation, various methods for IC management were in use already (Paper II). However, a more holistic view of intellectual capital and a systematic approach to manage it was missing. Along with the IC approach applied in the research, strategic organisational objectives were identified, intangible resources required to

achieve those targets were mapped, and finally, measures and practical tools for managing strategically important IC were developed. The most focal benefits of this approach relate to the consistency of measures with the objectives of an organisation, clear focus on strategically relevant issues, and personnel participation in the development of measures. Welfare service organisations are usually small with limited managerial resources. This type of performance measurement framework that focuses on strategically important factors "forces" organisations to prioritize to measure just strategically relevant factors, which limits the amount of measures in use. In addition, the workshop approach provides participants with an opportunity to learn about IC and its implications for the organisations' success. Operationalizing the concept of intellectual capital and connecting it to operational activities and strategic objectives was relatively *challenging* and time consuming. However, it contained one of the main benefits of the approach: personnel perceived how their daily activities and work contributions influence the operational and strategic objectives of the organisation, which was a motivating factor in the development project and for the future prospects of the IC measurement and management. Other challenges included lack of commitment and insufficient resources for development; for example, in small organisations, personnel replacements cause difficulties for the development work.

The same framework was applied in each case organisation in the Multiple Case Study B. However, the application of the framework resulted in different solutions in each organisation, depending on the needs related to IC management. In each organisation, strategic objectives and focal intellectual capital were identified. The more precise development targets depended on the needs of each organisation, and organisations ended up having different types of tools and results regarding IC management. However, in each case, the development project increased understanding of intellectual capital and its significance. In addition, practical tools for managing IC were developed, and existing managerial systems (e.g. BSC in Case B) were supplemented with IC aspects. Thus, the IC approach is flexible and can be easily modified to the needs of a target organisation. In each case organisation, current measures were utilized in IC measurement. In addition, IC measurement necessitated the creation of new measures, most of which were qualitative measures based on some type of surveys.

4.2.2. What factors facilitate success in the development of performance measurement in welfare service organisations?

As noted in Chapter 2.2.1, the design and implementation of performance measurement systems in welfare service organisations contain various challenges, and previous literature is filled with reasons for organisations not being successful in developing measurement systems (e.g. Pollanen, 2005; Rantanen et al., 2007). In this research (Papers III, IV), factors affecting the success of performance development in welfare service organisations were studied. In addition, the development of a performance

measurement system in the co-operative network was carried out (Paper VI), and characteristics related to it, including identified success factors and challenges, are analyzed in Chapter 4.3.2. Earlier literature proposes certain technical and organisational factors affecting success in performance measurement system development. Technical factors relate to features of a measurement system, including relevance, validity, reliability, and practicality of the measurement system. Organisational factors refer to the way performance measurement development is managed (carried out from a managerial point of view), including involving the employees and middle management, communication with the employees and middle management, participants in development work, and the extent to which performance development is supported by the top management.

This research (Paper IV) suggests that both factors related to performance measurement system designed (technical factors) and factors related to organising the development work (organisational factors) affect the success of performance measurement development in welfare service organisations. Technical criteria should be fulfilled at a sufficient level in order for the performance development to become successful. Of the technical factors, the relevance of a performance measurement system was the most important in facilitating the success in performance measurement development in this study. *The ability of the system to fulfill the managerial requirements* was the foremost system-related reason for successful performance measurement. A new measurement system (productivity matrix) was perceived as a managerial tool which enabled various managerial tasks that were not possible with earlier systems, e.g. it gave operational management the opportunity to monitor the performance in the unit, to assist in setting targets and planning development actions, and it enabled comparisons between units and the utilization of information from existing measures.

Managerial requirements also were met in performance measurement development in Multiple Case Study B (Paper III); organisations received practical tools for managing IC, and existing managerial systems were supplemented with IC aspects. Another focal aspect related to relevance of the measurement system is connected to its ability to address factors affecting performance and correlations between different factors. This elaborates what aspects to measure and affects/increases the validity of the resulting system. Performance measurement system development entailed consideration of different aspects related to performance, and identification of links between them, which was considered beneficial among participants (Papers III, IV). Challenges related to implementing and using a performance measurement system related to reliability and practicality. Regarding reliability, concerns included changes that had taken place in data registration over time (which causes incomparability of results) and lack of interest and competence in registration practices among personnel. At the time of implementation, a new performance measurement system requires extra work, thus practicality cannot be evaluated right after the implementation process is carried out.

In this research, performance measurement development projects (Papers III, IV) were carried out/organised in a consistent way. Development projects had similar structures and were facilitated by outside facilitators, and development work was conducted by working teams consisting of users of the performance measurement system. One general issue that was cited as a success factor was external facilitation, which provided additional resources for the development work. External facilitation, along with workshops as a working method, was perceived as beneficial, since it provided structure for the development work with schedules, phases and steps. In addition, external facilitators educated participants about concepts related to performance (e.g. productivity, IC) and assisted in operationalizing concepts into practice. The most essential factors facilitating the development, however, related to the *commitment of operational level/ users of the system* that was reported especially in the Interview Study C. A crucial factor in achieving commitment was the composition of the development team; in each development project, the development team consisted of users of the system (operational level). This entailed many benefits; for example, participants gained a better understanding about factors related to performance, which enhanced the understanding about measurement targets (what to measure) and reasons for measurement. In addition, participants had the opportunity to influence the result of the development work. Also, the composition of the teams and the positive atmosphere in the development teams were factors assisting the work. Notably, the expertise, motivation and commitment of team members were considered focal success factors of the teams. These factors enabled the development of the measurement culture and the familiarization of the personnel with the issue of performance measurement.

4.3. How can performance management be supported by the means of measurement in the welfare service system?

In this research, two focal tasks related to performance management at the service system level were identified. First, one of the main tasks for public administration is to decide how to use scarce resources in order to produce effective services for clients. Decision makers need information on the impacts of different service options in order to compare solutions in service provision and select the most effective ones. Second, as welfare services are increasingly produced through the co-operation of many organisations, and effectiveness has become focal performance criteria, tools for managing effectiveness at the service system level is needed. In this section, results of this research related to these two main tasks are discussed.

4.3.1. How to measure the impacts of welfare services?

The evaluation of different service provision models entails consideration of two aspects: providing services that have an effect on the well-being of clients and producing such services without wasting public money. The previous literature highlights the need to

evaluate the impacts of public welfare services at two levels: that of the service system and that of the clients (e.g. Konu et al., 2009; Niiranen et al., 2005; Porter, 2010). However, there are not many systematic models in the current literature for measuring multidimensional impacts (quantitative, qualitative, financial) of welfare services at different levels. This research proposes a framework for measuring the impacts of welfare services (Figure 9). The framework divides impact measurement into two levels: the service system level, which includes service providers/organisations related to the certain context, and the individual level, which includes actual service users. The idea in the framework is to measure selected clients' use of various services in all relevant sectors in a certain time frame before the introduction of a new service and in a certain time frame after the introduction of the service (cf. Klemola, 2015; Rautiainen, 2012). In the framework, impacts on the service system level relate to tangible (financial, quantitative) impacts, which illustrate changes in the service use, whereas impacts on the individual level relate to changes in the quality of life and are intangible and qualitative in nature. The difference between the two sets of measurement results (before and after) shows the change, i.e. the impacts achieved by the service.

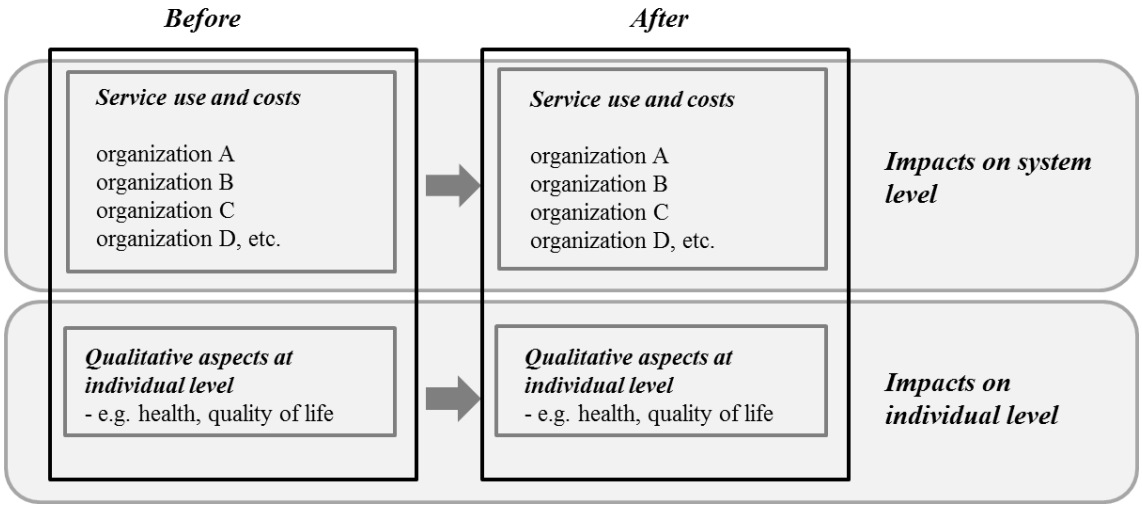

Figure 9. Framework for measuring the impacts of welfare services (Paper V).

Impact measurement is a challenging task for many reasons. Before conducting the measurement, one should be aware of different actors (and stakeholders) and their relationships in context, and how they affect the outcome. Potential impacts should be identified beforehand in order to understand what it is important to measure. Based on this, it is possible to measure what impacts were realized. In addition, the time perspective for the realization of the impacts needs to be analyzed in order to understand when expected impacts are measurable. (Vuolle, 2011; Kujansivu & Lönnqvist, 2009; Flatau & Zaretzky, 2008). Thus the measurement of impacts requires a profound understanding of the context in question, such as particular welfare services involved in different situations (before – after), its stakeholders, targets of stakeholders, and anticipated impacts. To

fulfill these requirements and in order to apply the framework in practice, a sequential process model for impact measurement, including practical steps of measurement in planning, implementation and analysis was developed (Table 7). The applicability of the framework and sequential process model were examined in two case studies (Paper V).

Table 7. Sequential process model for impact measurement (Paper V).

PLANNING	1. Familiarization with the context and the service innovation ✓ Literature review, interviews with experts in the field (e.g. managers of unit, representatives of municipals) 2. Analyzing the context and selecting the actors in the service system for the measurement (before – after) ✓ Selecting services to be measured according to the context. ✓ Setting criteria for individuals whose service use will be measured 3. Planning the data collection ✓ Time frames for the comparison (before – after) ✓ Specifying data sources
IMPLEMENTATION	4. Implementation of data collection ✓ Informing potential participants about the research (handouts, brochures), drawing up license applications to authorities ✓ Recruiting participants, obtaining written approvals from participants ✓ Requesting information of participants' service utilization and costs from different authorities (after licenses were granted) ✓ Interviews with participants ✓ Setting up client data base for tracking service use of individuals under study
ANALYSIS	5. Analysis of quantitative data ✓ Combination of different data sets, calculations, comparisons (before-after) 6. Analysis of qualitative data ✓ Interviews, non-financial impacts 7. Conclusions

The framework for measuring impacts illustrates objects and levels of measurement (what to measure), and the sequential process model shows actual steps in the measurement (how to measure). By applying the measurement framework presented in this study, multidimensional impacts of new types of services became evident. In both cases in Paper V, the service use patterns and total costs of services changed with the introduction of new services. At the service system level, the applied framework was able to demonstrate impacts of new services to service consumption and costs of various services in the same sector, but also in other sectors in the service system. In addition, changes in the distribution of costs between municipalities, government and clients became evident. The measurement of outcomes at the individual level was based on interviews with clients and/or guardians, which may be considered to be a subjective qualitative measurement. The themes of the interviews were based on known impacts of interventions in those particular contexts and included a relatively wide range of aspects of qualitative, client-

related outcomes. In addition to the interviews, quantitative information on changes in service use patterns may serve as indirect measures of quality of life; i.e. if a client's need for crisis services (police, ambulance) was reduced, probably the overall life management and quality of life was improved. This type of approach was considered more appropriate than standardized outcome measures used in economic evaluations in healthcare, e.g. 15D, because they focus just on changes occurring in the health of clients. In these situations, the attempt was made to gain a wider view of changes occurring in the lives of clients, and standardized health-related measures were not able to capture all the items.

In both cases of Paper V, the measurement results illustrated significant changes related to system and individual levels, which indicates that the framework with the sequential process model was able to demonstrate the multidimensional impacts of service innovations, and thus worked well in impact measurement in welfare services. This type of measurement provides valuable information for decision makers/public authorities, especially for planning and developing new services and for evaluating different options in providing services. Thus, the approach presented has many benefits. However, it also contains some challenges related to each stage of the process. First, the measurement result depends on how well the framework is constructed, i.e. how well the context is understood and analyzed in order to include in the comparison both appropriate services and individuals that appropriately represent the clientele. The planning stage also necessitates an understanding of the service innovation in question in order to specify the time frame for impact measurement (when the impacts are realized). Interventions usually also contain unintended impacts that may be difficult to identify and thus may be left out of the measurement. The implementation of this type of measurement necessitates gathering a wide range of confidential data of clients' service use, which is currently a challenging task, since receiving the information requires written informed consent both from the individuals under study and the authorities providing services. In this study, impact measurement was conducted using clients in service units that were committed to the research projects, and personnel of these units assisted in recruiting participants. Without the assistance of these personnel, the recruitment of participants would have been difficult. The measurement of impacts on service system level is based on the information received from different authorities, and there may be some inconsistency in the data, for example due to differences in cost accounting principles and registration practices.

To summarize, the framework described above is a helpful tool for public administration in comparing different options in providing services. However, a relatively long time is required before possible impacts are realized and are measurable. In addition, the information needed for this type of measurement is difficult or impossible and too expensive for a single organisation to obtain. Thus, this type of impact measurement is rather a tool for decision makers to measure the impacts of alternative service solutions at the system level, conducted by a research institute or governmental agency, rather than a management tool at the organisational level. This type of measurement has various

benefits for decision makers at the service system level but offers limited assistance for managers in welfare services to improve the effectiveness of welfare service systems while providing the services in practice. A different type of approach and tools are needed in order to manage the effectiveness in practice.

4.3.2. How to design performance measurement system to support the management of effectiveness in welfare services?

In this study, Paper VI examines the design of a performance measurement system to support the management of effectiveness of a welfare service that is provided by a network of organisations in a large Finnish municipality. The research focuses on the design phase of measurement, since the first steps of measurement are the most critical for the successful use of performance measurement later on (e.g. Bourne et al., 2000; Rantanen et al., 2007). Performance measurement design entails consideration of two aspects: 1) what to measure, and 2) how to carry out the measurement development (e.g. Bourne et al, 2000; Jääskeläinen et al., 2009).

As noted in Chapter 2.2.1, designing performance measures in the public sector is challenging. In addition, a collaborative network adds to the complexity of performance measurement design in many ways. The central challenges of performance measurement design in collaborative networks relate to creating a common vision of the targets of the network, the purposes of the measurement, and unclarified roles and responsibilities, which are also focal challenges in public welfare services (e.g. Barretta & Busco, 2011; DeGroff et al., 2010; Hansson et al., 2010; Pekkola, 2013; Rantanen et al., 2007). In addition, in public service networks with various stakeholders and levels of analysis, even concepts related to performance appear unclear (e.g. Barretta & Busco, 2011; Conaty, 2012; Lönnqvist & Laihonen, 2012). For example, in their research of welfare service system productivity, Lönnqvist and Laihonen (2012) found out that managers' understanding about the concept of productivity and the factors affecting it became more blurred as the level of analysis moved away from their own organisation towards the service system level. In efforts to measure the effectiveness of a co-operative network, the consensus of the target of measurement, i.e. the conceptualization and agreement of the concept of effectiveness, should be reached among co-operative partners. In order to specify what to measure and clarify the content of the concept of effectiveness, a conceptual framework based on the earlier literature including three perspectives/levels on effectiveness was constructed and applied in Case Study E (Paper VI).

At the beginning of the development project, the focal task was to identify the target for the development work, but also to draw a comprehensive picture about the network, its operations and its stakeholders to illustrate the connections between and among different actors in the network. During the development work, several targeted impacts related to clients and network participants were identified. The application of the conceptual framework facilitated the identification of focal perspectives of effectiveness and targets

related to each, which was crucial in order to prioritize and design measures. This was also helpful in illustrating links between different perspectives, i.e. what are targets in service production (network level) in order to achieve certain effects on clients, which in turn have effects at the community level. The resulting measurement system (see Paper VI) includes measures related to effects in all three levels of analysis – community, network and clients. As the effectiveness on the client level was considered paramount in the development work, nearly all developed measures in the measurement framework relate to the qualitative aspects of client outcomes, either directly (satisfaction, quality of life or functioning ability) or indirectly (access to services, number of home calls by the multidisciplinary team, relative number of home calls). Measures at the network level were intended to support the management and development of co-operation. However, the management of the co-operation was not of prime interest in this development work, and therefore the number of measures related to management and coordination activities was limited. Measures of costs and productivity were not included in these measures since they were already included in the existing measurement framework of the municipality. On the community level, the long-term effectiveness of services was linked to the existing measures of annual well-being reported in the municipality (i.e. number of home care clients entering institutional care compared to the entire elderly population of the municipality).

One of the principles in performance measurement development was to keep the measurement as simple and cost-effective as possible (cf. Jääskeläinen, 2010; Hannula, 2002). The resulting measurement system was in most parts based on existing measures and systems utilized in the municipality's elderly care. However, the scope of the measures needs to be extended to cover the whole network, not just individual organisations, which indicates the need for modification of current measurement practices. The measures developed seemed to cover the main aspects of effectiveness at different levels of the welfare service system (cf. Crook et al., 2005; Provan & Milward, 2001), thus providing a more holistic approach for performance measurement in this context.

The performance measurement design process was carried out as a development project comprising five workshops facilitated by two outside facilitators (researchers) and coordinated by the research and evaluation manager of the municipality. As cited earlier, the effort of the facilitator is considered an important factor affecting the success of performance measurement design process. In inter-organisational co-operation, the role of facilitator/coordinator is further emphasized (e.g. Axelsson et al., 2006; Pekkola, 2013). In this study, outside facilitators assisted participants in identifying measurement objects by structuring the concept of effectiveness into three levels of analysis and operationalizing it, based on the theoretical framework. Thus, participants had the possibility to form a shared impression about the concept of effectiveness. Otherwise the contents of effectiveness might have remained unstructured with all too many separate

objectives and interpretations related to it. Other benefits of outside facilitation and workshops as a method relate to organised content and schedules, consultation and extra resources provided by facilitators, and facilitators' mediating role in case of minor disagreements. In addition to outside facilitators, the input of an in-house coordinator was crucial to the progress of the development work (e.g. scheduling workshops).

As cited in earlier results (Chapter 4.2.2) the successful design of a performance measurement system presumes participation of employees in the operative level (users of the system) in the development work. In addition, composition and the positive atmosphere in the working team are also considered as focal factors assisting the development of performance measurement systems both in the public welfare services and in collaborative networks (e.g. Jääskeläinen, 2010; Pekkola, 2013; Rantanen, 2007). Inter-organisational collaboration in welfare services is often organised in the form of multidisciplinary teams, which is a small group of people representing different professions who together across organisational boundaries provide services to a specific group of clients (Axelsson et al., 2006). In light of the earlier literature, active involvement of representatives from multidisciplinary teams is vital for the successful development of performance measures in welfare service systems, both in deciding the targets for measurement and developing the actual measures. In this study, the working team was composed of representatives from different organisations and professions in the network, which was essential in defining a measurement framework that was accepted by all network partners. This should entail successful implementation of the measurement system later on (e.g. Rantanen et al., 2007; Axelsson et al., 2006).

The design project in Case E can be considered successful in the sense that agreement on measurement targets and measures was achieved, which are common challenges in networks (e.g. Kaplan et al., 2010; Parung and Bititci, 2008). As the starting point of the development work was to design measures of effectiveness for the purchaser's use, the main target as well as power relationships in the development work was evident from the beginning. However, there were some challenges that prolonged the design process. The service network was relatively new, and roles and responsibilities were still to some extent unclear, which manifested as lack of organisation and strong coordination in the development project. Participants were also involved in other concurrent development projects (one of which related to the same theme), which hampered the development project. Concurrent projects caused confusion among participants; e.g. some became frustrated or were too busy, which possibly undermined motivation and participation. These findings support earlier findings; unestablished roles and responsibilities in the network (e.g. Hansson et al., 2010) and overlapping projects (Rantanen et al., 2007) were the main challenges that prolonged the measurement design process.

In summary, this study proposes that measuring effectiveness of welfare services provided by co-operative network entails the identification of different levels of effectiveness and including all levels in the measurement solution. This promotes the

more holistic measurement of the effectiveness of the welfare service system. The conceptual framework presented in Paper VI works as a beneficial tool in the identification of the focal elements of effectiveness in this context. The division of effectiveness into three perspectives was beneficial for performance measurement, but also for the overall performance management of the network in the future. Workshops led by outside facilitators appear to be a practical working method in designing performance measurement in co-operative settings such as the one examined in this study. The most focal benefits relate to the development of a measurement system in co-operation among participants of the network, organised content and schedules, consultation and education provided by facilitators, and the facilitators' mediating role. The working group consisted of representatives from different organisations and professions, which is a prerequisite for the successful implementation and use of measures.

5. DISCUSSION AND CONCLUSIONS

5.1. Discussion

This research aims at drawing a more holistic view of performance measurement in the welfare services by examining how the performance of welfare services can be measured and managed at different levels of the welfare service system. To achieve the goal of the research, three research questions were posed. The first research question addressed the state of performance measurement and management in Finnish welfare service organisations and identified development needs in the sector. The second research question focused on finding solutions to two identified challenges related to performance measurement and management in welfare service organisations, i.e. how the intellectual capital approach can facilitate performance measurement and management, and what factors facilitate the successful development of performance measurement in welfare service organisations. The third research question focused on performance measurement and management at the service system level by examining how impacts of welfare services can be measured, and how performance measures that support managing the effectiveness of services provided by co-operative network of organisations can be designed.

Figure 10 summarizes the key findings of this study. Findings of this research indicate that diverse aspects of performance are focused, and different types of managerial needs and tasks relate to performance management and measurement at different levels of the welfare service system (cf. Klassen et al, 2010). This research also suggests different types of managerial tools for measuring performance at different levels in the service system.

At the system level, two types of needs regarding performance measurement were identified. First, there is a need for knowledge of impacts of various service options in order to select services that are the most effective in terms of providing desired effects on clients at reasonable costs. This need relates to the determining impacts of different service options at the client level and at the overall level of the service system. Public administration especially needs this type of information. In this study, a framework for measuring impacts of welfare services was constructed and applied in practice. The framework has many similarities with methodologies used in economic evaluation studies, especially studies of cost-effectiveness (e.g. Clark et al., 1998; Drummond et al., 2005; Flatau & Zaretzky, 2008; Jones et al., 1994; Pinkney & Ewing, 2005; Räsänen et al., 2005). This research underlines the importance of multidimensional impacts (quantitative, qualitative, and financial) occurring at the client and the service system levels, suggests practical tools to impact measurement and adds knowledge about conducting the measurement in practice (cf. Klemola, 2015; Rautiainen, 2012).

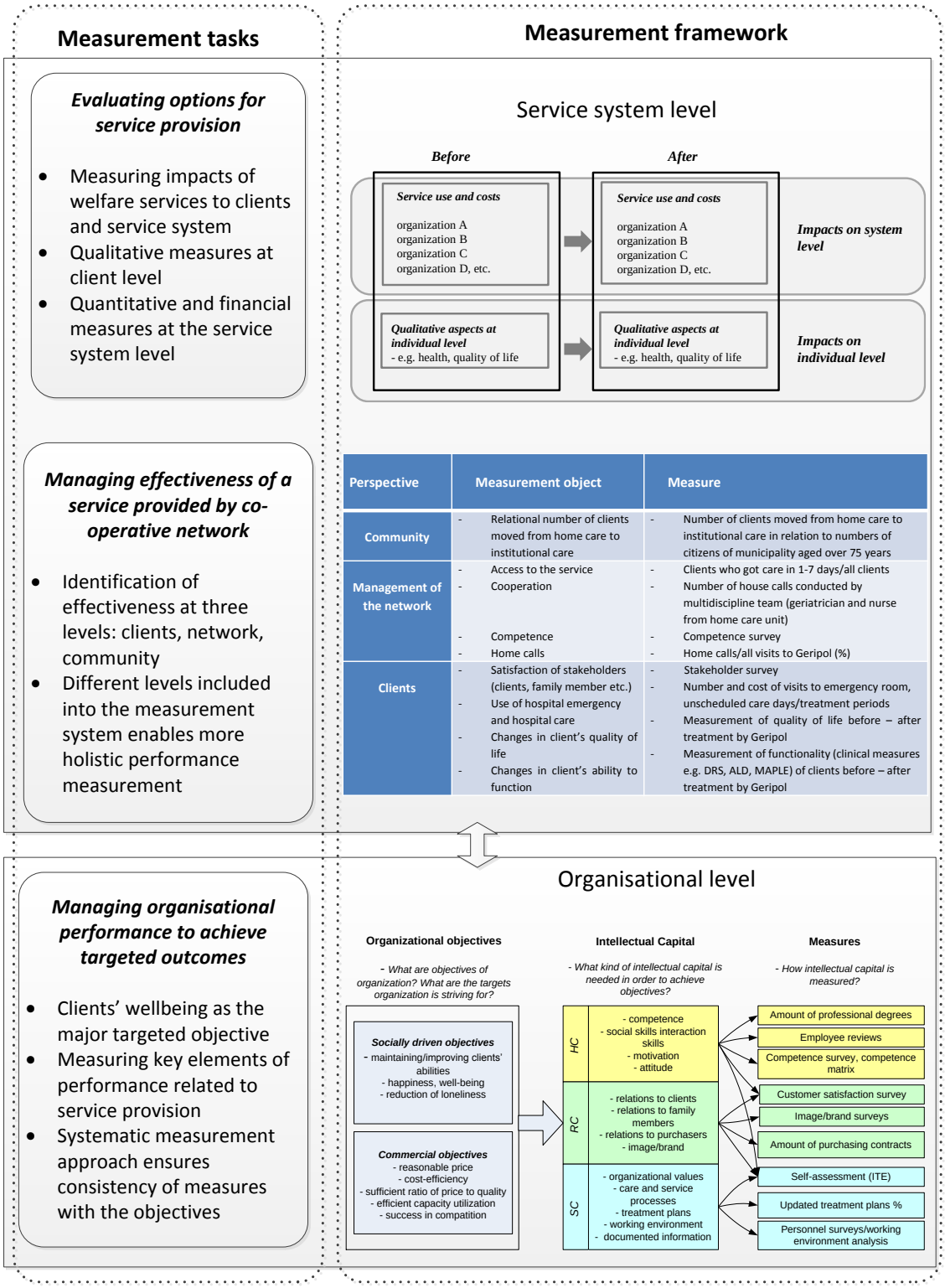

Figure 10. Performance measurement tasks and suggested frameworks for measuring welfare services at different levels of the service system.

Secondly, as welfare services are increasingly provided by the co-operation of different organisations, and effectiveness focusing the clients' perspective (value created to clients) has become focal performance criteria, there is a need to have measures in place to manage the effectiveness of services provided by a co-operative network of organisations. The results of this research indicate that measuring the effectiveness of services provided by a co-operative network necessitates operationalizing the concept of effectiveness at different levels and understanding interconnections between different levels, i.e. what is the targeted effectiveness for clients, what it requires from the network, and how it can be demonstrated at the community level. Thus, this study adds to existing research by operationalizing the concept of effectiveness in the service network (cf. Provan & Milward, 2001) and by designing measures for effectiveness in the context of the welfare service network (cf. Kulmala & Lönnqvist, 2009; Pekkola, 2013).

At the organisational level, an essential task of performance management is to ensure the achievement of organisational targets. The findings of this research show that the most important organisational targets relate to client well-being and high service quality. In welfare services, stakeholder requirements affect organisational objectives. Stakeholder expectations relate mainly to service output, like price, quantity, content and quality, but also the functionality of service processes. This research recognizes factors belonging to intellectual capital along with financial resources as central in service production. As performance measurement in welfare service organisations is still largely conducted by using sets of separate measures, and focus is on financial and quantitative measures that are unable to capture the qualitative aspects of the service provision, this research suggests a systematic measurement approach based on IC management frameworks (Danish Agency for Trade and Industry, 2000; Meritum, 2001) as a potential tool to manage performance at the organisational level. Results of this research indicate that application of the IC management approach in welfare services entails focal benefits; e.g. it is able to capture intangible aspects of the service provision by identifying intangible assets needed to achieve organisational objectives, and to develop measures to monitor the development of IC. Thus, this study supports earlier results from the business sector (e.g. Kujansivu, 2008; Lönnqvist et al., 2007; 2009) by suggesting that IC management is a potential managerial approach also for welfare service organisations, not just for reporting purposes as suggested by earlier research (e.g. Brozetti & Veltri, 2013; Guthrie et al., 2009; Schneider & Samkin, 2010).

In this research, intellectual capital management approach was applied in organisational level due to its identified central role in welfare service organisations. As can be noticed in the figure 10, qualitative and intangible aspects and qualitative measures, like ones related to quality of life, are included in all measurement frameworks suggested in this research. Thus this study suggests that qualitative aspects are important in the service provision at all levels of the welfare service system and similar measures for qualitative aspects can be used at different levels, although perspectives and purposes for

measurement change. It should be noted that intellectual capital approach was explicitly utilized at the organisational level – not at the service system level. This was due to the practical managerial needs that guided the development of measurement solutions. Capturing the intangible drivers of service production was a key challenge in the case organisations in Papers II and III while capturing the service impacts was the focal goal in the service system studies in Papers V and VI.

The arrow linking the service system level and the organisational level in Figure 10 illustrates that the main objectives and measurement practices/principles should be in line at different levels in the service system, even though focus and managerial tasks related to performance measurement differ (cf. Niiranen, 2008). Organisational objectives should be consistent with the overall objectives of the service system (or service programme in question) in order to avoid sub-optimization. Findings on impact measurement in this research (Paper V) indicate that the main measurement principles and practices (e.g. entry strategies, pricing of services) should be consistent within the sector in order to enable reliable impact measurement at the service system level.

One of the questions of this research related to the identification of factors facilitating the successful development of performance measurement in welfare services. In outline, performance measurement development processes in this research were alike, both at the organisational level (Papers III and IV) and in the network (Paper VI); i.e. the development method was similar; work was carried out in workshops facilitated by two researchers; and prospective users of the system participated in the development work. Based on this study, it seems that in its main parts, similar factors facilitate performance measurement development regardless of the level of analysis (organisation/network-level), in such areas as achieving consensus of targets, creating a measurement system that is technically accepted by all participants, developing a working group including users of the measurement system and outside facilitation. However, the results of Case Study E (Paper VI) underline the importance of the role of strong coordination that clarifies roles and responsibilities in performance measurement development in a co-operative network. In addition, the change from organisation-specific performance measurement to measurement of effectiveness of a service network necessitates many practical changes regarding performance measurement practices (e.g. data collection, analysis).

To summarize, this research suggests that performance management and measurement in welfare services necessitates different measurement approaches based on the level of analysis and managerial needs related to it. As the level of analysis moves from the organisational level to the service system level, it appears that different aspects of performance and performance management are focused. In welfare service organisations, the focus in performance management and measurement is on outputs and outcomes that the organisation provides to its clients and on the resources and processes needed to achieve those outcomes. At the service system level, the focus moves towards longer-

term effects on clients created by many organisations, thus extending performance measurement activities beyond the limits of one organisation.

5.2. Contribution of the research

5.2.1. Contribution to prior research

Research related to performance measurement and management in welfare services is fragmented, as it is conducted in many fields, even though the research subject and the ultimate research objectives are equivalent (how to improve performance in welfare services). Performance measurement and evaluation are particularly seen as rival streams of research rather than as complimentary forms of knowledge creation (e.g. Blalock, 1999; Davies, 1999; Nielsen and Ejler, 2008). This study contributes to prior research by providing a more holistic view of performance management and measurement by structuring performance measurement tasks at different levels of the welfare service system and applying both performance measurement and evaluation approaches in measuring performance in welfare services. In general, this research is based on performance measurement and management literature and aims to contribute to that field of research. This study has identified specific measurement tasks at different levels of the welfare service system and developed measurement frameworks based on earlier research to conduct performance measurement tasks in practice. Developed performance measurement frameworks were applied in practice in this research. This study includes a relatively extensive empirical examination of performance measurement in different types of welfare services, thus contributing to the rather conceptual research conducted in the area.

At the organisational level, one of the contributions of this research relates to new empirical information on the current state of performance measurement in Finnish welfare services. In this study, an interview study (Paper I) was conducted to examine the current stage of performance measurement in the non-profit, for-profit and public sectors. In addition, multiple case study research conducted in three case organisations elaborated the current picture of performance measurement in small non-profit organisations in the area. The results of the research support previous literature, i.e. the performance elements, current measures, and development needs identified were congruent with those of earlier studies (e.g. LeRoux et al., 2010; Laine et al., 2010; Packard, 2010). This research indicates that non-profit and private organisations emphasize commercial objectives along with the well-being of clients as the major organisational objectives, which is logical when considering the competitive environment these organisations are facing currently. The results of this research along with those of earlier studies (Jääskeläinen, 2010; Linna et al., 2010; Niiranen et al. 2005) indicate that organisations producing welfare services are relatively active in measuring their performance in Finland. However, more systematic approaches to performance measurement are needed, since

currently measurement consists of separate measures, many of which are quantitative output measures determined by stakeholders. With such measures welfare service organisations are not able to assess qualitative long-term effects they are striving for.

The results of this research underline the role of intangible aspects in the service provision related to resources, processes and outcomes of service operations (Papers I, II, III). Thus, this research supports propositions of earlier literature suggesting that intellectual capital has a central role in welfare service organisations (Habersam & Piber, 2003; Peng et al., 2007; Ramirez & Gordillo, 2014; Zigan et al., 2008). Earlier research of intellectual capital in the non-profit sector or public services has been fairly conceptual, or research with empirical findings has focused on reporting on intellectual capital to external stakeholders rather than studying how to manage IC in order to improve organisational performance (e.g. Brozetti & Veltri, 2013; Guthrie et al., 2009; Kong, 2007; Kong et al., 2008; Schneider & Samkin, 2010). In this research, an IC management framework based on two well-known IC management models was developed and applied in practice. Thus this research adds to the previous research by generating new information about the development of intellectual capital management in Finnish welfare service organisations in practice and provides practical understanding about the possibilities of IC management in this particular context.

Findings of this research support the earlier research by underlining the need for the welfare sector to measure the impacts of services they provide. This research contributes to the prior research by presenting a framework to measure the multidimensional impacts of welfare services and applies the framework in two different services (in Paper V). The basic idea of the framework is in line with "logical scientific steps" of evaluation proposed by Blalock (1999) and models of economic evaluation, especially with cost-effectiveness analysis conducted in healthcare services and social services (e.g. Clark et al., 1998; Drummond et al., 2005) by providing systematic means of comparing the costs of a service with its outcomes. In the framework, impacts of services are measured at two levels: qualitative impacts at the individual level and quantitative and financial impacts at the level of the service system. As a contribution to existing models to measure cost-effectiveness in health and social services (Klemola, 2015; Rautiainen, 2012), this framework was able to demonstrate impacts of new services to service use and costs in the same sector, but also in other relevant sectors in the service system, for example the provision of housing (living in the Housing First unit in Multiple Case Study D) reduced substantially the cost and use of healthcare services. In addition, changes in the distribution of costs between municipalities, government and clients became evident. As a contribution to previous models (e.g. Klemola, 2015), this framework includes measurement of qualitative impacts to clients. Whereas existing economic evaluation models highlight standardized health-related measures in measuring impacts to clients, this framework suggests a method that entails consideration of wider perspectives of impacts on clients' quality of life. The framework contributes to existing frameworks by

suggesting that outcome measurement at the individual level entails use of subjective qualitative measures (client interviews), which necessitates an understanding of a wide range of anticipated client-related outcomes in particular client groups. This type of measure can be regarded as more valid than measures focusing just on health-related outcomes for this measurement purpose. To summarize, this research contributes to previous research by presenting practical methodology (framework and sequential process model) for measuring impacts of new type of services, including qualitative impacts on clients and quantitative and financial impacts in the service system. In order to measure impacts, one should be aware of potential impacts of activity. This research adds to knowledge about how to identify potential impacts of a welfare service innovation, and how to conduct the measurement in practice.

From a more general view, this research contributes to the questions about what to measure and how to develop measurement in the context of welfare services. In this research, conceptual analysis along with operationalization of concepts related to performance contributes to the understanding of focal aspects of performance at different levels of the service system (what to measure). At the organisational level, the focus is on resources, processes and outcomes of a particular organisation, whereas at the service system level focus is on qualitative impacts created to clients and quantitative and financial effects created to the service system. At the service system level this research has extended the scope of the performance measurement approach to the measurement of effectiveness by operationalizing the concept of effectiveness in the context of integrated service delivery in welfare services. Whereas the earlier literature (e.g. Provan & Milward, 2001) proposes frameworks for evaluating network effectiveness at different levels, this research takes a step forward and applies such a framework in practice in the context of integrated service delivery. Regarding the question of how to carry out the measurement development, findings of this research support earlier research regarding factors facilitating success related to the development process (e.g. Bourne et al., 2000). According to this research, success factors of the development process relate to identifying a technically acceptable measurement system, the composition of the working group, coordination and outside facilitation. The results of this research indicate that design of a performance measurement system in the context of inter-organisational collaboration requires strong coordination. Case organisations of this research were different, ranging from small non-profit organisations to large municipal organisations. However, the success factors in the performance development seem to be similar in all cases, which is surprising, given the differences in managerial resources in organisations.

In this research, performance measurement and evaluation streams of research are considered as complimentary forms of knowledge production (cf. Nielsen & Ejler, 2008) when attempting to measure the performance in welfare services. Thus, this research is one attempt to combine these two streams of research in finding solutions to issues of

performance measurement and management in welfare services, rather than building boundaries or restrictions between these two.

5.2.2. Contribution to management practice

The managerial contribution of this research relates to developing managerial tools and practices for performance measurement and management in welfare services. As discussed earlier, the concept of performance is a multidimensional umbrella concept covering all aspects related to the success of an organisation and its activities (cf. Tangen, 2005). This research has structured and operationalized the concept of performance in welfare services, both at the organisational and service system levels, which is beneficial when considering what to measure (what are focal aspects) when measuring performance in the sector. In addition, this research elaborated measurement tasks and presented practices for conducting the measurement at different levels of the service system.

This research contributes to managerial practices by suggesting and applying a performance measurement approach in welfare service organisations and at the service system level. To respond to the practical needs arising from the field, in this research more systematic measurement practices were developed. In welfare service organisations, performance measurement was focused on intellectual capital measurement. However, the same types of measurement principles work when aiming at more systematic performance measurement in general. For example, organisations should start the management of their performance by studying their strategic objectives and proceed to the recognition of key resources needed to achieve those objectives. Regarding the strategic objectives, it proved to be a very useful approach to break them down into smaller and more concrete goals and everyday tasks that are carried out to achieve those goals to perceive links between and among resources, processes and objectives. Moreover, intellectual capital management and measurement does not necessitate the introduction of specific IC management frameworks, but can be applied by integrating it to existing performance measurement practices, like Balanced Scorecard (cf. Kujansivu, 2008). In line with the earlier research (e.g Jääskeläinen, 2009; Kaplan, 2001; Ukko, 2009), this research suggests that employee/user participation in the measurement development is beneficial for many reasons; for example, users perceive the links between everyday activities to strategic objectives of organisation, and participation enables the development of a measurement culture and the familiarization of the personnel with the issue. As the resources for performance measurement and development are scarce in the welfare service organisations, this research suggests organisations should focus on key resources, utilizing existing measurement systems and practices, and carefully consider what information is needed and how it is utilized to support the management.

At the service system level, the foremost contribution of this study relates to introducing impact measurement framework that has been utilized in measuring multidimensional impacts of welfare services at the client and service system levels. This framework, along

with the sequential process model, provides practical guidance on how impacts of services can be measured. As noticed earlier, research literature is filled with different types of evaluation models, but the Finnish welfare service sector lacks applicable models for measuring impacts of different services (cf. Julkunen, 2004, p. 10; Sinkkonen, 2008). The framework introduced in this research, along with the practical experiences of carrying out the measurement, aims to fill this gap.

5.3. Assessment of the research

Traditionally the evaluation of the quality of research is conducted by utilizing concepts of validity and reliability. Validity and reliability have their roots in quantitative research, and there has been discussion about the applicability of the concepts in qualitative research (e.g. Guba, 1981; Shenton, 2004). Researchers (Denzin & Lincoln, 1984; Guba, 1981) have suggested that qualitative research necessitates different criteria of evaluation compared to quantitative research. According to Guba (1981), four aspects in assessing the trustworthiness in research in general are truth value, applicability, consistency and neutrality. In quantitative research, these aspects are addressed by the terms internal validity, external validity/generalizability, reliability and objectivity. Corresponding terms suggested for qualitative research are credibility, transferability, dependability and confirmability (Denzin & Lincoln, 1984; Guba, 1981; Riege, 2003). In order to remain analogous with earlier research, this research applies concepts of validity and reliability, as they are considered as common constructs that can be appropriately used in most scientific paradigms (Morse et al., 2002; Yin, 2009, p. 40). As a whole, this research is a qualitative multiple-case study. There are various criteria, tests and strategies presented in the literature (e.g. Gummesson, 2000; McKinnon, 1988; Riege, 2003; Yin, 2009) that can be utilized in establishing the validity and reliability of case study research. Next, validity and reliability of this research is discussed based on the criteria found in the literature.

Broadly defined, **validity** concerns the question of whether the researcher is studying the phenomenon she or he is striving to study (McKinnon, 1988). *Construct validity* describes whether correct operational measures are identified for the concepts being studied (Yin, 2009). Performance is the focal concept in this dissertation. In general, performance is a vague concept that is rather difficult to operationalize in a consistent way, and the perceptions of the concepts related to performance may vary between managers in the welfare sector (cf. Lönnqvist & Laihonen, 2012). Research question 1 entailed the consideration of a definition of the concept of performance in welfare service organisations. In this research, the main elements of performance (inputs, processes, outputs, and outcomes) were identified based on the literature, and in interviews (Papers I and II) managers were asked to identify focal aspects related to identified elements of performance. Thus, the concept of performance was already divided into smaller parts by the researchers, which facilitated the operationalization of the concept. Both interview

studies were designed with other researchers, which enhances the construct validity by limiting researchers' subjective judgement and diminishes researcher bias regarding the operationalization of the concept. Another option would have been to ask managers simply about performance as they perceive it, and factors affecting it, but in that case the content of the concept would differ depending on respondent, and the construct validity would have been challenged.

Construct validity can be increased, for example, by using multiple sources of evidence and having key informants review the draft case study report (Yin, 2009, p. 40-41). Based on these two aspects, construct validity of this research appears to be relatively well established. In this research, data was collected from various different sources as described in Section 3.5. Answers for each of the main research questions of this research were based on different sets of data, thus providing a rich picture of the phenomena and enabling more versatile analysis. Key informants reviewed case study descriptions in all case studies, and interviewees (or their representatives) had opportunity to review and comment on results of interviews before those results were published. In addition, steering groups of research projects and academic supervisors reviewed the case study reports. All six academic research papers of this dissertation have gone through the peer-review process, which should ensure the academic quality of the research.

In case study research, *internal validity* aims at establishing phenomena in a credible way by emphasizing the construction of an internally valid research process (Riege, 2003). Research literature presents various ways to address internal validity or credibility of qualitative research (e.g. Riege, 2003; Morse et al., 2002; Shenton, 2004). One factor affecting internal validity is the methodological coherence of the research; are data and methods used logically, and are they able to answer the research questions (Morse et al., 2002). The main target of this research was to find out how the performance of welfare services can be measured at different levels of the welfare service system. To answer research questions of this study, a qualitative approach was considered suitable as it is able to provide the researcher with in-depth information about the phenomena under investigation (justified in Chapter 3.4). For the research question 1, a larger enquiry after interviews would have enhanced the credibility of findings. However, it would have required additional resources and was not possible in this research. As described in Section 3, the scope of the research extended from the organisational level to the service system level, which also indicated the change for the sampling plan for the research. In addition, research questions changed in the course of the research process, which worked to sustain the fit between research questions, methods and data (cf. Morse et al., 2002).

One way to increase the internal validity of qualitative research is to apply research methods well established in the research area in question (Shenton, 2004). This research utilizes research methods that are typically used in performance measurement and management research. For example, the action research approach, which is successfully utilized in previous performance measurement development projects (e.g. Jääskeläinen,

2010; Laihonen et al., 2014; Lönnqvist, 2004; Pekkola, 2013), was adopted in performance measurement development (Papers III, VI). In addition, impact measurement framework presented in this study bases on economic evaluation models applied especially in health- and social services (e.g. Clark et al., 1998; Drummond et al., 2005; Jones et al., 1994; Flatau & Zaretzky, 2008). Credibility relates also to the question of whether there is sufficient information available about the research process in order for the reader to assess the credibility of the research, i.e. how plausible the research is. Thus, detailed, "thick" description of the phenomena under study and the context around them promotes credibility, as it helps to illustrate the actual situations that have been investigated (Miles & Huberman, 1994, Shenton, 2004). In this research, fairly detailed descriptions of cases (organisations, managerial needs, research projects) are provided in each research article. For interview studies (Papers I, IV), background information (theoretical background, purpose of interviews), descriptions of interviewees and structures of interviews are provided. These descriptions facilitate readers' ability to assess the credibility of this research.

Qualitative research contains many types of threats to credibility. One such threat relates to bias in key informants, in this research, for example to interviewees in Multiple Case Study D. Client interviews form an important part of the research, as qualitative impacts of new service innovations were assessed based on clients' perceptions. Thus, it would be beneficial to have interviewees that represent clientele as well as possible. Interviewees were selected randomly among clients, which should increase credibility (e.g. Shenton, 2004). However, it is possible that clients who were active and regard living in a unit with positive impacts, were more willing to participate in the interview.

External validity or generalizability defines the domain to which findings of research can be generalized (Yin, 2009, p. 43). A common concern related to a case study is that it provides little basis for generalization. However, in case studies, the aim is not to provide statistical generalization, but to provide detailed understanding of the research issue in specific environments. According to contextual generalization (Lukka & Kasanen, 1995) findings of the case study can be applied at least to some extent in other organisations with similar context. In this research, most of the organisations involved are Finnish public or non-profit welfare service organisations that pursue other targets than financial profits. Contextual factors and key elements of performance in the service provision are presumably very similar to other organisations in the sector, especially in health and social care. Thus, results of this research can be applicable in Finnish welfare service organisations, especially in social services and healthcare services, in public and non-profit sectors.

External validity can be achieved in the research design phase by using theory in the single case study and replication logic in multiple case studies (Yin, 2009, p. 41). In this research, replication was used by examining the same phenomena, role of intellectual capital and intellectual capital management, in three different case organisations. Further,

measuring impacts of a service innovation was examined in two different cases in different contexts. This improves external validity, as the results of cases are compared with each other and generalized at some level. In case studies, generalization can be promoted by analytic generalization, where the researcher is striving to generalize a particular set of findings to some broader theory, not to a larger population (Yin, 2009, p. 43). In this research, findings of each case study were analyzed based on selected theoretical underpinnings (in each research article), which should improve external validity of this research.

It is suggested that in qualitative research, readers should be able to make the judgement about applicability of findings to their own positions (Shenton, 2004), and it is the researcher's responsibility to provide enough information about fieldwork sites to enable the reader to make such judgements. Thus, it is important that sufficient description of the investigation is provided to allow readers to have a proper understanding of the context and boundaries of the research. This research aims to provide rich description of the fieldwork conducted (see Section 3.5 and research papers), like the number and basic characteristics of the organisations participating in the research, the number of interviewees, data collection methods employed, the number of data collection sessions and the time period over which the data was collected (cf. Shenton, 2004), which should facilitate readers' ability to assess applicability of findings.

Reliability refers to demonstrating that the same findings and conclusions can be obtained by repeating the operations of the study, such as data collection procedures (Yin, 2009). The objective is to ensure that if someone else followed the procedures described in the study and conducted the same study all over again, he or she would arrive at the same findings and conclusions. In qualitative research, reliability is a challenging quality requirement, since research settings (e.g. action research, interviews) can seldom be replicated exactly as they were originally, due to personnel changes and other changes in situational and contextual factors (Koskinen et al., 2005). Reliability aims at minimizing errors and biases in the study. To ensure reliability of data in this research, interviews, meetings, workshops, and quantitative data gathered from different authorities were carefully documented and collected to a database. Almost all interviews were taped and transcribed later and workshops were documented carefully so that other researchers can use and analyze the data[3]. Thus, the most of the data used in the research is available for other researchers to conduct the study again. However, data collected for Multiple Case Study D had to be destroyed due to the regulations regarding confidential personal data. In this research, the progress of the research process in an empirical context is described in Section 3.3, which facilitates repeatability of the research (cf. Koskinen et al., 2005).

[3] In Multiple Case Study D, interviews of clients in HF-unit were not taped, but two researchers carried out interviews and made notes, which secured the quality of documentation.

Triangulation is a typical strategy for improving the validity and reliability of research (Golafshani, 2003). Triangulation refers to using several different data sources, research methods and investigators or theories to increase credibility and minimizing biases. According to Denzin's classic distinction (in Miles & Huberman, 1994) there are four types of triangulation: of data sources, of methods, of researchers and of theories. Data triangulation was used in this research, as described earlier. Answers for each of the main research questions were based on different sets of data, and for research questions 2 and 3, different types of research methods were used. In addition, each case study entailed utilization of many data collection methods, for example, Multiple Case Study B included interviews and participant observations, and Multiple Case Study D contained interviews and quantitative data collection from archival records. In this research, theory triangulation was utilized by using multiple perspectives (performance measurement at organisational level and service system level) and theories (performance measurement, intellectual capital management, evaluation) in interpreting the results of this study.

One of the challenges related to qualitative research is observer bias that limits the objectivity of the research. Observer bias may affect qualitative research in many ways; for example, in interviews, personal biases can shape what researcher see, hear and record. In the action research, the researcher may become an advocate of certain ideas rather than being an observer because of personal biases (Voss et al., 2002). Triangulation of researchers aims at ensuring as far as possible that the findings are the result of experiences and ideas of informants, rather than characteristics and preferences of the researcher (Shenton, 2004). In this research, at least one other researcher participated in each empirical research with the author; action research projects in Multiple Case Study B and Case Study E were carried out with another researcher, and each workshop was analyzed together. Interviews were designed and analyzed with other researchers. However, the reader should be reminded that all researchers involved in this research have similar backgrounds (management, business administration), which affects the interpretations. Researchers coming from other disciplines might have ended up with different interpretations.

Relevance is an important aspect in evaluating any research. The research setting of this dissertation was based on practical managerial challenges identified in the welfare service sector, and the focal aim of the research was to develop solutions to those challenges. As this research is practically rather than theoretically oriented, aiming at finding solutions to real life situations, quality of this research can be assessed in relation to which research results are perceived to facilitate the solution of an actual problem (cf. Gummesson, 2009, p. 164). The impact measurement framework proposed in this research has been applied in other measurement projects in the welfare service context by this author (Sillanpää, 2013; Sillanpää, 2014) and by other researchers (Karlsson, 2011). Research findings related to new type of housing service for homeless people (Housing First) has attracted interest in Finnish media (e.g. AL 2011; AL 2012; HS 2011; HS 2015), which indicate

that findings are socially interesting. Research findings have also been cited in the introduction of the Government's programme to reduce long-term homelessness (Ministry of Environment, 11.3.2013), which suggests that results have been utilized in the decision making. Research findings along with the framework have also received international interest; the author has been invited to present the framework and findings in international conferences[4], which indicates that the findings are perceived as highly relevant. Thus, based on this analysis it appears that impact measurement framework proposed in this research and research findings related to it are the most relevant results of this research. However, as the analysis of the use of performance measures in decision making was out of the scope of this research, clear conclusions about the usability of measures cannot be made.

At the time of writing the conclusions of this dissertation, the reform of health and social services is occurring in Finland. The fundamental aim of the reform is to develop a service system that produces services to clients in more cost-effective and equal ways. With reference to the current decision making situation, the topic of this research is very relevant. In situations like this, decision makers need to understand how performance can be perceived at different levels of the service system, and what types of tools can be utilized to get information about performance at different levels of the welfare service system and from different perspectives in order to manage it. Thus, the theme of this research and suggested solutions can be considered as highly relevant in the current situation in Finnish society.

5.4. Suggestions for the future research

This research provides new knowledge about performance measurement at different levels in the welfare service system. However, many questions related to performance measurement and management in the context of welfare services remain unanswered and require further research.

The focal limitation of this research is its focus on design and implementation of performance measurement. More information is needed about the use of performance measurement information at different levels in welfare service system. At the organisational level, this research focused on designing measures related to intellectual capital. However, this research was not able to offer information about the usability of the information, e.g. how IC measures were reported, who used the information and what actions were taken based on IC measures. Intellectual capital development projects were carried out in three non-profit elderly care organisations. Further research about intellectual capital management in other types of organisations, for example in public or for-profit organisations and in other types of welfare services, would enrich the current

[4] Invited presentations in conferences: Tackling homelessness as a social investment for the future, Amsterdam 2013, The 15th National Homelessness Conference, Edinburgh 2014

understanding about the role of intellectual capital, benefits and challenges related to it, and its potential as a managerial perspective in the welfare services sector. In addition, as this research applies IC management approach only at the organisational level, further research is needed about applicability of IC management approach in the service system level in welfare services, for example in service networks.

In this research, a performance measurement system to support the effectiveness management of an integrated service delivery was designed. Due to practical limitations (time), this research was not able to provide information about implementation and use of the performance measurement system in the context of collaborative networks in welfare service sector. As earlier research literature indicates difficulties in managing inter-organisational co-operation in the welfare sector, further research is needed about the usability of performance measurement in managing the effectiveness of such a co-operative network.

One of the current concerns is that much information is gathered in the social and healthcare sectors, both at the organisational and the service system level, but information gathered is not utilized in optimal way (e.g. Jääskeläinen, 2010; Laihonen & Sillanpää, 2014; Klemola et al., 2014). The ongoing reform of social welfare and healthcare services entails strategies for more efficient use of customer-centered information (STM, 2014). This development would ease the challenges in obtaining the information about clients' service use, which was one of the main challenges in this study when measuring performance at the service system level (Paper V). Recently knowledge management is proposed as a promising approach in creating more effective welfare services, e.g. by providing tools and practices to more comprehensive, future-oriented information and developments on citizens' well-being (e.g. Klemola et al., 2014). However, many development needs and avenues for further research remain unanswered and require attention before such systems are working in practice and facilitate performance management in the sector. For example, based on this research, it seems that there are not consistent principles regarding data entry or pricing of services, especially in public sector organisations, which challenges the comparisons of different units. Thus, more research and development is needed to create consistent practices in the sector.

One of the foremost avenues for the further research relates the role and utilization of performance information at the service system level. Performance measurement tools presented in this research enable the measurement and comparison of impacts of different services and would facilitate knowledge-based decision making. Impact measurements carried out in this research were related to specific programmes (e.g. governments' programme for homelessness), thus impact measurement conducted in this research can be characterized as non-recurring activity related to certain service innovations. However, as information regarding the effectiveness of services is needed constantly in the welfare sector, further multidisciplinary research is needed to specify the key information to determine the effectiveness, how that information can be acquired from the system, and

how the information can be incorporated to public administration and policy making in order to create more effective welfare services.

References

AL (2011), ‘Entiset kodittomat elävät siististi koulun naapurissa’, Aamulehti 4.1.2011.

AL (2012), ’Harri Erkkilä pääsi pois kadulta kodin lämpöön’, Aamulehti 17.10.2012.

Andriessen, D. (2004), ‘IC valuation and measurement: classifying the state of art’, *Journal of Intellectual Capital*, Vol. 5, No. 2, pp. 230-242.

Axelsson, R., & Axelsson, S.B. (2006), ‘Integration and collaboration in public health – a conceptual framework’, *International Journal of Health Planning and Management*, Vol. 21, pp. 75-88.

Badinelli, R., Barile, S., Ng, I., Polese, F., Saviano, M., Di Nauta, P. (2012), ‘Viable service systems and decision making in service management’, *Journal of Service Management*, Vol. 23, No. 4, pp. 498-526.

Barratt, M., Homas Y.C., Li, M. (2011), ‘Qualitative case studies in operations management: Trends, research outcomes, and future research implications’, *Journal of Operations Management*, Vol. 29, pp. 329-342.

Barretta, A. & Busco, C. (2011), ‘Technologies of government in public sector’s networks: In search of cooperation through management control innovations’, *Management Accounting Research*, Vol. 22, No. 4, pp. 211-219.

Beecham, J., Knapp, M., McGillow, S., Donelly, M., Kvanagh, S., Fenyo, A. & Mays, N. (1997), ‘The cost-effectiveness of community care for adults with learning disabilities leaving long-stay hospital in Northern Ireland’, *Journal of Intellectual Disability Research*, Vol. 41, No. 1, pp. 30-41.

Behn, R. D. (2003), Why Measure Performance? Different Purposes Require Different Measures, *Public Administration Review*, Vol. 63, No. 5, pp. 586-606.

Bititci, U.S., Carrie, A.S. & McDewitt, L. (1997), ‘Integrated performance measurement systems: A development guide’, *International Journal of Operations & Production Management*, Vol. 17, No. 5, pp. 522-534.

Bitner, M.J., Faranda, W.T., Hubbert, A. R., Zeithaml, V.A. (1997), ‘Customer contributions and roles in service delivery’, *International Journal of Service Industry Management*, Vol. 8, No. 3, pp. 193-205.

Blalock, A. B. (1999), ‘Evaluation Research and the Performance Management Movement’, *Evaluation*, Vol. 5, No. 2, pp. 117-149.

Boland, T. & Fowler, A. (2000), ‘A systems perspective of performance management in public sector organizations’, *The International Journal of Public Sector Management*, Vol. 13, No. 5, pp. 417-446.

Bourne, M., Mills, J., Wilcox, M., Neely, A., & Platts, K. (2000), ‘Designing, implementing and updating performance measurement systems’, *Journal of Operations & Production Management*, Vol. 20, No. 7, pp. 754-771.

Brazier, J., Ratcliffe, J., Salomon, J.A., & Tsuchiya, A. (2007), *Measuring and Valuing Health Benefits for Economic Evaluation*, Oxford, New York: Oxford University Press, Inc.

Brozetti, G., Veltri, S., (2013), 'Intellectual capital reporting in the Italian non-profit sector: analysing a case study', *Journal of Intellectual Capital*, Vol. 14, No. 2, pp. 246-263.

Busi, M. & Bititci, U. (2006), 'Collaborative performance management: present gaps and future research', *Journal of Productivity and Performance Management*, Vol. 55, No. 1, pp. 7-25.

Callender, G. (2011), 'Alignment of inter-agency supply chains to enhance public sector performance management', *International Journal of Productivity and Performance Management*, Vol. 60 No. 1, pp. 9-23.

Carenys, J. (2012), 'Management Control Systems: A Historical Perspective', *International Journal of Economy*, Management and Social Sciences, Vol. 1, No. 1, pp. 1-18.

Chandler, J. D., Vargo S. L. (2011), 'Contextualization and value-in-context: How context frames exchange', *Marketing Theory*, Vol. 11, No. 1, pp. 35-49.

Chesbrough, H., Spohrer, J. (2006), A research manifesto for services science, *Communications of the ACM*, Vol. 49, No. 7, pp. 35-40.

Clark, R.E., Teague, G.B., Ricketts, S.K., Bush, P.W., Xie H., McGuire, T.G., Drake, R.E., McHugo, G.J., Keller, A.M. and Zubkoff, M. (1998), 'Cost-Effectiveness of Assertive Community Treatment Versus Standard Case Management for Persons with Co-Occurring Severe Mental Illness and Substance Use Disorders', *Health Services Research* 33:5, December 1998, Part 1, pp. 1285-1308.

Conaty, F.J. (2012), 'Performance management challenges in hybrid NPO/public sector settings: an Irish case', *International Journal of Productivity and Performance Management*, Vol. 61, No. 3, pp. 290-309.

Coughlan, P., & Coghlan, D. (2002), 'Action research for operations management', *International Journal of Operations & Production Management*, Vol. 22, No. 2, pp. 220-240.

Crook, W.P., Mullis, R.L., Cornille, T.A., & Mullis, A.K. (2005), 'Outcome measurement in homeless systems of care', *Evaluation and Program Planning*, Vol. 28, pp. 379-390.

Cuba, E.G. (1981), 'Criteria for Assessing the Trustworthiness of Naturalistic Inquiries', *Educational Communication and Technology*, Vol. 29, No. 2, pp. 75-91.

Danish Agency for Trade and Industry (2000), *Guidelines for intellectual capital statements – key to knowledge management*, Danish Agency for Trade and Industry, Copenhagen.

Davies, I.C. (1999), Evaluation and Performance Management in Government, *Evaluation*, Vol. 5, No. 2, pp. 150-159.

Dawson, A. (2010), 'A case study of impact measurement in a third sector umbrella organisation', *International Journal of Productivity and Performance Management*, Vol. 59, No. 6, pp. 519-533.

DeGroff, A., Schooley, M., Chapel, T., Poister, T.H. (2010), 'Challenges and strategies in applying performance measurement to federal public health programs', *Evaluation and Program Planning,* Vol. 33, pp. 365-372.

Denzin, N.K., Lincoln, Y.S. (1994), 'Entering the Field of Qualitative Research', in Denzin, N.K. and Lincoln, Y.S. (ed) *Handbook of Qualitative Research*, SAGE Publications Inc., Thousand Oaks.

Drummond, M.F., Sculpher, M.J., Torrance, G.W., O´Brien, B.J., Stoddart, G.L. (2005), *Methods for the Economic Evaluation of Health Care Programmes*, Oxford University Press Inc., New York.

Dubois, A., Gadde, L-E. (2002), 'Systematic combining: an abductive approach to case research', *Journal of Business Research*, Vol. 55, pp. 553-560.

Dumay, J., Rooney, J. (2011), '"Measuring for managing?" An IC practice case study', *Journal of Intellectual Capital*, Vol. 12, No. 3, pp. 344-355.

Eddy, D.M. (1998), 'Performance Measurement: Problems and Solutions', *Health Affairs*, July/August, pp. 7-25.

Edvardsson, B., Gustafsson, A., Roos, I. (2005), 'Service portraits in service research: a critical review', *International Journal of Service Industry Management*, Vol. 16, No. 1, pp. 107-121.

Eisenhardt, K.M. (1989), Building Theories from Case Study Research, *Academy of Management Review*, Vol. 14, No. 4, pp. 532-550.

Eisenhardt, K.M, Graebner, M.E. (2007), Theory building from cases: opportunities and challenges, *Academy of Management Journal*, Vol. 50, No. 1, pp. 25-32.

Emory, C.W. (1985), *Business Research Methods*, Third Edition, Irwin Series in Information and Decision Sciences, Richard D. Irwin Inc., USA.

Evans, J.M., & Baker, G.R. (2012), 'Shared mental models of integrated care: aligning multiple stakeholder perspectives', *Journal of Health Organization and Management*, Vol. 26, No. 6, pp. 713-736.

Ferreira, A., Otley, D. (2009), 'The design and use of performance management systems: An extended framework for analysis', *Management Accounting Research,* Vol. 20, pp. 263–282

Flatau, P., Zaretzky, K. (2008), 'The Economic Evaluation of Homelessness Programmes', *European Journal of Homelessness*, Vol. 2, December 2008, pp. 305-320.

Fletcher, A., Guthrie, J., Steane, P., Roos, G., Pike, S. (2003), 'Mapping stakeholder perceptions for a third sector organization', *Journal of Intellectual Capital*, Vol. 4, No. 4, pp. 505-527.

Foltin, C. (1999), 'State and local government performance: it's time to measure up!', *The Government Accountants Journal*, Vol. 48, No. 1.pp. 40-46.

Franco-Santos, M., Kennerley, M., Micheli, P., Martinez, V., Mason, S., Marr, B., Gray, D., Neely, A. (2007), 'Towards a definition of a business performance measurement system', *International Journal of Operations & Production Management*, Vol. 27, No. 2, pp. 784-801.

Fryer, K., Antony, J. & Ogden, S. (2009), 'Performance management in the public sector', *International Journal of Public Sector Management*, Vol. 22, No. 6, pp. 478-498.

Ghauri, P., Grønhaug, K. (2005), *Research Methods in Business Studies – A Practical Guide*, Third edition, Pearson Education Limited, Essex.

Giannakouris, K. (2008), *Ageing characterises the demographic perspectives of the European societies*, Statistics in focus 72/2008, Eurostat.

Goh, S.C. (2012), 'Making performance measurement systems more effective in public sector organizations', *Measuring Business Excellence*, Vol. 16, No.1, pp. 31-42.

Golafshani, N. (2003), 'Understanding Reliability and Validity in Qualitative Research', *The Qualitative Report*, Vol. 8, No. 4, pp. 597-607.

Greiling, D. (2010), 'Balanced scorecard implementation in German non-profit organizations', *International Journal of Productivity and Performance Management*, Vol. 59, No. 6, pp. 534-554.

Grönroos, C. (1984), A Service Quality Model and its Marketing Implications, *European Journal of Marketing*, Vol. 18, No. 4, pp. 36-44.

Grönroos, C. (2007), *Service Management and Marketing, Customer Management in Service*, John Wiley & Sons, Ltd, England.

Grönroos, C., Ojasalo, K. (2004), Service productivity: Towards a conceptualization of the transformation of inputs into economic results in services, *Journal of Business Research*, Vol. 57, No. 4, pp. 414-423.

Government Communications Department (2016), 'Government outlined healthcare, social welfare and regional government reform package', Press Release 137/2016, Available (cited 13.4.2016): http://valtioneuvosto.fi/artikkeli/-/asset_publisher/hallitus-linjasi-sote-ja-aluehallintouudistusta?_101_INSTANCE_3wyslLo1Z0ni_groupId=10616&_101_INSTANCE_3wyslLo1Z0ni_languageId=en_US

Gummesson, E. (2000), *Qualitative Methods in Management Research*, Second Edition, Sage Publications Inc., Thousand Oaks.

Guthrie, J., Steane, P., Farneti, F. (2009) 'IC reporting in the Australian Red Cross blood service', *Journal of Intellectual Capital*, Vol. 10, No. 4, pp. 504-519.

Habersam, M., Piber, M. (2003), 'Exploring intellectual capital in hospitals: two qualitative case studies in Italy and Austria', *European Accounting Review*, Vol. 12, No.4, pp. 753-779.

Halligan, J., Sarrico, C.S., Rhodes, M.L. (2012), 'On the road to performance governance in the public domain?', *International Journal of Productivity and Performance Management*, Vol. 61, No. 3, pp. 224-234.

Hannula, M. (1999), *Expedient Total Productivity Measurement*, Acta Polytechnica Scandinavica, Industrial Management and Business Administration Series, No.1, The Finnish Academy of Technology, Espoo.

Hannula, M. (2002), 'Total Productivity measurement based on partial productivity ratios', *International Journal of Production Economics*, Vol. 78, pp. 57-67.

Hannula, M. & Lönnqvist, A. (2002), *Suorituskyvyn mittauksen käsitteet*, Metalliteollisuuden kustannus, Helsinki.

Hansen, H. F. (2004), 'Choosing Evaluation Models, A Discussion on Evaluation Design', *Evaluation*, Vol. 11, No. 4, pp. 447-462.

Hansson, J., Qvretveit, J., Askerstam, M., Gustafsson, C., & Brommels, M. (2010), 'Coordination in networks for improved mental health service', *International Journal of Integrated Care*, Vol. 10, No. 25, pp. 1-9.

Hared, B.A., Abdullah, Z., Huque, S.M.R. (2013), 'Management Control Systems: A review of literature and a theoretical framework for future researches', *European Journal of Business and Management*, Vol. 5, No. 6, pp. 1-13.

Hartman, S. (2012), *Sosiaalipalvelut*, Toimialaraportti 5/2012, Työ- ja elinkeinoministeriö.

Hartman, S. (2011), *Terveyspalvelut*, Toimialaraportti 10/2011, Työ- ja elinkeinoministeriö.

Hiilamo, H., Kangas, O., Fritzell, J., Kvist, J., Palme, J. (2013), *A recipe for a better life: experiences from the Nordic countries*, CMI, Unigrafia.

Hill, T. P. (1977), 'On Goods and Services', *Review of Income & Wealth*, Vol., 23, No. 4, pp. 315-338.

Hood, C. (1991), A public management for all season? *Public Administration*, Vol. 69, No. 1, pp. 3-19.

Hoque, Z. (2008), 'Measuring and reporting public sector outputs/outcomes, Exploratory evidence from Australia', *International Journal of Public Sector Management*, Vol. 21, No. 5, pp. 468-493.

HS (2011), 'Pitkän pennin Pekka', Helsingin Sanomat 19.6.2011.

HS (2015), 'Kalliiksi käy, kun inhimillisyys ja talous kulkevat käsi kädessä', Helsingin Sanomat 19.7.2015, available http://www.hs.fi/paakirjoitukset/a1437186934838.

Huang, H. B. (2010), 'What is good action research? Why the resurgent interest?', *Action Research*, Vol. 8, No. 1, pp. 93-109.

Jansen, E.P. (2008), ‘New Public Management: Perspectives on Performance and the Use of Performance Information’, *Financial Accountability & Management*, Vol. 24, No. 2, pp. 169-191.

Jensen, C. (2008), ‘Worlds of welfare services and transfers’, Journal of European Social Policy, Vol. 18, No. 2, pp. 151-162.

Johnsen, Å., Nørrekilt, H., Vakkuri, J. (2006), Introducing a Nordic Perspective on Public Sector Performance Measurement, *Financial Accountability & Management*, Vol. 22, No. 3, pp. 207-212.

Johnston, R., Clark, G. (2008), *Service Operations Management – Improving Service Delivery*, Pearson Education Limited, England.

Johnston, R., Jones, P. (2004), ‘Service productivity - Towards understanding the relationship between operational and customer productivity’, *International Journal of Productivity and Performance Management*, Vol. 53 No. 3, pp. 201-213.

Jones, K., Colson, P., Valencia, J.D., Susser, E. (1994), ‘A Preliminary Cost Effectiveness Analysis of an Intervention to Reduce Homelessness Among the Mentally Ill’, *Psychiatric Quarterly*, Vol. 65, No. 4, s. 243-256.

Julkunen, I. (2004), ‘Introduction’, in Julkunen, I. (ed) *Perspectives, models and methods in evaluating the welfare sector – a Nordic approach*, pp. 9-10, Stakes, Helsinki.

Jääskeläinen, A. (2010), *Productivity Measurement and Management in Large Public Service Organizations*, Publication 927, Tampere University of Technology, Tampereen Yliopistopaino, Tampere.

Jääskeläinen, A., Laihonen, H. (2014), ‘Applying performance measurement in service operations: analysis of contextual differences’, *International Journal of Business Performance Management*, Vol. 15, No. 3, pp. 243-261.

Jääskeläinen, A., Laihonen, H., Lönnqvist, A., Palvalin, M., Sillanpää, V., Pekkola, S., Ukko, J. (2012), ‘A contingency approach to performance measurement in service operations’, *Measuring Business Excellence*, Vol. 16, No. 1, pp. 43-52.

Jääskeläinen, A., Lönnqvist, A. (2009), ‘Designing operative productivity measures in public services’, *VINE: The journal of information and knowledge management systems*, Vol. 39, No. 1, pp. 55-67.

Kangasharju, A. (2007), *Hyvinvointipalvelujen tuottavuus, Tuloksia opintien varrelta*, Valtion taloudellinen tutkimuskeskus, Helsinki.

Kangasharju, A. (2008), *Tuottavuus osana tuloksellisuutta*, Kuntaliiton verkkojulkaisu, Suomen kuntaliitto, Helsinki.

Kaplan, R.S. (2001), Strategic Performance Measurement and Management in Nonprofit Organizations, *Nonprofit Management & Leadership*, Vol. 11, No. 3, pp. 353-370.

Kaplan, R.S., Norton, D.P. (1992), ‘The Balanced Scorecard – Measures That Drive Performance’, *Harvard Business Review*, January – February, pp. 71-79.

Kaplan, R.S., Norton, D.P., Rugelsjoen, B. (2010), 'Managing Alliances with the Balanced Scorecard', *Harvard Business Review*, January-February, pp. 114-120.

Karlsson, I. (2011), *Mielenterveyskuntoutujien tuetun asumisen kustannusvaikuttavuuden selvitys*, Varkauden kaupunki, SOLVER palvelut Oy, Kouvola.

Kasanen, E., Lukka, K, Siitonen, A. (1993), 'The Constructive Approach in Management Accounting Research', *Journal of Management Accounting Research*, Fall 1993, pp. 243-264.

Kaydos, W. (1999), *Operational Performance Measurement: Increasing Total Productivity*, St. Lucie Press, Florida.

Kettunen, R. (2007), *Sosiaalipalvelut. Toimialaraportti ennakoi liiketoimintaympäristön muutoksia*, Toimialaraportti 15/2007, Kauppa- ja teollisuusministeriö, Helsinki.

Kettunen, P. (2012), Sosiaalipalveluiden vaikuttavuuden arviointi, in Hänninen, S., Junnila, M. (ed) *Vaikuttavatko politiikkatoimet? Sosiaali- ja terveydenhuolto vaikuttavuusarvioinnin kohteena*, pp. 146-150, Terveyden ja hyvinvoinnin laitos, Tampere.

Kianto, A., Hurmelinna-Laukkanen, P., Ritala, P. (2010), 'Intellectual capital in service- and product –oriented companies', *Journal of Intellectual Capital*, Vol. 11, No. 2, pp. 305-325.

Kim, D., Kumar, V, Kumar, U. (2009), 'A Framework of Intellectual Capital Management Based on ISO 9001 Quality Management System: The Case Study of ISO 9001 Certified Public R&D Institute', *Knowledge and Process Management*, Vol. 16, No. 4, pp. 162–173.

Klassen, K.J., Russell, R.M., Chrisman J.J. (1998), Efficiency and Productivity Measures for High Contact Measure, *Service Industries Journal*, Vol. 18, No. 4, pp. 1-18.

Klassen, A., Miller, A., Anderson, N., Shen, J., Schiariti, V., O'Donnell, M. (2010), 'Performance measurement and improvement frameworks in health, education and social services systems: a systematic review', *International Journal for Quality in Health Care*, Vol. 22, No. 1, pp. 44-69.

Klemola, K. (2015), Tuottavuuden, vaikuttavuuden ja kustannusvaikuttavuuden arviointi alueellisesti integroiduissa sosiaali- ja terveyspalveluissa – palvelujen käyttöön perustuva malli ja esimerkkejä, Acta Universitatis Lappeenrantaensis 664, Lappeenranta University of Technology.

Klemola, K., Uusi-Illikainen, J., Askola, T. (2014), *Sosiaali- ja terveyspalveluiden tietojohtamisen käsikirja*, SITRA, Helsinki.

Knapp, M. (1984), *The Economics of Social Care – Studies in social policy*, MacMillan Publishers Ltd, Hong Kong.

Kong, E. (2010), 'Analyzing BSC and IC's usefulness in nonprofit organizations', *Journal of Intellectual Capital*, Vol., 11, No. 3, pp. 284-304.

Kong, E. (2007), 'The strategic importance of intellectual capital in the non-profit sector', *Journal of Intellectual Capital*, Vol. 8, No. 4, pp. 721-31.

Kong, E., Prior, D. (2008), ‘An intellectual capital perspective of competitive advantage in nonprofit organisations’, *International Journal of Nonprofit and Voluntary Sector Marketing*, Vol. 13, pp. 119-128.

Koskinen, I., Alasuutari, P., Peltonen, T. (2005), *Laadulliset menetelmät kauppatieteissä*, Vastapaino, Tampere.

Konu, A, Rissanen, P., Ihantola, M., Sund, R. (2009), ’Effectiveness in Finnish healthcare studies’, *Scandinavian Journal of Public Health*, Vol. 37, pp. 64–74.Krongstrup, H. (2004), ‘User evaluation in practice – the UPQA model’, in Julkunen, I. (ed) *Perspectives, models and methods in evaluating the welfare sector – a Nordic approach*, pp. 83-91, Stakes, Helsinki.

Kujansivu, P. (2008), *Intellectual Capital Management – Understanding Why Finnish Companies Do Not Apply Intellectual Capital Management Models*, Tampere University of Technology, Publication 747.

Kulmala, H., Lönnqvist, A. (2006), ‘Performance measurement of networks: towards a nonfinancial approach’, International Journal of Networking and Virtual Organisations, Vol. 3, No. 3, pp. 299-316.

Kurunmäki, L., & Miller, P. (2011), ‘Regulatory hybrids: Partnerships, budgeting and modernising government’, *Management Accounting Research*, Vol. 22, No. 4, pp. 220-241.

Labro, E., Tuomela, T-S. (2003), ‘On bringing more action into management accounting research: process considerations based on two constructive case studies’, *European Accounting Review*, Vol. 12, No. 3, pp. 409-442.

Laihonen, H., Jääskeläinen, A., Pekkola, S. (2014), Measuring performance of a service system – from organizations to customer-perceived performance, *Measuring Business Excellence*, Vol. 18, No. 3, pp. 73-86.

Laihonen, H., Lönnqvist, A. (2010),’Knowledge-based value creation: grasping the intangibility of service operations in Finland’, *International Journal of Knowledge-Based Development*, Vol. 1, No. 4, pp. 331-345.

Laihonen, H., Sillanpää, V. (2014), ‘What is the Role of Knowledge Management in Establishing the Effectiveness in Welfare Services?’, *Knowledge and Process Management*, Vol. 21, No. 2, pp. 112-121.

Laine, J. (2005), *Laatua ja tuotannollista tehokkuutta? Taloustieteellinen tutkimus vanhusten laitoshoidosta*, Stakes, Tutkimuksia 151, Vaajakoski.

Laitinen, I., Jalonen, H., Stenvall, J. (2014), *Se toimii sittenkin. Kohti organisaatiotutkimuksen pragmaattista kompleksisuusteoriaa*, Tutkimuksia 42, Turun ammattikorkeakoulu, Turku.

Lepak, D. P., Smith, K. G., Taylor, M.S. (2007), ‘Value creation and value capture: a multilevel perspective’, *Academy of Management Review*, Vol. 32, No. 1, pp. 180-194.

LeRoux, K., Wright, N.S. (2010), 'Does Performance Measurement Improve Strategic Decision Making? Findings From a National Survey of Nonprofit Social Service Agencies', *Nonprofit and Voluntary Sector Quarterly*, Vol. 39, No. 4, pp. 571-587.

Linna, P., Pekkola, S., Ukko, J., Melkas, H. (2010), Defining and measuring productivity in the public sector: managerial perceptions, *International Journal of Public Sector Management*, Vol. 23, No. 5, pp. 479-499.

Linnosmaa, I. (2012), *Palvelusetelit sosiaalipalveluissa*, Terveyden ja hyvinvoinnin laitos, Raportti 53/2012.

Lith, P. (2012), *Innovatiiviset julkiset hankinnat Suomen kansantaloudessa*, TEM-raportteja 18/2012.

Lovelock, C., Gummesson, E. (2004), 'Whither Services Marketing? In Search of a New Paradigm and Fresh Perspectives', *Journal of Service Research*, Vol. 7, No. 1, pp. 20-41.

Lukka, K., Kasanen, E. (1995), 'The problem of generalizability: anecdotes and evidence in accounting research', *Accounting, Auditing & Accountability Journal*, Vol. 8, No. 5, pp. 71-90.

Lönnqvist, A. (2004), *Measurement of Intangible Success Factors: Case Studies on the Design, Implementation and Use of Measures*, Publication 475, Tampere University of Technology, TTY- paino, Tampere.

Lönnqvist, A., Jääskeläinen, A., Kujansivu, P., Käpylä, J., Laihonen, H., Sillanpää, V., Vuolle, M. (2010), *Palvelutuotannon mittaaminen johtamisen välineenä*, Tietosanoma Oy, Helsinki.

Lönnqvist, A., Kujansivu, P. (2007), 'Designing and implementing an intellectual capital management system: applying the Meritum Guidelines in practice', *International Journal of Knowledge Management Studies*, Vol. 1, No. 3/4, pp. 276-290.

Lönnqvist, A., Kujansivu, P., Antikainen, R. (2006), *Suorituskyvyn mittaaminen, Tunnusluvut asiantuntijaorganisaation johtamisen välineenä*, Edita Publishing Oy, Helsinki.

Lönnqvist, A., Laihonen, H. (2012), 'Welfare service system productivity: the concept and its application', *International Journal of Productivity and Performance Management*, Vol 61. No. 2, pp. 128-141.

Lönnqvist, A., Sillanpää, V., Carlucci, D. (2009), 'Intellectual capital management in practice: assessment of implementation and outcomes', *Knowledge Management Research & Practice*, 2009, No 7, pp. 308-316.

Macpherson, M. (2001), 'Performance measurement in not-for-profit and public-sector organisations', *Measuring Business Excellence*, Vol. 5, No. 2 ,pp. 13-17.

Malmi, T. & Brown, D.A. (2008), 'Management control systems as a package – Opportunities, challenges and research directions', *Management Accounting Research*, Vol. 19, No. 4, pp. 287-300.

Mansell, J., Knapp, M., Beadle-Brown, J. & Beecham, J. (2007), 'Deinstitutionalisation and community living – outcomes and costs: report of a European Study', Volume 2, Main Report, Canterbury, Tizard Centre, University of Kent.

Marr, B., Schiuma, G., Neely, A. (2004), 'The dynamics of value creation: mapping your intellectual performance drivers', *Journal of Intellectual Capital*, Vol. 5, No. 2, pp. 312-325.

Martin, L.L., Kettner, P.M. (2010), *Measuring the Performance of Human Service Programs*, SAGE Publications Inc., Thousand Oaks, CA.

Martin-Castilla, J.I., Rodriguez-Ruiz, O. (2008), 'EFQM model: knowledge governance and competitive advantage', *Journal of Intellectual Capital*, Vol. 9, No. 1, pp. 133-156.

McGuire, A. (2001), 'Theoretical concepts in economic evaluation of health care', In Drummond, M., McGuire, A. (ed): Economic Evaluation in Health Care – Merging Theory with Practice, Oxford University Press Inc., New York.

McKinnon, J. (1988), 'Reliability and Validity in Field Research: Some Strategies and Tactics', *Accounting, Auditing and Accountability*, Vol. 1, No. 1, pp. 34-54.

Meklin, P. (1997), *Valtiontalouden perusteet*, Hallinnon kehittämiskeskus, Edita, Helsinki.

Meritum (2001), *Guidelines for managing and reporting on intangibles, intellectual capital report*, Final Report of the Meritum Project.

Miles, M.B, Huberman, A.M. (1994), *Qualitative Data Analysis*, Second edition, Sage Publication Inc., Thousand Oaks.

Ministry of Environment (2013), Pitkäaikaisasunnottomuuden vähentämisohjelma 2012-2015, available http://www.ym.fi/fi-FI/Asuminen/Ohjelmat_ja_strategiat/Paattyneet_hankkeet/Pitkaaikaisasunnottomuuden_vahentamisohj(1873)

Morse, J. M., Barrett, M., Mayan, M., Olson, K., Spiers, J. (2002), 'Verification Strategies for Establishing Reliability and Validity in Qualitative Research', *International Journal of Qualitative Methods*, Vol. 1, No. 2, pp. 13-22.

Moullin, M., Soady, J., Skinner, J., Price, C., Cullen, J., Gilligan, C. (2007), 'Using the Public Sector Scorecard in public health', *International Journal of Health Care Quality Assurance*, Vol. 20, No. 4, pp. 281-289.

Mouritsen, J., Thorsgaard Larsen, H., Bukh, P.N. (2005), 'Dealing with the knowledge economy: intellectual capital versus balance scorecard', *Journal of Intellectual Capital*, Vol. 6, No. 1, pp. 8-27.

Moxham, C. (2009), 'Performance measurement: Examining the applicability of the existing body of knowledge to nonprofit organisations', *International Journal of Operations & Production Management*, Vol. 29, No. 7, pp. 740-763.

Nahapiet, J., Ghoshal, S. (1998), 'Social capital, intellectual capital, and the organizational advantage', *Academy of Management Review*, Vol. 23, No. 2, pp. 242-266.

Neely, A., Gregory, M., Platts, K. (2005), 'Performance measurement system design – A literature review and research agenda', *International Journal of Operations & Production Management*, Vol. 25, No. 12, pp. 1228-1263.

Nielsen, S.B., & Ejler, N. (2008), 'Improving Performance? Exploring the Complementarities between Evaluation and Performance Management', *Evaluation*, Vol. 14, No. 2, pp.171-192.

Niiranen, V. (2008), 'The Many Purposes of Performance Evaluation', *International Journal of Public Administration*, Vol. 31, pp. 1208-1222.

Niiranen, V., Stenvall, J., Lumijärvi, I., Meklin, P., Varila, J. (2005), 'Miten arvioida kuntapalveluiden tuloksellisuutta? Kartuke-tutkimuksen lähtökohdat, metodologiset sitoumukset ja tavoitteet', in Niiranen, V., Stenvall, J., Lumijärvi, I. (ed): *Kuntapalvelujen tuloksellisuuden arviointi – Tasapainoitettu mittaristo kunnallisessa organisaatiossa*, Otavan kirjapaino Oy, Keuruu.

Nordgren, L., (2009), 'Value creation in health care services – developing service productivity. Experiences from Sweden', *International Journal of Public Sector Management*, Vol. 22, No. 2, pp. 114-127.

Nudurupati, S.S., Bititci, U.S., Kumar, V., Chan, F.T.S. (2011), 'State of the art literature review on performance measurement', *Computers & Industrial Engineering*, Vol. 60, pp. 279–290.

Packard, T. (2010), 'Staff Perceptions of Variables Affecting Performance in Human Service Organizations', *Nonprofit and Voluntary Sector Quarterly*, Vol. 39, No. 6, pp. 971-990.

Parasuraman, A. (2002), 'Service quality and productivity: a synergistic perspective', *Managing Service Quality*, Vol. 12, No. 1, pp. 6-9.

Parung, J., & Bititci, J. (2008), 'A Metric for Collaborative Networks', *Business Process Management Journal*, Vol. 14, No. 5, 654-674.

Pekkola, S. (2013), *Performance Measurement and Management in a Collaborative Network*, Acta Universitatis Lappeenrantaensis 534, Lappeenranta University of Technology.

Pekurinen, M., Seppälä, T.T. (2014), *Sosiaali- ja terveydenhuollon keskeiset rahavirrat*, Raportti 22/2014, Terveyden ja hyvinvoinnin laitos, Juvenes Print, Tampere.

Peng, T. J. A., Pike, S., Roos, G. (2007), 'Intellectual capital and performance indicators: Taiwanese healthcare sector', *Journal of Intellectual Capital*, Vol. 8 No. 3, pp.538-556.

Petty, R., Guthrie, J. (2000), 'Intellectual capital literature review. Measurement, reporting and management, *Journal of Intellectual Capital*, Vol. 1, No. 2, pp. 155-176.

Pilkington, A., Chai, K-H. (2008), Research themes, concepts and relationships, A study of International Journal of Service Industry Management (1990-2005), *International Journal of Service Industry Management*, Vol. 19, No. 1, pp. 83-110.

Pinkney, S., Ewing, S. (2005), 'How Does this Help Again? Economic Evaluation and Homelessness Policy', Proceedings of *'Looking back, looking forward: a quarter-century*

of social change', the Australian Social Policy Conference, Sydney, New South Wales, Australia, 20–22 July 2005.

Poister, T.H. (2003), *Measuring Performance in Public and Non-profit Organizations*, John Wiley & Sons, Inc, San Francisco, CA.

Pollanen, R.M. (2005), Performance measurement in municipalities, Empirical evidence in Canadian context, *International Journal of Public Sector Management*, Vol. 18, No. 1, pp. 4-24.

Porter, M. E. (2010), 'What is Value in Health Care?' *The New England Journal of Medicine*, 23, 2477-2481.

Provan, K. G., Milward, H. B. (2001), 'Do Networks Really Work? A Framework for Evaluating Public-Sector Organizational Networks', *Public Administration Review*, Vol. 61, No. 4, pp. 414-423.

Qvretveit, J. (1998), *Evaluating health interventions. An introduction to evaluating of health treatments, services, policies and organizational interventions,* Open University Press, Buckingham.

Qvretveit, J., Hansson, J., Brommels, M. (2010), 'An integrated health and social care organizations in Sweden: Creation and structure of a unique local public health and social care system', *Health Policy*, Vol. 97, pp. 113-121

Radnor, Z.J., Barnes, D. (2007), 'Historical analysis of performance measurement and management in operations management', *International Journal of Productivity and Performance Management,* Vol. 56, No. 5, pp. 384-396.

Rahkola, J. (2009), *Hyvinvointipalvelujen uudistaminen – periaatteet ja kansainväliset kokemukset*, KSS Working Papers, 1/2009.

Rajavaara, M. (2006), *Yhteiskuntaan vaikuttava Kela, Katsaus vaikuttavuuden käsitteisiin ja arviointiin*, Sosiaali- ja terveysturvan katsauksia 69, Kelan tutkimusosasto, Helsinki.

Ramirez, Y., Gordillo, S. (2014), 'Recognition and measurement of intellectual capital in Spanish universities', *Journal of Intellectual Capital*, Vol. 15, No. 1, pp. 173-188.

Rantanen, H., Kulmala, H.I., Lönnqvist, A., Kujansivu, P. (2007), 'Performance measurement systems in the Finnish public sector', *International Journal of Public Sector Management*, Vol. 20, No. 5, pp. 415-433.

Rastogi, P.N. (2003), 'The nature and role of IC. Rethinking the process of value creation and sustained enterprise growth' *Journal of Intellectual Capital*, Vol. 4, No. 2, pp. 227-248.

Rautiainen, A., (2012), 'Kustannusvaikuttavuuden mittareiden kehittäminen sosiaalityössä', *Kunnallistieteellinen aikakauskirja*, 1/12, pp. 31-42.

Rhee, S.-K., Rha, J.-Y. (2009), Public service quality and customer satisfaction: exploring the attributes of service quality in the public sector, *The service Industries Journal*, Vol. 29, No. 11, pp. 1491-1512.

Riege, A.M. (2003), 'Validity and reliability tests in case study research: a literature review with "hands-on" applications for each research phase', *Qualitative Market Research: An International Journal*, Vol. 6, No. 2, pp. 75-86.

Rosenheck, R., Kasprow, W., Frisman, L., Liu-Mares, W. (2003), Cost-effectiveness of Supported Housing for Homeless Persons With Mental Illness, *ARC Gen Psychiatry*, Vol. 60, Sep. 2003, pp. 940-951.

Rossi, P.H., Lipsey, M.W., Freeman, H.E., (2004), *Evaluation – A Systematic Approach*, Seventh edition, Sage Publication, Thousand Oaks.

Rouse, P., Putterill, M. (2003), 'An integral framework for performance measurement', *Management Decision*, Vol. 41, No. 8, pp. 791-805.

Räsänen, P., Sintonen, H., Ryynänen, O-P, Blom, M., Semberg-Konttinen, V., Roine, R.P. (2005), 'Measuring cots-effectiveness of secondary health care: Feasibility and potential utilization of results', *International Journal of Technology Assessment in Health Care*, Vol. 21, No. 1, pp. 22-31.

Sahay, B.S. (2005), 'Multi-factor productivity measurement model for service organisation', *International Journal of Productivity and Performance Management*, Vol. 54, No. 1, pp. 7-22.

Sandell, G. (2004), Integrating Evaluation in Welfare Praxis – the Integrated Model, in Julkunen, I. (ed) *Perspectives, models and methods in evaluating the welfare sector – a Nordic approach*, pp. 115-130, Stakes, Helsinki.

Saunders, M., Lewis, P., Thornhill, A. (2009), *Research methods for business students*, Fifth Edition, Pearson Education Limited, Essex.

Saunila, M., Ukko, J., Rusila, P., Rantanen, H. (2012), Challenges of performance measurement and management in public healthcare services, *World Review of Entrepreneurship, Management and Sust. Development*, Vol. 8, No. 2, pp. 181-195.

Schiuma, G., Ordóñez de Pablos, P., Spender, J.C. (2007), 'Intellectual capital and company's value creation dynamics', *International Journal of Learning and Intellectual Capital*, Vol. 4, No. 4, pp. 331-341.

Schneider, A., Samkin, G. (2010), 'Intellectual capital reporting by the New Zealand local government sector', *Journal of Intellectual Capital*, Vol. 9, No. 3, pp. 456-486.

Shenton, A. K. (2004), 'Strategies for ensuring trustworthiness in qualitative research projects', *Education for Information*, Vol. 22, pp. 63-75.

Sillanpää, V. (2013), *Asunto ensin yksiköiden kustannusvaikuttavuus – vertailussa mielenterveys- ja päihdekuntoutujien yksiköt*, (in Finnish) report available at the web site of Ministry of the Environment: http://www.ym.fi/download/noname/%7B13F1333B-9C45-438D-B9BD-59D0BEE62339%7D/77950

Sillanpää, V. (2014), *Kehitysvammainen henkilö terveydenhuollon palvelupoluilla. Kustannusvaikuttavuuden arviointi*, (in Finnish), report available at the website: http://www.savas.fi/userfiles/file/tepa/Raportti_Mikkeli_18092014.pdf

Silvennoinen-Nuora, L., Lumijärvi, I., Sihvonen, M. (2005), ”Strategiatyö ja tasapainoitettu mittaristo”, in Niiranen, V., Stenvall, J., Lumijärvi, I. (ed): *Kuntapalvelujen tuloksellisuuden arviointi – Tasapainoitettu mittaristo kunnallisessa organisaatiossa*, Otavan kirjapaino Oy, Keuruu.

Silvestro, R., Fitzgerald, L., Johnston, R. (1992), ‘Towards a Classification of Service Processes’, *International Journal of Service Industry Management*, Vol. 3, No. 3, pp. 62-75.

Simons, R. (2000), *Performance Measurement & Control Systems for Implementing Strategy*, Prentice Hall, New Jersey.

Sinkkonen, M. (2008), ’Sosiaalipalvelujen vaikuttavuuden arvioinnista’, *Hallinnon Tutkimus*, 1/2008, pp. 18-34.

Sintonen, H., Pekurinen, M. (2009), *Terveystaloustiede*, WSOY Oppimateriaalit, Helsinki.

Spohrer, J., Vargo. S.L., Caswell, N., Maglio, P.P. (2008), The Service System is the Basic Abstraction of Service Science, *Proceedings of the 41st Hawaii International Conference on System Sciences - 2008*.

Strandberg-Larsen, M., Krasnik, A. (2009), ‘Measurement of integrated healthcare delivery: a systematic review of methods and future research directions’, *International Journal of Integrated Care*, Vol. 9, No. 2, pp. 1-10.

STM (2014), *Tieto hyvinvoinnin ja uudistuvien palveluiden tukena – Sote -tieto hyötykäyttöön –strategia 2020*, Juvenes Print, Tampere.

Sund, R. (2005), Terveydenhuoltojärjestelmän vaikuttavuuden arvioinnista, *Yhteiskuntapolitiikka*, Vol. 70, No. 5, pp. 507-513.

Syvänen, S. (2003), *Työn paineet ja puuttumattomuuden kustannukset. Tutkimus sisäisen tehottomuuden lähteistä ja vaikutuksista, esimerkkikohteena kuntien sosiaalitoimen vanhuspalveluja tuottavat työyhteisöt*, Acta Universitatis Tamperensis 942.

Tangen, S. (2005), ‘Demystifying productivity and performance’, *International Journal of Productivity and Performance Management*, Vol. 54, No. 1, pp. 34-46.

Tuomi, J., Sarajärvi, A. (2009), *Laadullinen tutkimus ja sisällönanalyysi*, Tammi, Helsinki.

Ukko, J. (2009), *Managing through measurement: A framework for successful operative level performance measurement*, Acta Unversitatis Lappeenrantaensis, 348, Lappeenranta University of Technology.

Vaarama, M. (1995), *Vanhusten hoivapalvelujen tuloksellisuus hyvinvoinnin tuotanto – näkökulmasta*, Tutkimuksia 55, Stakes, Jyväskylä. (in English: Performance in the care of elderly, A production of welfare – analysis of the public care system in Finnish municipalities)

Vakkuri, J, Meklin, P. (2006), Ambiguity in Performance Measurement: A Theoretical Approach to Organisational Uses of Performance Measurement, *Financial Accountability & Management*, Vol. 22. No. 3, pp. 235-250.

van Helden, G.J., Johnsen, Å, Vakkuri, J. (2012), 'The life-cycle approach to performance management: Implications for public management and evaluation', *Evaluation*, Vol. 18, No. 2, pp. 159-175.

Vargo, S.L., Lush, R. F. (2004), 'Evolving to a New Dominant Logic for Marketing', *Journal of Marketing*, Vol. 68, January, pp. 1-17.

Vargo, S.L., Lush, R. F. (2008), 'Service-dominant logic: continuing the evolution', *Journal of the Academy of Marketing Science*, Vol. 36, No. 1, pp. 1-10.

Vargo, S. L., Maglio, P. P., Akaka, M. A. (2008), On value and value co-creation: A service systems and service logic perspective, *European Management Journal*, (2008) 26, pp. 145-152.

Vartiainen, P. (2008), A Framework for the Evaluative Analysis of Welfare Systems, *International Journal of Public Administration*, Vol. 31, No. 10-11, pp. 1139-1144.

Vedung, E. (2004), 'Evaluation Models and the Welfare Sector', in Julkunen, I. (ed) *Perspectives, models and methods in evaluating the welfare sector – a Nordic approach*, pp. 13-19, Stakes, Helsinki.

Vedung, E. (2010), 'Four Waves of Evaluation Diffusion', *Evaluation*, Vol. 16, No. 3, pp. 263-277.

Virtanen, P. (2007), *Arviointi. Arviointitiedon luonne, tuottaminen ja hyödyntäminen*, Edita Prima Oy, Helsinki.

Virtanen, P., Uusikylä, P. (2004), 'Exploring the Missing Links between Cause and Effect', *Evaluation*, Vol. 10, No. 1, pp. 77-91.

Voss, C, Tsikriktsis, N, Frohlich, M. (2002), Case research in operations management, *International Journal of Operations & Production Management*, Vol. 22, No. 2, pp. 195-219.

Vuolle, M. (2011), *Measuring Performance Impacts of Mobile Business Services from the Customer Perspective*, Publication 1013, Tampere University of Technology.

Wadongo, B, Abdel-Kader, M. (2014), 'Contingency theory, performance management and organizational effectiveness in the third sector – A theoretical framework', *International Journal of Productivity and Performance Management*, Vol. 63, No, 6, pp. 680-703.

Westbrook, R. (1995), 'Action research: a new paradigm for research in production and operations management', *International Journal of Operations & Production Management*, Vol. 15, No. 12, pp. 6-20.

Whyte, M., Zyngier, S. (2014), 'Applied Intellectual Capital Management Experiences from an Australian public sector trial of the Danish Intellectual Capital Statement', *Journal of Intellectual Capital*, Vol. 15, No. 2, pp. 227-248.

Wistow, G., Dickinson, H. (2012), 'Integration: work still in progress', *Journal of Health Organization and Management*, Vol. 26, No. 6, pp. 676-684.

Yin, R. K. (2009), *Case Study Research, Design and Methods,* Fourth Edition, Sage Publication Inc., Thousand Oaks.

Zeithaml, V.A., Bitner, M.J., Gremler, D.D. (2009), *Services Marketing: Integrating Customer Focus Across the Firm,* Fifth edition, The McGraw-Hill Companies, Singapore.

Zigan, K., Macfarlane, F., Desombre, T. (2008), 'Intangible resources as performance drivers in European hospitals', *International Journal of Productivity and Performance Management,* Vol. 57, No. 1, pp. 57-71.

PART II: ORIGINAL PUBLICATIONS

PAPER I

Sillanpää, V. (2011)

Performance measurement in welfare services: a survey of Finnish organisations, *Measuring Business Excellence*, Vol. 15, No. 4, pp. 62-70.

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Performance measurement in welfare services: a survey of Finnish organisations

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Summary

Purpose – *This paper aims to identify the focal elements of performance in Finnish welfare service organisations, how performance is measured in welfare services, and what are management needs regarding the development of performance measurement in the sector.*

Design/methodology/approach – *First, the relevant performance management literature of welfare services is reviewed, then interviews with 15 managers of Finnish welfare service organisations in public, nonprofit and for-profit sectors are reported.*

Findings – *The paper identifies the key elements of performance in Finnish welfare services. The results of the research indicate that Finnish welfare service organisations are relatively active in their performance measurement. Development needs relate to acquiring more systematic performance measurement approaches and new measures for the quality and long-term effects of services.*

Practical implications – *Research elaborates the concept of performance in welfare services, thus enabling practitioners to analyse and develop their organisations' performance. The summary of current measurement practices and development needs in current practices serves to develop suitable performance management tools for welfare services.*

Originality/value – *In welfare services, performance management is a rather complex issue. Research on the topic, especially that on nonprofit, for-profit and public Finnish welfare service organisations. is meager. This paper provides new information about the issue in Finnish welfare services.*

Keywords *Welfare services, Performance, Measurement, Management, Finland, Organizational performance*

Paper type *Research paper*

1. Introduction

In Europe demand for welfare services outstrips resources for their provision. The productivity of welfare services is relatively low and decreased further in the early twenty-first century (Kangasharju, 2007; Lönnqvist *et al.*, 2010), increasing pressures for performance management in welfare service organisations.

Welfare services include healthcare, education and social services (OECD, 2000). Traditionally welfare services in Finland are provided by public or third sector organisations. The implementation of the new public management has increased the use of the so-called purchaser-provider model in the provision of welfare services, imposing new requirements on welfare service organisations to demonstrate their performance to purchasers (Sillanpää *et al.*, 2010).

Welfare services have specific characteristics affecting performance management. In services, both inputs and outcomes of operations are mostly intangible in nature (e.g. Jääskeläinen, 2010; Laihonen and Lönnqvist, 2010). The objects of welfare service organisations typically relate to maintaining or improving clients' long-term wellbeing, which complicates the performance measurement. Because welfare services are largely funded by taxpayers, through provision by public organisations or contracts with non-profit and

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for-profit organisations, they have multiple stakeholders to whom they are accountable. Performance management in welfare services with varying expectations from multiple stakeholders is arguably more complex than in organisations operating in other sectors. (Packard, 2010)

The research on welfare services has recognised elements of performance (e.g. Jääskeläinen, 2010; Packard, 2010), performance management practices (e.g. Kaplan, 2001; Linna *et al.*, 2010) and challenges (e.g. Moxham, 2009). However, studies concentrate on certain types of organisations (public or non-profit) lacking a wider view of the welfare service sector. In Finland the focus on performance management research has been on the public sector. The literature lacks information of how managers of welfare services in different types of organisations (public, non-profit, for-profit) cope with these challenges. In particular, the generic understanding seems to be that performance measurement in welfare service organisations is difficult, but the exact nature of these difficulties is unclear. Practice-based information is needed for further development of measurement practices.

Motivated by the challenges described above, this paper seeks answers to the following questions through a literature review and a survey of Finnish welfare organisations:

- What are the elements of performance in welfare service organisations?
- How is performance currently measured in welfare service organisations?
- What are the development needs in performance measurement in these organisations?

Below the literature of performance measurement in welfare services is outlined to identify focal elements of performance and comprehend current performance measurement practices in the sector. After this the research methods, data and the results of the empirical study are presented.

2. Performance measurement in welfare services

2.1 Elements of performance in welfare services

An organisation's performance is considered as a multidimensional umbrella concept including all aspects related to that organisation's success and activities (Tangen, 2005). This includes efficiency, effectiveness, quality, productivity, quality of work life, innovations and profitability (Sink, 1985). This definition further complicates the classification of performance, due to lack of agreement on what these sub-concepts include, e.g. productivity, and various definitions have been proposed (e.g. Grönroos and Ojasalo, 2004; Johnston and Jones, 2004; Klassen *et al.*, 1998). According to Jääskeläinen (2010), efficiency entails utilisation of inputs and doing things right. Productivity examines the output of a production process including quantity and quality of products and services. Effectiveness is connected to outcomes and benefits in relation to the organisation's objectives and customer needs, while profitability is related to the relationship between revenue and costs.

Performance can be examined from different aspects; actual results or outputs of activities (e.g. financial results), or how an activity is carried out (e.g. efficiency, quality of production process). It may also refer to the organisation's ability to achieve results in the future (e.g. competence of employees). Performance is difficult to define; its content depends on the perspectives of the examination. Regarding measurement, performance may be defined as ability of the object measured to achieve objectives defined (Lönnqvist, 2004).

The objectives an organisation pursues are highly case specific (Tangen, 2005). In welfare services, outcomes of organisations relate to changes in people's health, wellbeing or quality of life achieved through care or service (e.g. Eddy, 1998; Packard, 2010; Laine, 2005). Welfare services also produce quantitative outputs, like numbers of care/residential days, attendance and number of services provided (e.g. Packard, 2010; Peng *et al.*, 2007).

In services, value is created in interaction between service provider and customer, underlining the customers' role in service provision (Bitner *et al.*, 1997). The ability of

customers to participate in the service production process contributes to the organisation's performance (Grönroos and Ojasalo, 2004; Parasuraman, 2002). In welfare services, the customers' role is further underlined, since their ability and willingness to participate the service production varies substantially in different services, e.g. the ability of elderly people with dementia to contribute to care is relatively low.

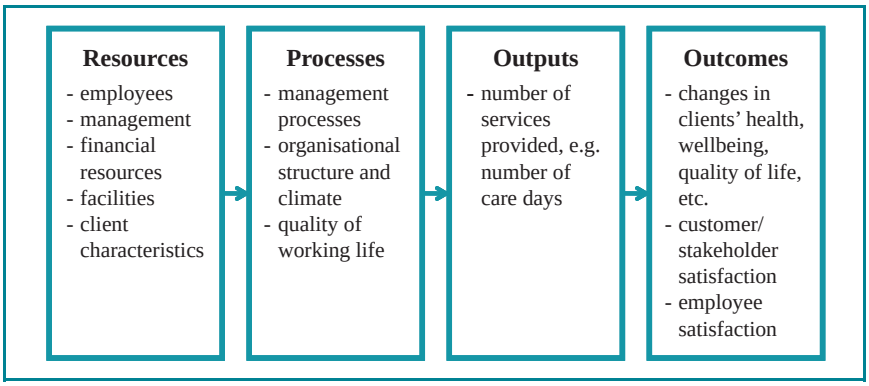
Packard (2010) presents a model of performance for human service organisations, including input, throughput and output factors. In the model inputs include community context (e.g. available resources, funding, laws and regulations), client characteristics, staff characteristics, management competences and practices, resources (facilities and equipment) and board effectiveness. Client characteristics are considered especially important, since clients are often disadvantaged or unwilling to receive services offered. Throughputs refer to organisation's capacity to convert inputs into outputs and include programme capacity and management capacity like management processes, organisational climate and structure, and quality of working life. Outputs include factors like client outcomes, stakeholder and client satisfaction, cost effectiveness, financial health, and employee satisfaction. Figure 1 summarises the key elements of performance in welfare services. In the framework, performance is divided into four elements; resources, processes, outputs and outcomes.

2.2 Performance measurement in welfare services

In welfare services, a central underlying motivation for performance measurement is the need of organisations to demonstrate their value and achievements to various stakeholders (Greiling, 2010; Packard, 2010). According to Moxham (2009), other drivers for measuring the performance in non-profit organisations include financial reporting, operational control, and facilitating continuous improvement. In the public sector, purposes of performance measurement also include communication with the public, enhancing transparency, organisational learning, contract management and inter-administrative comparison (Jääskeläinen, 2010). In general, the central purpose of performance measurement is to provide information for managerial purposes, e.g. strategic planning and decision-making, which is also among the uses of performance measurement in non-profit and public sectors (Greiling, 2010; LeRoux and Wright, 2010; Jääskeläinen, 2010).

Performance measurement in welfare services is affected by many factors, like the intangible nature of services and various stakeholders imposing requirements for a multi-dimensional approach. Various types of measurement framework for services have been proposed (Jääskeläinen, 2010; Sahay, 2005; Hasan and Kerr, 2003). Balanced Scorecard, productivity prism and quality management models are examples of frameworks applied in welfare services (e.g. Greiling, 2010; Hazilah, 2009; Jääskeläinen, 2010; Kaplan, 2001). However, the literature suggests that rather than utilising specific multidimensional

Figure 1 Elements of performance in welfare services



frameworks, welfare service organisations prefer sets of separate measures in performance measurement (e.g. LeRoux and Wright, 2010; Linna *et al.*, 2010). According to LeRoux and Wright (2010), the most common measures used by nonprofits operating in the welfare sector include workload and output indicators, unit cost and efficiency measures, measures of outcomes and effectiveness, client or customer satisfaction, external audits, and industry standards and benchmarks.

Non-profit welfare service organisations face various challenges in their performance measurement efforts. Reconciling the varying expectations of multiple stakeholders is a complex task (Packard, 2010). Other challenges include the intangibility of services, immeasurability of missions, unknowable outcomes, and the variety of interests and standards of stakeholders (Beamon and Balcik, 2008). Stakeholders determine the performance measurement, which indicates that performance measurement criteria are generally developed by stakeholders, e.g. derived from governmental policy or stipulated by regulators or funding organisations. Nonprofits are required to collect certain types of data for their stakeholders, but usability of data for managerial purposes appears limited (Moxham, 2009).

For many nonprofits financial accountability is the key driver for measuring performance. Welfare services apply various quantitative output measures, which yield valuable information about the operations of the organisation, but reveal nothing about actual goal achievement. However, in welfare services, the main outcomes relate to changes in people's health, wellbeing or quality of life. Focusing on quantitative, short-term measures required by funders offers little incentive for nonprofit organizations to demonstrate the effects of their services (Moxham, 2009).

The research on performance measurement in welfare services highlights the need to develop more comprehensive measurement systems that include aspects of quality and long-term effectiveness (Linna *et al.*, 2010). Other challenges include the use of underdeveloped and resource intensive performance measurement systems, inadequate information systems, use of inconsistent assessment criteria, and lack of standardised measures (e.g. Eddy, 1998; Moxham, 2009). Also, decision-making and management in both non-profit and public sectors are not traditionally performance-oriented, the focus being on inputs, indicating that performance measurement culture in welfare service organisations is still in its infancy (Fryer *et al.*, 2009; Jansen, 2004; Jääskeläinen, 2010).

3. Empirical examination: interviews

3.1 Data and research methods

Interviews with 15 managers of welfare service organisations were conducted March-April 2011. The managers represented organisations operating in the following sectors: health care (health centres, hospital), rehabilitation services (for drug abusers and people with mental problems), elderly care (elderly homes, sheltered accommodation) and education. Both purchasers and providers of welfare services were interviewed. Service providers were from the public, private and third sectors. Eight interviewees represented the public sector, three of them being purchasers, four the private sector and three the third sector. Organisations represent different types of welfare services ranging from elementary school to health centres and long-term intensive care units. Organization size varied substantially from an elderly care organisation with 35 employees and a budget of 1 million euros to a municipal education organisation of 60,000 pupils, 6,000 employees and a budget of 600 million euros.

The semi-structured interviews included themes related to organisation performance, the current state of performance measurement and development needs in performance measurement. The interview themes and questions on each theme appear in Table I.

The duration of interviews varied from half an hour to an hour and a half. The interviews were audio recorded and transcribed later, resulting in over 13 hours of taped discussions, which corresponds about 60 pages of written notes. The next section includes the results of the

Table I Themes of interviews and interview questions related to each theme

Theme	*Interview question*
Elements of performance	What is the target of your organisation? The aim of operations? Who are the most essential stakeholders of your organisation and what are their expectations? What are the most important resources contributing to achievement of targets? What factors in operating processes contribute to achievement of targets? What is the role of customer in the service production?
Current state of performance measurement	What factors are measured in your organisation? Why are these factors measured/what is the purpose of measurement? How is the measurement conducted? How useful are the current measures? How is the measurement information utilised?
Development needs in performance measurement	What are the challenges in performance measurement? Do you have development needs in performance measurement? What needs? What resources do you have for measurement development?

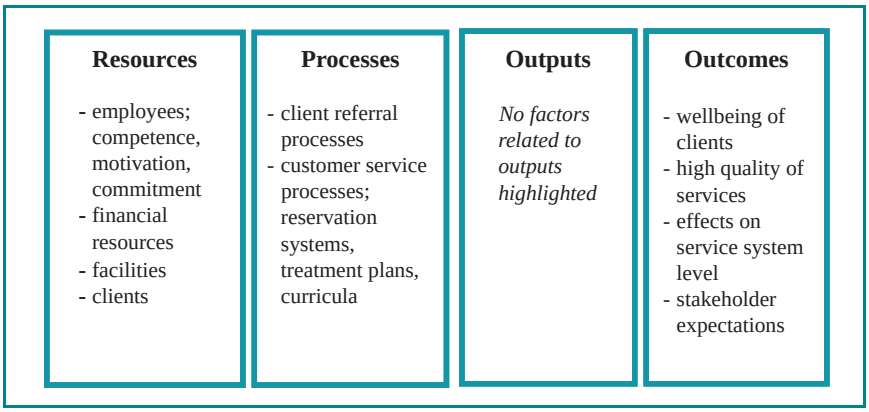
interviews regarding performance and performance measurement. In the main points, the analysis of the results is based on the framework presented in Figure 1.

3.2 Results of the interviews

Elements of performance in welfare services. Employees and their competence, motivation and commitment were frequently mentioned as the chief resources in providing welfare services (see Figure 2). Most interviewees underlined the importance of financial resources as enabling overall operations and employee recruitment. Facilities and equipment were considered important, especially in health care services and long-term rehabilitation services. The role of customers as informants and actors in service provision was considered essential by most interviewees.

In many organisations smoothness of customer service processes was closely related to achievement of outcomes. Client referral processes ensuring appropriate services for clients at the right time were considered the most important processes in social and health care. In health centres, the reservation system and its speed was considered crucial to performance, whereas in long-term care treatment plans and in education the curriculum were the most important processes steering service operations. The most important processes in welfare

Figure 2 The key elements of performance in Finnish welfare service organisations



services entail direct interaction with the client. Only few managers cited managerial processes, like those related to information sharing and motivating employees.

When managers were asked to identify targets of their operations, short-term outputs, like quantitative targets of their operations were not underlined. Instead, all interviewees named long-term effects, like the wellbeing of clients or the promotion of wellbeing as the principal outcome of their organisations. For example, in elderly care the aim was to support clients' independent living whereas vocational school sought job placements for their pupils. High service quality emerged as a focal outcome in almost all interviews. Outcomes and effects on service system level and the overall level of society were also highlighted, e.g. fulfilment of requirements set by working life and decrease of recurrent misuse of more expensive services. Commercial outcomes, like being the leading service provider, profitability and profitable growth were mentioned by only three managers representing private sector organisations. Stakeholder expectations relate mainly to availability, quality, price and content of services.

Current state of performance measurement. Employees were identified as the most important resource, and all organisations measured factors related to them, like employee satisfaction, competence level, training needs of employees, and wellbeing at work (see Figure 3). Besides the factors related to employees, sufficiency of financial resources was a critical measurement object in many organisations.

Many organisations assessed the smoothness of service processes with various measures. The quality of service processes was assessed with measures like deviations and accidents at work. In long-term care, service process quality was assessed by monitoring measures related to implementation of treatment plans.

All these organisations utilised many kinds of quantitative output measures. The role of financial output measures was underlined in only a few organisations, although all had many types of financial measures in use. The most essential financial output measures related to assessing the average cost per service unit provided. Managers named different practices in measuring the outcomes or implications of their services. For example, elderly care organisations monitor changes in clients' wellbeing by applying the resident assessment instrument (RAI). In educational institutions outcomes were measured by assessing learning outcomes (grades), placements after graduation, and employment opportunities. In mental rehabilitation, care outcome was measured by assessing placements of clients after rehabilitation (own home/institution). All these factors also relate to service quality, which was reportedly an important element in both service output and service process. A manager of a purchaser organisation pointed out that emphasising outcome measures alone is risky in

Figure 3 Performance measures in Finnish welfare service organisations

Resources	Processes	Outputs	Outcomes
- employee satisfaction - competence level - wellbeing at work - employee turnover - number of sick days - utilization rate of facilities - sufficiency of financial resources	- queuing times - speed of appointment system - number of deviations and accidents - follow-up of treatment plans	- quantitative measures: number of customer visits, care days, residential days, degrees taken - financial measures: costs per service unit provided, e.g. cost/residential day, costs/clients served	- changes in clients' capacity/wellbeing e.g. learning outcomes, RAI - placements after graduation/ rehabilitation - client satisfaction (individuals and organisations)

welfare services, since it may lead to partial optimisation of operations, e.g. to biased client selection. Customer satisfaction (both individual and organisational customers) was perceived as a focal part of performance and was measured in nearly all organisations.

Only few organisations utilised some specific framework for performance measurement. Those applying some specific framework mainly applied Balanced Scorecard or a modification of it. Quality systems were used in a few organizations. All organisations had sets of different types of measures including financial, quantitative and qualitative measures. Measurement was largely conducted by managers. However, especially in elderly care and education, employees had a focal role in conducting measurements related to outcomes of services (e.g. RAI assessments, grades). Employees' attitudes towards measurement varied across organisations and also within organisations; some were motivated; others considered it an additional burden.

In most cases, managerial purposes, e.g. information needs for resource allocation and development of operations were considered the main reasons for performance measurement. Enhancing transparency of operations, comparison of units, and assessment of organisations' implications were managerial reasons for measuring performance. The need to report on operations and outcomes to external stakeholders was among the key reasons for measuring performance. Quantitative output measures especially were reported regularly. Purchasers of services have set certain requirements for availability and quality of services, and require information on measures stipulated in the terms of service contracts. For purchaser organisations (e.g. municipalities), one of the main reasons for measurement was the need to show taxpayers how their money was used and what was achieved. Some managers pointed out that most of the information reported to stakeholders had low managerial value.

Development needs in performance measurement. Performance measures were deemed useful by most interviewees, and the quantity of measures was considered appropriate. However, in some large public organisations the number of measures was considered excessive, e.g. managers did not know the precise number of measures in use, but estimated this about hundred. The main development needs related to measures of quality and effects of services. For example, one of the managers considered current quality measures rudimentary with poor reliability, whereas another pointed out the need for quality measures acceptable to most employees. A need for new measures regarding implications of services was underlined in many responses. There was also a need for measures converting service effects into monetary terms, which would illustrate the value of the organisation's operations to purchasers and other stakeholders. Besides getting new measures for implications, there were significant challenges and development needs regarding information systems and availability of information. Incompatibility of information systems was a common challenge among interviewees, especially in the public sector. In general, the support of information systems for performance measurement was considered poor. Organisations in the private sector were more content with their information systems than other organisations.

Nearly all organizations reported inadequate resources for developing performance measurement. In most organisations development work was done alongside all other responsibilities, which complicates and delays the development work. Usually development was accomplished as separate projects in co-operation with educational institutions whose students did part of the development work. Private organisations reported better development resources than public and third sector organisations.

4. Conclusions

The findings of this research show that the most important outcomes of welfare service organisations related to client wellbeing and high service quality. Human and financial resources are focal in service production. Customer service processes that ensure timely and appropriate services for clients were considered important elements of performance. In welfare services stakeholder requirements affect organisations' objectives. Stakeholder expectations relate mainly to service output, like price, quantity, content and quality, but also

functionality of service processes. Managers underlined long-term qualitative outcomes rather than quantitative outputs when asked to identify targets of operations. However, operational outputs were underlined as important measurement targets.

Managerial needs and the need to report to stakeholders were reportedly the main reasons for performance measurement. The empirical research reveals that welfare service organisations utilize various financial, quantitative and qualitative measures related to elements of performance. Most managers considered current performance measures useful. However, some managers pointed out that ''statistics'' compiled for stakeholders had little managerial value in terms of developing and planning operations. Specific performance measurement frameworks were seldom used. Some organisations utilised Balanced Scorecard or a modification of it. Development needs in performance measurement related to the need for new measures for long-term implications and quality of services. Organisations also needed better information systems to support performance measurement. However, welfare service organisations in general had inadequate resources for developing performance measurement. Private organisations were more content with their information systems and development resources than organisations in the public and third sectors.

The main contribution of this research relates to new empirical information on performance measurement in Finnish welfare services in the non-profit, for-profit and public sectors. The results of the research support previous literature, i.e. the performance elements, current measures, and development needs identified were congruent with those of earlier studies (e.g. LeRoux and Wright, 2010; Packard, 2010). The results of this research along with those of earlier studies indicate that organisations producing welfare services are relatively active in measuring their performance. However, more systematic approaches to performance measurement are needed, since currently measurement consists of separate measures, many of which are quantitative output measures determined by stakeholders. With such measures welfare service organisations are not able to assess qualitative long-term effects they are striving for. These results highlight the need for further research on measuring quality and impacts of welfare services.

References

Beamon, B.M. and Balcik, B. (2008), ''Performance measurement in humanitarian relief chains'', *International Journal of Public Sector Management*, Vol. 21 No. 1, pp. 4-25.

Bitner, M.J., Faranda, W.T., Hubbert, A.R. and Zeithaml, V.A. (1997), ''Customer contributions and roles in service delivery'', *International Journal of Service Industry Management*, Vol. 8 No. 3, pp. 193-205.

Eddy, D.M. (1998), ''Performance measurement: problems and solutions'', *Health Affairs*, July/August, pp. 7-25.

Fryer, K., Antony, J. and Ogden, S. (2009), ''Performance management in the public sector'', *International Journal of Public Sector Management*, Vol. 22 No. 6, pp. 478-98.

Greiling, D. (2010), ''Balanced scorecard implementation in German non-profit organizations'', *International Journal of Productivity and Performance Management*, Vol. 59 No. 6, pp. 534-54.

Grönroos, C. and Ojasalo, K. (2004), ''Service productivity: towards a conceptualization of the transformation of inputs into economic results in services'', *Journal of Business Research*, Vol. 57 No. 4, pp. 414-23.

Hasan, M. and Kerr, R.M. (2003), ''The relationship between total quality management practices and organisational performance in service organizations'', *The TQM Magazine*, Vol. 15 No. 3, pp. 286-91.

Hazilah, A. (2009), ''Practice follows structure: QM in Malaysian public hospitals'', *Measuring Business Excellence*, Vol. 13 No. 1, pp. 23-33.

Jääskeläinen, A. (2010), *Productivity Measurement and Management in Large Public Service Organizations*, TUT Publication 927, Tampere University of Technology, Tampere.

Jansen, E.P. (2004), ''Performance measurement in governmental organizations: a contingent approach to measurement and management control'', *Managerial Finance*, Vol. 30 No. 8, pp. 54-68.

Johnston, R. and Jones, P. (2004), ''Service productivity. Towards understanding the relationship between operational and customer productivity'', *International Journal of Productivity and Performance Management*, Vol. 53 No. 3, pp. 201-13.

Kangasharju, A. (2007), *Hyvinvointipalvelujen tuottavuus, Tuloksia opintien varrelta*, Valtion taloudellinen tutkimuskeskus, Helsinki.

Kaplan, R. (2001), ''Strategic performance measurement and management in nonprofit organizations'', *Nonprofit Management & Leadership*, Vol. 11 No. 3, pp. 353-70.

Klassen, K.J., Russell, R.M. and Chrisman, J.J. (1998), ''Efficiency and productivity measures for high contact services'', *The Service Industries Journal*, Vol. 18 No. 4, pp. 1-18.

Laihonen, H. and Lönnqvist, A. (2010), ''Knowledge-based value creation: grasping the intangibility of service operations in Finland'', *International Journal of Knowledge-based Development*, Vol. 1 No. 4, pp. 331-45.

Laine, J. (2005), *Laatua ja tuotannollista tehokkuutta? Tieteellinen tutkimus vanhusten laitoshoidosta*, Tutkimuksia 151, Stakes, Helsinki.

LeRoux, K. and Wright, N.S. (2010), ''Does performance measurement improve strategic decision making? Findings from a national survey of nonprofit social service agencies'', *Nonprofit and Voluntary Sector Quarterly*, Vol. 39 No. 4, pp. 571-87.

Linna, P., Pekkola, S., Ukko, J. and Melkas, H. (2010), ''Defining and measuring productivity in the public sector: managerial perceptions'', *International Journal of Public Sector Management*, Vol. 23 No. 5, pp. 479-99.

Lönnqvist, A. (2004), *Measurement of Intangible Success Factors: Case Studies on the Design, Implementation and Use of Measures*, TUT Publication 475, Tampere University of Technology, Tampere.

Lönnqvist, A., Jääskeläinen, A., Kujansivu, P., Käpylä, J., Laihonen, H., Sillanpää, V. and Vuolle, M. (2010), *Palvelutuotannon mittaaminen johtamisen välineenä*, Tietosanoma, Tallinna.

Moxham, C. (2009), ''Performance measurement: examining the applicability of the existing body of knowledge to nonprofit organisations'', *International Journal of Operations & Production Management*, Vol. 29 No. 7, pp. 740-63.

OECD (2000), *Employment Outlook*, OECD, Paris.

Packard, T. (2010), ''Staff perceptions of variables affecting performance in human service organizations'', *Nonprofit and Voluntary Sector Quarterly*, Vol. 39 No. 6, pp. 971-90.

Parasuraman, A. (2002), ''Service quality and productivity: a synergistic perspective'', *Managing Service Quality*, Vol. 12 No. 1, pp. 6-9.

Peng, T.J.A., Pike, S. and Roos, G. (2007), ''Intellectual capital and performance indicators: Taiwanese healthcare sector'', *Journal of Intellectual Capital*, Vol. 8 No. 3, pp. 538-56.

Sahay, B.S. (2005), ''Multi-factor productivity measurement model for service organisation'', *International Journal of Productivity and Performance Management*, Vol. 54 No. 1, pp. 7-22.

Sillanpää, V., Lönnqvist, A., Koskela, N., Koivula, U-M., Koivuaho, M. and Laihonen, H. (2010), ''The role of intellectual capital in non-profit elderly care organizations'', *Journal of Intellectual Capital*, Vol. 11 No. 2, pp. 107-22.

Sink, D. (1985), *Productivity Management: Planning, Measurement and Evaluation, Control and Improvement*, John Wiley & Sons, New York, NY.

Tangen, S. (2005), ''Demystifying productivity and performance'', *International Journal of Productivity and Performance Management*, Vol. 54 No. 1, pp. 34-46.

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PAPER II

Sillanpää, V., Lönnqvist, A., Koskela, N., Koivula, U-M., Koivuaho, M. & Laihonen, H. (2010)

The role of intellectual capital in non-profit elderly care organizations, *Journal of Intellectual Capital*, Vol. 11, No. 2, pp. 107-122.

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The role of intellectual capital in non-profit elderly care organizations

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Abstract

Purpose – The starting-point of this paper is the observation that, while intellectual capital (IC) management seems to be a potential approach for non-profit elderly care organizations, there is a lack of empirical evidence on how it could actually be applied. This paper aims to add to knowledge of this issue.

Design/methodology/approach – This is an exploratory, qualitative case study including three case organizations. The case descriptions and analysis are based on interviews with managers of the case organizations.

Findings – The study describes which intangible resources are highlighted in the operations of non-profit elderly care organizations, the existing practices regarding the management of IC factors and the IC needs of management in these organizations.

Research limitations/implications – The study focuses on Finnish non-profits. The operations of the third sector may vary across countries.

Practical implications – The elderly care sector is facing big challenges due to the changing age structure in many Western countries and due to the pressure to produce cost-effective but still high-quality services. The IC approach seems well-suited as a managerial framework that can capture the intangible aspects of operations. However, more research and practical application experience are needed at this stage.

Originality/value – IC research on non-profit organizations is rare and has so far been rather generic and conceptual. The paper makes a contribution by presenting empirical and industry-specific findings.

Keywords Intellectual capital, Measurement, Non-profit organizations, Social welfare organizations, Service industries, Case studies

Paper type Research paper

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1. Introduction

1.1 Introducing the research issue

Intellectual capital (IC) is one of the key determinants of companies' business performance (Schiuma *et al.*, 2007). In service organizations the role of IC is crucial because the outcome of activities is heavily based on, e.g. the efforts of skilled personnel, fluent processes and other intangible factors, while the role of tangible resources such as machines is not as important (Kujansivu and Lönnqvist, 2009). In addition, service organizations' outputs are to a large extent intangible in nature (e.g. Vargo and Lusch, 2004). In non-profit organizations, the intangible aspects of operations are further emphasized: for those organizations improving the wellbeing of clients or other stakeholder groups is more important than financial success. Therefore, IC management has been proposed as a novel managerial approach in non-profit organizations (Kong, 2007a, 2009; Kong and Prior, 2008).

Non-profit (or third sector) organizations have a significant role in the provision of welfare services as a third element between the public sector and private markets. The third sector includes a variety of different organizations and associations. A common feature is the absence of the redistribution of profits. The third sector is active in many areas of economy ranging from healthcare, social services, employment and culture to environment (OECD, 2003). Compared with private companies the characteristics of non-profit organizations include the following:

- they are value-driven, instead of profit-driven;
- they stress the local dimension in their activities;
- they provide and develop services based on needs which are often not recognized by public authorities;
- they offer not only services for clients but also often do community work and/or advocacy work;
- they train and engage volunteers as part of the service staff; and
- they may have a special approach in their work, e.g. social goal, value goals, empowerment or religious approach. (Borzaga and Santuari, 2003).

In companies the significance of IC is acknowledged and several frameworks for managing and developing IC have been introduced (e.g. Kujansivu, 2008). However, the issue is relatively new to non-profit organizations (Kong, 2008). Thus there are many open questions. There is also a lack of empirical research in the topic because only a few empirical studies have been carried out (Fletcher *et al.*, 2003; Kong, 2007b). This paper builds on the few studies conducted so far and examines how IC could be taken into account in non-profit organizations.

One aspect of the existing research on the issue is the generic nature of the studies and models. For example, Kong and Prior (2008) have presented a comprehensive framework to account for the IC-based competitiveness of non-profit organizations. While the framework creates an excellent basis for further discussion it also raises a question about the role of the industry. It can be assumed that, from the IC management point of view, the distinction between different industries (e.g. elderly care versus charity work) may in some cases be as important as the profit orientation (i.e. for-profit vs. non-profit). Thus, more research is needed to understand the specific

role of IC in different sectors of the non-profit arena (see Kong *et al.*, 2009). In this paper the focus is on the elderly care sector.

1.2 Practical motivation: the case of non-profit elderly care in Finland

The population in Finland as in Europe in general is aging fast (Giannakouris, 2008). The changing age structure will have an impact throughout society. First of all, it is a major challenge for the sustainability of the entire public economy but especially for health and care actors and the capability to care for the elderly (Parjanne, 2004). At the same time the working aged population is decreasing and has to bear the responsibility for an increasing number of economically inactive people. In addition to this challenging development, the elderly care sector has a poor reputation as an employer. Since the caring profession is deemed mentally and physically demanding, it is not an attractive career choice for young people in Finland. At the same time there is a significant share of employees retiring and the clients' condition is deteriorating (e.g. increased share of patients with dementia). These trends create a very challenging situation for the Finnish elderly care sector.

Governmental, municipal and many other official programs and reforms have been initiated to ensure that the anticipated shortage of employees and the increasing need for services for the elderly do not lead Finnish society or the elderly care sector into a state of crisis. It is considered that holistic and comprehensive understanding of caring units, their processes and the clients' needs is required to develop new solutions (Lammintakanen and Kinnunen, 2006; Parjanne, 2004; Valtioneuvoston kanslia, 2004).

In Finland, the importance of the third sector has increased in recent decades due to the economic pressure to decrease public expenditure and to search for more efficient forms of service provision by outsourcing and partnership models. In Finland, there are about 13,000 non-governmental organizations working in the field of social and health care. They employ about 10 percent (36,000) of the total work force in the social and health care sector and provide nearly about 18 percent of the social and health care services. In addition, nearly 250,000 have participated as volunteers. (Peltosalmi *et al.*, 2008) A typical feature in non-profit welfare service organizations is that they often combine professional work and volunteer help in a synergetic manner, in contrast to the public or private sector.

The modernisation process of the welfare state and the implementation of the New Public Management model in the Finnish public sector have increased the use of the so-called purchaser-provider model in the provision of welfare services. Thus, instead of producing the services by themselves, municipalities are buying the services from either private or third sectors. The tendering procedures have had a major effect on the management of non-profit service organizations since in the tendering process they have to be able to demonstrate their performance in a manner comparable that of the for-profit organizations. This has increased the need to introduce quality management and quality assurance systems equivalent to those in private enterprises.

In the challenging and competitive situation faced by the Finnish non-profit elderly care organizations, it seems important to ensure that the intangible aspects of their operations are properly managed. Examples of relevant IC factors in the caring area include professional caring competence, image, well-being at work, personal and

organizational relationships, trust, and knowledge-related skills such as interaction and sharing accurate and intuitive information (Dubois *et al.*, 2006; Lammintakanen and Kinnunen, 2006). Thus, IC management is a potential approach in developing new managerial practices in non-profit elderly care organizations.

1.3 Objectives and research approach

The starting-point of this paper is the observation that while IC management is a potential approach for non-profit elderly care organizations, there is a lack of empirical evidence on how it could actually be applied. Surprisingly, in the for-profit sector, too, there is not a lot of evidence of companies actually applying IC management models despite the large number of managerial frameworks developed (Kujansivu, 2008; Lönnqvist *et al.*, 2009). In fact, companies seem to be managing IC (or components of IC) without applying specific IC management models (Lönnqvist *et al.*, 2008). Thus it is important to better understand the current status and actual needs regarding the management of IC-related factors in non-profit elderly care organizations.

This exploratory study investigates empirically the role of IC as a managerial approach in non-profit elderly care organizations. In particular, the following questions are examined:

(1) Which intangible resources are highlighted in the operations of non-profit elderly care organizations?

(2) What are the existing practices regarding the managing of IC factors?

(3) What are the IC needs of management in these organizations?

This paper reports a qualitative case study including three case organizations. The details of the empirical research are explained later in the paper. The lack of prior empirical knowledge on the issue justifies the explorative nature of the paper, which in turn creates a basis for more detailed further research.

2. Current knowledge on IC management in non-profit organizations

The research stream of intellectual capital (IC) began around the mid nineties with the publication of numerous seminal books raising awareness on the importance of intellectual capital for companies' success and proposing models for classifying, measuring and managing intellectual capital (e.g. Edvinsson and Malone, 1997; Sveiby, 1997; Roos *et al.*, 1997). The term IC refers to an organization's non-physical sources of value (Lev, 2001). IC is often divided into three main groups:

(1) *human capital*, including competences and employees' knowledge;

(2) *relational capital*, including customer relationships and brands; and

(3) *structural capital*, including business processes and documented information stored in databases.

It is considered that IC – in addition to physical resources – forms an important basis for value creation, and should therefore be systematically managed.

The research on IC has been most actively pursued in the areas of IC measurement and reporting. Especially in the initial stages of IC research, the focus was on the

development of IC statements (similar to financial statements) yielding knowledge about the monetary value of a company's IC. This is considered important since the financial statement (especially the balance sheet) does not fully capture IC, which in certain industries may nevertheless form a major part of a company's value. While several research projects have been carried out (e.g. Meritum, 2001; Mertins and Will, 2007; Mouritsen *et al.*, 2003) so far no widespread reporting system has been established. This is due at least partly to difficulties in finding reliable and relevant IC factors to be measured: as the importance of different aspects of IC varies between companies it is hard to assess and compare their value using standard metrics.

The literature includes a large set of IC measurement models and tools (see, e.g. Andriessen, 2004). Some models are intended to describe the status of IC using a single indicator while others approach IC through its components by using a set of measures. The area of IC measurement is constantly developing and new approaches are being introduced. On the other hand, it seems that companies are actively measuring issues related to IC (e.g. brand, competencies and working atmosphere) but the utilization of specific IC management models is not extensive (Lönnqvist *et al.*, 2008).

In the early phases of IC research the main focus was (and for the most part continues to be) on company-level examination. The goal was to understand the role of IC in value creation and to develop tools for managing it. Recently, the IC concept has also been utilized in analyzing other units, e.g. countries (Bontis, 2004) and regions (Schiuma *et al.*, 2008). In addition, IC management has also been examined in the context of non-profit organizations (Fletcher *et al.*, 2003; Guthrie *et al.*, 2009; Kong, 2007a, b, 2009; Kong and Prior, 2008; Kong and Thomson, 2006), although IC research is still quite rare in the non-profit context (Kong, 2008). As an example of such studies, Fletcher *et al.* (2003) studied stakeholder perceptions of value dimensions in the Australian Red Cross Blood Service by focusing on the perspective of IC. Another example is Kong and Prior's (2008) study on the role of IC for the competitiveness of non-profit organizations.

The IC framework presented by Kong and Prior (2008) highlights the importance of knowledge as a key resource in non-profit organizations. Kong and Prior argue that their model helps "non-profit organizations to reconcile commercial objectives for organizational survival and social mission" by providing a conceptual method for understanding and analyzing the role of different elements of IC in non-profit organizations. In addition, the framework also links the knowledge flows within and outside the organization to value creation. This paper focuses on the empirical recognition of the key elements of IC in the given non-profit context thereby operationalizing the conceptual model of Kong and Prior (2008).

In summary, although not a lot of research has so far been accomplished, the third sector seems quite suitable for the application IC management. First, non-profit organizations are facing tough performance challenges (Kong, 2007a) and therefore need managerial tools in the same way as private companies do. Second, the intangibility of operations and targets may be even more evident in the non-profit sector than in private companies which ultimately aim at financial results (Kong, 2007a). This motivates the empirical study of the applicability of the different IC management approaches in the context of non-profit organizations.

3. Empirical examination

3.1 Description of research methods and the empirical setting

The empirical part of the study was carried out by interviewing managers of three case organizations in spring 2008. Interviews concerned three themes related to the research questions:

(1) the recognition of IC;
(2) existing practices regarding IC; and
(3) future needs regarding IC.

The aim was to gain from the informants a more concrete and detailed understanding of the role of IC in these organizations and the needs to manage IC. All the organizations – Jyllin Kodit, Rehabilitation Institute Apila and HelsinkiMission – are non-profit welfare service organizations operating in the elderly care sector. These organizations are pilots in a three-year research project funded by RAY, Finland's Slot Machine Association. The aim of the project is to develop IC measures for non-profit elderly care organizations. The project started in March 2008.

In the case selection phase, it was considered that a set of disparate elderly care organizations would provide interesting results and also facilitate the generalization of findings within the elderly care sector (Eisenhardt, 1989; Flyvjberg, 2006). The case descriptions are based on the interviews. In each organization, the director of the organization and another person in a managerial position were interviewed. This was considered appropriate since directors and managers were assumed to have a broad perspective on the resources, functions and overall management of their organization. Also, the case organizations are quite small and the two respondents per organization actually represent the managerial personnel very well. Interviews were semi-structured and lasted from one to two and a half hours, depending on the interviewee. This resulted in about nine hours of taped material and 39 pages of written notes.

The interviews elicited the directors' and managers' views on intangible resources and their importance in relation to the outcomes of the organization. In practice, the respondents were asked to identify the success factors, challenges and risks related to their organization and its operations. The questions also aimed at identifying the eligible outcomes of the organization from the perspectives of various stakeholders (see Fletcher *et al.*, 2003). The key stakeholders of these organizations include residents/clients and their relatives, the personnel of the organization, those paying for services (such as municipalities and national organizations), owners, volunteers and financers. The respondents were also asked how they currently manage IC factors and about their needs regarding IC management. Next, all three case studies are described. Then, the case findings are analyzed.

3.2 Case study: Jyllin Kodit

Jyllin Kodit is an old people's home founded in 1965 and owned by the Jalmari Jylli Foundation. Jyllin Kodit offers care, nursing, nutrition, research and rehabilitation services for elderly people. The organization has five special care units that function as group homes with a total of 80 residents in dependent or highly dependent care. In addition, Jyllin Kodit offers recreational activities and short-term rehabilitation for

elderly people. The organization has been active in its development activities and has implemented several development projects, e.g. related to management, the well-being of the personnel, incentive systems and rehabilitation of the elderly. Jyllin Kodit has about 60 full-time employees and a group of volunteers who are active in the operations of the organization, e.g. by providing leisure activities.

The role of IC in Jyllin Kodit. For Jyllin Kodit the most essential part of IC is skilled personnel that enable the overall operation of the organization. Clients are another essential resource. There are two types of clients in old people's homes in Finland: actual end-users, who receive the service (personal clients) and municipal and national organizations (organizational customers) that pay for the most of the services. The first priority for the organization is to fulfill the needs of end users, but organizational customers set the financial limits that regulate the service. Satisfied customers are an important part of the IC of the organization. The relatives of elderly people are also seen as an important interest group since they can provide information about a client's life and history that enables the organization to provide appropriate care. Volunteers are also important for the organization since they can provide activities and services that would not otherwise be possible within the cost limits set by organizational customers.

Organizational values that direct all operations are also considered an essential factor of IC in Jyllin Kodit. They are defined in the establishment of the foundation, and all actors in the organization from employees to board members are required to follow these values of caring and responsibility. Another important factor related to the organization is the mode of operation and management, which includes defined processes and low hierarchy, in turn enabling rapid decision-making and flexibility. Cooperative partners and subcontractors play also an important role by offering services that the organization does not itself supply. A good reputation is also recognized as an important factor.

Many of the challenges and risks related to IC are posed by the operating environment. In Finland, elderly care is continuously monitored and evaluated by the national and municipal organizations and therefore it is necessary to maintain a high quality of services. Changes in the operating environment require flexibility for organizations and employees, which is challenging. Retaining motivated employees and maintaining and developing their competence is also a challenge to be overcome. Keeping clients satisfied is also seen as a challenge in Jyllin Kodit. There are sometimes conflicts about the content of services: end-users would like a wider set of services, but organizational customers (payers) are reluctant to pay for these. Finally, the poor reputation of the elderly care sector is considered a risk since it affects the availability of employees.

Current status and needs for IC management. Jyllin Kodit utilizes various methods in assessing and managing its IC. The organization's annual internal audits are used to assess important resources and operations as well as the outcomes. Jyllin Kodit utilizes an EFQM-based quality management system and a performance measurement system based on the balanced scorecard.

Outcomes of activities are monitored by tests that evaluate clients' physical and mental changes. Customer satisfaction is assessed by customer satisfaction surveys made regularly for the short-term rehabilitation clients. In intensive care units (group

homes), customer satisfaction is monitored by following up daily reports of clients. Client needs are evaluated in intensive care units every three months.

Regarding employees, Jyllin Kodit has conducted surveys on it remuneration system and well-being at work. Recently, appraisal interviews for the whole personnel were initiated. Even though Jyllin Kodit utilizes many methods, daily unofficial informal conversations with employees are considered central means of managing IC.

According to the managers interviewed, the needs for IC management relate mostly to the personnel of the organization. Human resources are considered as an important target for development. Currently managers need information on employee satisfaction and on the competencies of employees. Another future need concerns information about the reputation of the organization. At the moment the organization reports on its operations to authorities, organizational customers, its owner, financiers and clients. In the future, Jyllin Kodit would like to report and share more information on its operations with potential clients, professionals associated with the elderly care sector and organizational customers.

3.3 Case study: Rehabilitation Institute Apila

The Rehabilitation Institute Apila was founded in 1963 and is owned by the Finnish Rheumatism Association. Apila helps people suffering from musculoskeletal diseases by offering short-term rehabilitation. Apila offers recreational activities and rehabilitation services aimed at maintaining and improving an individuals' working capacity. Since 2004 respite care for the elderly (geriatric rehabilitation) and family care have been rapidly increasing sectors. The facility has 116 places for clients using rehabilitation and recreational services and serves over 1,800 clients annually. The facility employs some 80 professionals with different areas of expertise. The facility also functions as the national resource centre for uncommon rheumatic diseases and inflammatory muscular diseases.

The role of IC in Apila. In Apila the personnel is deemed the most important IC resource. Professional skills and competencies, as well as the motivation, commitment and friendliness of employees are considered essential factors in Apila. Work atmosphere, a positive and strong community spirit, flexibility and responsibility were likewise considered important. The organization has a low management hierarchy enabling flexible and rapid decision-making.

The organization is challenged by a fluctuating demand for services. When demand is high and people are overburdened the flow of information suffers, causing confusion and inefficiency in operations. Regarding the operating environment there is a threat that competition may reduce both prices and the quality of services. The availability of skilled employees is also a potential challenge. In addition to daily routines, the personnel need to participate in the development of new services, which is also considered challenging. On the other hand, the lack of marketable service products is considered a weakness or threat to the organization.

At the moment services are mostly custom-made with higher quality than required, which may lead to inefficiency in operations. Apila has old traditions, which is mainly seen as an asset of the organization. However, these traditions are partly also seen as a burden that impedes operations and development. The organization has previously specialized in a relatively narrow area of expert services, which has made it vulnerable.

Moreover, the small number of organizational customers increases the risks and highlights the importance of development and marketing activities.

Current status and IC management needs. Human resources and satisfied customers are important resources that are monitored and managed in Apila. The number and development of the personnel is assessed annually. The development of human resources is monitored by following the amount of training that employees have received. Appraisal interviews are held annually and the well-being surveys of employees are conducted every other year. Apila receives customer feedback constantly since customer satisfaction surveys are conducted after each short-term rehabilitation period. These surveys are seen as the best way to assess how well the organization has succeeded in its activities. Outcomes of the service activities are monitored by clients' physical and mental tests at the end of each rehabilitation period.

According to the managers interviewed, there seem to be two main needs in IC management in Apila. The first relates to service outcomes. There is no information available on the long-term effects of rehabilitation services on clients' health and well-being. This would be very important information for the organization in verifying its operations. Another IC management need is for more detailed information on employee well-being to facilitate human resource management in the future. Currently Apila reports on its activities to authorities, organizational customers and the owner of the organization. In the future the organization would like to inform its current and potential customers (both individuals and organizations) on its activities and development of activities.

3.4 Case study: HelsinkiMission

HelsinkiMission is a charity organization providing services to elderly people, mentally disabled children, young people with mental problems, and young people with violent backgrounds. HelsinkiMission was founded in 1883 to help poor people without social security in the city of Helsinki. Today HelsinkiMission operates to reduce loneliness, insecurity and depression among elderly people and other target groups. The organization operates locally, but some services for the elderly are spread nationwide. The forms of services that the organization offers elderly people include discussion groups, call centers, activity groups and sheltered accommodation Cecilia. In addition, HelsinkiMission organizes campaigns to recruit volunteers as friends for elderly. It has about 45 employees and some 1,070 volunteers. The City of Helsinki and Finland's Slot Machine Association are the biggest financers of the organization.

The role of IC in HelsinkiMission. Volunteers are the most important resource of the organization. Outcomes of voluntary work are created in personal interaction with volunteers and elderly people. Volunteers play a central role in the activities by providing services, e.g. recreational groups. With the help of volunteers HelsinkiMission is able to reach and help a great number of elderly. Volunteers also bring a broad range of competencies to the organization. For example, brand development was done by volunteers and the board members of the organization are also volunteers. Brand is an essential intangible resource for HelsinkiMission. A strong brand supports the fundraising activities (ensuring donations) and the recruitment of new volunteers. Organizational values strongly guide operations and therefore they form an essential part of IC in HelsinkiMission. Skilled employees with long experience

in organizing voluntary work and an enthusiastic, good working atmosphere are also important factors in the organization. In addition, the process of recruiting volunteers is an essential part of operations since it directs volunteers to fulfill the needs of elderly people. The good administration, small size and low hierarchy of the organization enable fast decision-making. Co-operation partners and networks are also important parts of IC in HelsinkiMission.

The operating environment of HelsinkiMission requires flexibility and rapid response in the challenges emerging in the field, which sometimes causes chaos in the organization. HelsinkiMission operates with a relatively small number of employees, and there is a risk that too much flexibility will result in personnel burnout. Another major risk is the uncertainty inherent in voluntary work. The organization cannot order the volunteers to do anything; all operations depend on the motivation and willingness of volunteers. Motivations to voluntary work are changing, and the organization needs to be aware of the differing motivations of volunteers. One additional challenge in voluntary work relates to organizing the work: at the moment there are not enough people to coordinate the volunteers. This may lead to frustration among volunteers if they do not get the opportunity to help the elderly as planned. There is also a risk of voluntary workers becoming committed to the coordinator; if the person leaves the organization there is a danger of also losing voluntary workers. Another set of risks relates to the brand. The brand is very vulnerable and any misconduct by employees or managers of the organization may do serious damage to the brand and the organization. Uncertainty regarding the role of third sector organizations in Finnish society creates challenges for the organization, likewise uncertainties in financing (in donations, projects, sponsorships, etc.).

Current status and needs for IC management. Volunteers are an essential part of IC in HelsinkiMission, and many management activities relate to volunteers (e.g. monitoring the number of volunteers) or work done by volunteers (monitoring the number of contacts with elderly people). Voluntary work is managed by training volunteers, which is seen as one of the main ways of evaluating operations. HelsinkiMission is currently opening an intranet site that serves as a tool in organizing the voluntary work. Recently the brand was evaluated for the first time by a survey. In the future, the brand will be evaluated frequently. The operations of the organization are evaluated according to the requirements of the financers. The outcomes of the operations are evaluated by monitoring the numbers of donors and sponsors. HelsinkiMission aims at reducing the numbers of suicides among elderly people, and one principal indicator of the outcome is the number of suicides among elderly people in the Helsinki area.

The needs for IC management in HelsinkiMission relate to the assessment of outcomes. At the moment the organization lacks "soft" evaluation measures, e.g. how operations create happiness and well-being among elderly people. This information is needed in order to evaluate the success of the organization. Also, the satisfaction of volunteers and elderly should be monitored as well as the effects of voluntary work from both parties' point of view (elderly people and volunteers). At the moment there are no measures for operation processes in the organization, and according to the interviewees there seems to be a need for some process measures. HelsinkiMission reports on its activities to sponsors, donors and financers. Volunteers and cooperative

partners also receive information on the organization's activities. In the future the organization would like to reach everyone (both individuals and organizations) in the Helsinki area to disseminate information on its activities and to attract more participants to its operations.

4. Analysis of the empirical data

The results of the empirical research reveal some common perceptions among the interviewees about the role of IC in non-profit elderly care organizations. This is noteworthy, especially since the case organizations are dissimilar in many aspects. It is also natural that some IC factors were felt to be more important in one case than in another. The role of volunteers is a good example of this. Table I presents a summary of the empirical data.

Comparison of the empirical observations summarized in Table I and the IC framework proposed by Kong and Prior (2008) reveals the main elements of the model. For example, the different types of IC were identified, the role of IC was in many cases assessed in relation to the contradictory goals (e.g. customer's quality needs vs. municipality's cost constraints) and the role of IC / knowledge flows was apparent in the case of, e.g. risks of losing competent employees and in recruiting employees or volunteers.

Analyzing the current status and needs for managing IC, it is difficult to distinguish features common to all organizations except the concern for human capital. Current management methods concentrate on specific resources, such as human resources or customer satisfaction but a more systematic way of assessing the impacts of resources and operations on outcomes seems to be missing. This is seen in the common need for IC management; organizations seem to need to assess the outcomes and effects of operations. This finding is interesting because the main body of IC literature concerns resources – not the outputs or outcomes of operations. It is uncertain whether the IC management field is able to meet this need.

The managers of the case organizations also felt they needed more information regarding employees, e.g. on employee competence and well-being. Needs in reporting relate to sharing a broader range of information of organizations' activities with present and potential clients. This is related at least partly to the pressure arising from the separation of purchaser and provider roles that has been increasingly utilized in municipalities.

Comparison of these findings with those of an earlier survey of Finnish companies (Lönnqvist *et al.*, 2008), reveals some similarities and some differences. Both for-profits and non-profits seem to use many managerial tools to manage IC factors, but no comprehensive IC framework. There are also similarities in the IC factors considered important. In addition, more information on IC factors (i.e. better indicators) seems to be a desired development path for both sectors. However, while the non-profit organizations studied here were eager to report information on IC, the companies did not regard reporting as an important IC-related activity.

5. Conclusions

Research on non-profit organizations is currently sparse. The existing research has mostly been rather generic and conceptual. This paper contributes to the existing

Table I.
Summary of the empirical data

	Jyllin Kodit	Rehabilitation Institute Apila	HelsinkiMission
Important IC resources	Skilled personnel Customers –Individuals –Organizations –Relatives of elderly people Volunteers Organizational values Management, incl. defined processes and low hierarchy Cooperative partners Subcontractors Reputation	Personnel –Competences –Motivation –Commitment –Friendliness Working atmosphere –Positive and strong community spirit –Flexible –Responsible Low hierarchy Satisfied customers	Volunteers Brand Organizational values Skilled employees Enthusiastic, good working atmosphere Recruiting process of volunteers Good administration Low hierarchy Cooperative partners and networks
Practices in managing IC	Annual internal audits Quality management Performance measurement Evaluation of customers' physical and mental changes Customer satisfaction surveys Daily reports on customers Evaluation of customer needs in every three months Surveys on rewarding and well-being of employees Appraisal interviews Daily unofficial conversations	Monitoring the number and development of personnel Appraisal interviews Well-being surveys of employees Customer satisfaction surveys Physical and mental tests of customers	Monitoring number of volunteers and contacts Training of volunteers Intranet site as a tool to organize voluntary work Brand survey Operations evaluated by requirements from financers Monitoring number of donors and sponsors Monitoring number of suicides among elderly people in Helsinki area
Need for IC management	Information on employee satisfaction and competences Information about the reputation of the organization	Information on long-term effects of rehabilitation services More in-depth information about the well-being of employees	Assessment of outcomes;, e.g. measures for happiness and well-being among elderly people Information on customer satisfaction: volunteers and elderly Measures for operational processes

literature by presenting the findings of an exploratory study on IC in non-profit elderly care organizations. It extends the existing research by presenting empirical and industry-specific findings.

The key findings of the study are as follows: First, key IC factors in non-profit elderly care are related to the abilities of the personnel and volunteers, relationships with various stakeholders, organizational image and brand, organizational structure and values as well as working atmosphere. Second, the results suggest that IC is already being managed in the case organizations using various managerial tools (see Table I), but a comprehensive view of IC as well as some practical tools is lacking. Third, development needs regarding IC management include better tools to provide information and facilitate reporting on certain IC resources (e.g. employee competence) and on the impact of activities.

The practical starting-point of this study related to the major challenges currently faced by the elderly care sector in Finland and in other countries. The IC approach seems well-suited for non-profit elderly care organizations as a managerial framework to encapsulate the intangible aspects of their operations. At this point, practical experience of applying IC management is needed.

This study was essentially explorative. A more thorough understanding could have perhaps been achieved by, a longitudinal research approach. However, the need for this particular study was justified by an analysis of the existing literature. The different stages of the research process have been described in a fairly detailed manner, which should enable the reader to assess the quality of the findings. The inclusion of three case organizations providing different elderly case services and the participation of five researchers with different backgrounds as co-authors should enhance the quality of the research in terms of generalizability and reliability. This study focused on Finnish non-profits. The operations of the third sector may vary across different countries, and this should be taken into account.

Future research on this topic could focus on a more detailed analysis of individual IC factors and seek suitable ways to manage and measure them. An important question is which kinds of IC managerial tools could actually be used given the practical constraints (e.g. regarding resources) of these organizations. Considering the non-profit sector more widely, it would be interesting to carry out similar studies in other sectors of non-profit activity and compare the findings. This would help understand the impacts of profit orientation and industry on IC management.

References

Andriessen, D. (2004), *Making Sense of Intellectual Capital: Designing a Method for the Valuation of Intangibles*, Elsevier Butterworth-Heinemann, Stoneham, MA.

Bontis, N. (2004), "National Intellectual Capital Index: A United Nations initiative for the Arab region", *Journal of Intellectual Capital*, Vol. 5 No. 1, pp. 13-39.

Borzaga, C. and Santuari, A. (2003), "New trends in the non-profit sector in Europe: the emergence of social entrepreneurship", *The Non-profit Sector in a Changing Economy*, OECD Publishing, Paris, pp. 31-59.

Dubois, C.-A., Nolte, E. and McKee, M. (2006), *Human Resources for Health in Europe*, European Observatory on Health Systems and Policies Series, Open University Press, Milton Keynes.

Edvinsson, L. and Malone, M.S. (1997), *Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower*, HarperBusiness, New York, NY.

Eisenhardt, K. (1989), "Building theories from case study research", *Academy of Management Review*, Vol. 14 No. 4, pp. 532-50.

Fletcher, A., Guthrie, J., Steane, P., Roos, G. and Pike, S. (2003), "Mapping stakeholder perceptions for a third sector organization", *Journal of Intellectual Capital*, Vol. 4 No. 4, pp. 505-27.

Flyvjberg, B. (2006), "Five misunderstandings about case-study research", *Qualitative Inquiry*, Vol. 12 No. 2, pp. 219-45.

Giannakouris, K. (2008), *Ageing Characterises the Demographic Perspectives of the European Societies, 72,2008*, Eurostat.

Guthrie, J., Steane, P. and Farneti, F. (2009), "IC reporting in the Australian Red Cross blood service", *Journal of Intellectual Capital*, Vol. 10 No. 4, pp. 504-19.

Kong, E. (2007a), "The strategic importance of intellectual capital in the non-profit sector", *Journal of Intellectual Capital*, Vol. 8 No. 4, pp. 721-31.

Kong, E. (2007b), "The human capital and human resource management relationships in non-profit organisations: misunderstanding and implication", *International Journal of Knowledge Management Studies*, Vol. 1 Nos 3/4, pp. 471-83.

Kong, E. (2008), "The development of strategic management in the non-profit context: intellectual capital in social service non-profit organizations", *International Journal of Management Reviews*, Vol. 10 No. 3, pp. 281-99.

Kong, E. (2009), "Facilitating learning through intellectual capital in social service non-profit organisations", *International Journal of Learning*, Vol. 16 No. 2, pp. 533-50.

Kong, E. and Prior, D. (2008), "An intellectual capital perspective of competitive advantage in nonprofit organisations", *International Journal of Nonprofit and Voluntary Sector Marketing*, Vol. 13, pp. 119-28.

Kong, E. and Thomson, S. (2006), "Intellectual capital and strategic human resource management in social service non-profit organisations in Australia", *International Journal of Human Resources Development and Management*, Vol. 6 Nos 2-4, pp. 213-31.

Kong, E., Jenkins, S. and Ardagh, D. (2009), "A preliminary analysis of learning processes for innovation in member-serving non-profit organisations: the role of governance structure and its elements – shared knowledge, decision making and benefit sharing", *International Journal of Learning*, Vol. 16 No. 6, pp. 1-16.

Kujansivu, P. (2008), *Intellectual Capital Management: Understanding Why Finnish Companies Do Not Apply Intellectual Capital Management Models*, Publication No. 747, Tampere University of Technology, Tampere.

Kujansivu, P. and Lönnqvist, A. (2009), "Measuring the effects of an IC development service: Case Pietari Business Campus", *Electronic Journal of Knowledge Management*, Vol. 7 No. 4, pp. 469-80.

Lammintakanen, J. and Kinnunen, J. (2006), "Hoitotyön osaamisvaatimukset ja merkitys tulevaisuuden terveyspalveluissa (Competence requirements of nursing and its relevance in health service of the future)", in Miettinen, M., Hopia, H., Koponen, L. and Wilskman, K. (Eds), *Hoitotyön vuosikirja 2006. Inhimillisten voimavarojen johtaminen*, pp. 9-28.

Lev, B. (2001), *Intangibles. Management, Measurement, and Reporting*, Brookings Institution Press, Washington, DC.

Lönnqvist, A., Kujansivu, P. and Sillanpää, V. (2008), "Intellectual capital management practices in Finnish companies", *International Journal of Innovation and Regional Development*, Vol. 1 No. 2, pp. 130-46.

Lönnqvist, A., Sillanpää, V. and Carlucci, D. (2009), "Intellectual capital management in practice: assessment of implementation and outcomes", *Knowledge Management Research and Practice*, Vol. 7 No. 4, pp. 308-16.

Meritum (2001), *Guidelines for Managing and Reporting on Intangibles (Intellectual Capital Report)*, Final Report of the MERITUM Project.

Mertins, K. and Will, M. (2007), "A consistent assessment of intellectual capital in SMEs InCaS: intellectual capital statement – made in Europe", *The Electronic Journal of Knowledge Management*, Vol. 5 No. 4, pp. 427-36.

Mouritsen, J., Bukh, N., Flagstad, K., Thorbjørnsen, S., Johansen, M., Kotnis, S., Thorsgaard Larsen, H., Nielsen, C., Kjærgaard, I., Krag, L., Jeppesen, G., Haisler, J. and Stakemann, B. (2003), *Intellectual Capital Statements – The New Guideline*, Danish Ministry of Science, Technology and Innovation, Copenhagen.

OECD (2003), *The Non-profit Sector in a Changing Economy*, OECD Publishing, Paris.

Parjanne, M.-L. (2004), *The Changing Age Structure of the Population and Preparing for its Effects in the Different Sectors of Administration*, Reports of the Ministry of Social Affairs and Health 2004:18, Ministry of Social Affairs and Health (in Finnish).

Peltosalmi, P., Vuorinen, M. and Särkelä, R. (2008), *Järjestöbarometri (A Report on the Finnish Non-profit Social and Health Sector Organisations)*, Sosiaali- ja terveysturvan keskusliitto ry, Helsinki (in Finnish).

Roos, J., Roos, G., Dragonetti, N. and Edvinsson, L. (1997), *Intellectual Capital: Navigating the New Business Landscape*, Macmillan Press Ltd, London.

Schiuma, G., Lerro, A. and Carlucci, D. (2008), "The Knoware Tree and the Regional Intellectual Capital Index: an assessment within Italy", *Journal of Intellectual Capital*, Vol. 9 No. 2, pp. 283-300.

Schiuma, G., Ordóñez de Pablos, P. and Spender, J.C. (2007), "Intellectual capital and companies' value creation dynamics", *International Journal of Learning and Intellectual Capital*, Vol. 4 No. 4, pp. 331-41.

Sveiby, K.-E. (1997), *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*, Berrett-Koehler Publishers Inc., San Francisco, CA.

Valtioneuvoston kanslia (2004), "Väestön ikärakenteen muutos ja siihen varautuminen" ("The change in the age structure of the population and how to prepare for it"), Tulevaisuusselonteon liiteraportti 1. Valtioneuvoston kanslian julkaisusarja 29/2004 (in Finnish).

Vargo, S.L. and Lusch, R.F. (2004), "Evolving to a new dominant logic for marketing", *Journal of Marketing*, Vol. 68 No. 1, pp. 1-17.

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PAPER III

Sillanpää, V. & Laihonen, H. (2012)

Managing intellectual capital in non-profit elderly care organizations

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Managing Intellectual Capital in Non-Profit Elderly Care Organizations

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ABSTRACT

The management of intellectual capital (IC) is considered as a highly promising approach for non-profit organizations (NPO). However, lack of in-depth understanding about the issue and practical tools to support management persists. IC research in the case of NPO's is still rather generic and conceptual. This paper makes a contribution by describing the practices of IC management in this particular context. The paper describes one possible approach to recognize the key intangibles of non-profit organizations. This approach was applied in three case organizations in order to illustrate the significance of IC from the viewpoint of value creation in services. More generally, the paper illustrates first, the necessity to concretize the strategic perspectives of IC management and second, the need for measurement tools that enable the monitoring of IC.

Keywords: *Elderly Care Organizations, Intellectual Capital Management, Measurement, Non-Profits, Services, Value Creation*

INTRODUCTION

During the last few years interest in intellectual capital in the non-profit sector has increased. The central role of intangible resources in this sector has been recognized and the literature presents several approaches that link intellectual capital to the context of non-profit organizations (e.g., Fletcher, Guthrie, Steane, Roos, & Pike, 2003; Guthrie, Steane, & Farneti, 2009; Kong, 2007a, 2007b, 2009; Kong & Prior, 2008; Kong & Thomson, 2006; Sillanpää, Lönnqvist, Koskela, Koivula, Koivuaho, & Laihonen, 2010). Even though the central role of IC in non-profits has been recognized, the literature remains at a rather conceptual level with only some empirical examination about the IC or IC management in the context of non-profit organizations.

In general, IC literature has recognized and highlighted that the success of organizations depends on their intellectual capital and several models for classifying, measuring and managing IC have been introduced (e.g., Edvinsson & Malone, 1997; Sveiby, 1997; Roos & Roos, 1997). The practical applications of

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IC management have concentrated mainly on large for-profit organizations. However, the importance of intangible resources is not limited to big companies. Many small and medium size organizations are highly knowledge-intensive (e.g., Alvesson, 1993; Miles *et al.*, 1995), or intangibility and management of knowledge assets are for other reasons highly relevant to them.

This paper focuses on non-profit organizations operating in the field of welfare services. The paper describes three IC management development projects of non-profit elderly care organizations and thereby operationalizes the strategically oriented IC approach in the given context. The organizations studied are examples of fairly small organizations with relatively limited development resources. From the viewpoint of IC management their information needs are rather simple, and correspondingly, their measurement culture is not very sophisticated. Therefore, the measures and respective managerial tools and processes should not be too complex nor resource consuming.

The earlier literature has recognized the significance of intellectual resources for non-profits and suggested IC management as a promising approach to manage these resources (e.g., Kong *et al.*, 2008). It also suggests that non-profit organizations can successfully adopt managerial approaches and tools from the for-profit sector (e.g., Ramirez & Janiga, 2009; Beck, Lengnick-Hall, & Lengnick-Hall, 2008). However, empirical experiences of applying IC management in these organizations are still scarce. Therefore, the literature has called for more detailed analysis of IC factors and demanded practical measures that would support the IC management in non-profit organizations (Sillanpää *et al.*, 2010). Originating from this, *the first objective* of this paper is to report which intangible resources are the most important for non-profit elderly care organizations from the viewpoint of their value creation processes. *The second objective* arises from the first one and from the overall purpose of illustrating the significance of IC in non-profits –how can IC in these organizations be managed in practice? In order to achieve its objectives, the paper describes different phases of the development processes that were carried out in the case organizations.

The rest of this article is organized as follows. In the next section, the current understanding of IC in the context of non-profit organizations is briefly reviewed and a conceptual framework for analyzing their value creation is presented. This is followed by descriptions of the empirical setting and research methodology. Empirical examination of three case organizations is elaborated in the following section. Finally, analysis and conclusions are presented.

LITERATURE REVIEW: INTELLECTUAL CAPITAL MANAGEMENT AND NON-PROFIT ORGANIZATIONS

Knowledge assets or organizations' intellectual capital (IC) is one of the key determinants of their business performance (Schiuma, Ordóñez de Pablos, & Spender, 2007). The management of IC concerns the control and alignment of organizations' knowledge assets and processes through which these transform into other resources and, finally, into customer value (Petty & Gutherie, 2000; Choo & Bontis, 2002). IC is often divided into three main categories: *human capital*, including competence and employees' knowledge; *relational capital*, including customer relationships and brands; and *structural capital*, including business processes and documented information stored in databases. It is considered that IC - in addition to physical resources - forms an important basis for value creation, and should therefore be systematically managed (e.g., Rastogi, 2003)

Measuring the status of intangible resources enables us to determine the 'stock' of an organization's IC at a certain point in time (Edvinsson & Malone, 1997; Sveiby, 1997; Roos *et al.*, 1997). This approach is known as the static view of IC. The concept of dynamic IC refers to an organization's actions creating value, maintaining or transforming IC or describing organizations' ability to continu-

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ously learn and innovate (e.g.,-Kianto, 2007; Ståhle, Ståhle, & Pöyhönen, 2003). In service operations it seems necessary to obtain both of these views, because the service as a process transforms intangible (and tangible) resources into valuable outcomes through the interaction between the service provider and the customer.

The role of IC is highlighted in service operations because the outcome of these activities is heavily based on intangible inputs, such as the competence and motivation of personnel, seamless processes and co-operation between different actors. The intangible nature of service output further demonstrates the significance of IC for value creation (Vargo & Lusch, 2004; Levy, Murphy, & Zanakis, 2009; Laihonen & Lönnqvist, 2010).

In non-profit organizations, the intangible aspects of operations are further emphasized. For these organizations, the well-being of clients or other stakeholder groups comes before financial success. Therefore it is suggested in the literature that IC management may provide a novel and very promising managerial approach in non-profit organizations (Kong, 2007a, 2007b). As the IC research focuses on understanding and managing the intangible aspects of organizational activities, it might provide the managers of non-profit organizations with methods and tools for visualizing the significance of knowledge assets in their organizations (Kong *et al.*, 2008).

The existing literature on IC and non-profit organizations is scarce, but it seems that interest in the intangible aspects of health and social services in general has increased during the last few years. The central role of intangible resources in this sector has been recognized and researchers are currently highly interested in their linkage to customer value especially from the viewpoint of long-term effectiveness of services. Despite its scarcity, the literature presents some interesting approaches, in which intellectual capital is linked to the context of non-profit organizations (Fletcher *et al*., 2003; Guthrie *et al*., 2009; Kong, 2007a, 2007b, 2009; Kong *et al*., 2006, 2008; Sillanpää *et al.*, 2010).

The IC framework presented by Kong and Prior (2008) highlights knowledge as a key resource in non-profit organizations. The model provides a conceptual basis for understanding and analyzing the role of different elements of IC in non-profit organizations. In addition, the framework also links the knowledge flows within and outside the organization to value creation. Figure 1 in the Appendix presents a modified version of the IC framework.

Figure 1 connects the framework of Kong and Prior to the framework focusing on the linkage between knowledge flows and IC presented by Laihonen and Koivuaho (2011). The framework presented in Figure 1 illustrates how the stocks of intellectual capital (human, relational and structural capital) transform into value for different stakeholders. The most important stakeholders for organizations producing elderly care services are the service recipients. In addition to them, organizational customers (in most cases municipalities) are an important stakeholder group not least from the financial perspective. In Finland, municipalities are responsible for providing health and social services; therefore they often purchase and pay for the service. Donors are another stakeholder group that takes part in financing the services. Financial structure may differ between non-profits. In addition to external stakeholders, non-profit organizations have internal stakeholders (i.e., employees) whose needs have to be fulfilled. Finally, it is important that organizations' financial situation remains in balance although monetary success is not their primary target.

Kong and Prior (2008) have divided targets of non-profit organizations into *social mission* and *commercial objectives* that reflect the dual purpose of non-profit organizations. The actual value creation takes place partly based on the knowledge transfer between the service provider and the customer, but especially in the case of elderly care services tangible resources also have an important role in service activities. Nevertheless, regarding the intangible resources the framework supports the managers of non-profit organizations in gaining a clearer understanding

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of their IC and its relation to the organization's ability to build and sustain competitive advantage (Kong *et al*., 2008).

The framework provides a conceptual understanding of the overall role of IC in non-profit organizations from the viewpoint of their value creation. However, the literature has been criticized for a lack of empirical research and concrete applications, methods and tools for managing IC in these organizations. The next sections of the paper illustrate how the framework can be operationalized and utilized in the creation of IC measures and management practices.

RESEARCH METHODOLOGY

The empirical research conducted includes action research projects (Gummesson, 2000) in three Finnish non-profit elderly care organizations. The overall research project was carried out as a part of a three-year research program funded by Finland's Slot Machine Association (RAY). The aim of the program was to demonstrate the significance of IC in non-profit organizations and to develop IC measures that would support this objective.

The research project, consisting of three development projects, began with interviews with the managers of each case organization (two managers per organization) in fall 2008. The aim of these interviews was to gain a concrete and a more detailed understanding of the role of IC in these particular organizations. In addition, the interviews mapped current IC management tools and the future needs concerning IC management. Concurrently, a literature review of non-profit elderly care organizations and their management was completed. The structure and different phases of the research project are illustrated in Figure 2 in the Appendix.

Individual development projects including 4-7 workshops were carried out in all case organizations during 2009. These workshops were guided by two researchers, who also educated participants about concepts related to IC and IC management and measurement. The purpose of these workshops was, first, to gather information about the intangible resources of non-profit elderly care organizations and, second, to develop useful measures and management methods for the purposes of each case organization. Project work groups consisted of five to ten participants (most in managerial positions). About six months after the development projects, evaluation workshops were held in order to get participants' assessments of the development project, its benefits and outcomes.

The structure of development projects was grounded on two well-known models for IC management: the Danish guidelines (Danish Agency for Trade and Industry, 2000) and Meritum Guidelines (Meritum, 2001). The Danish guidelines document was considered useful since its clear visual structure provides a simple and understandable overview of the significance of measuring IC, and further, the linkage between the measures and the organizational targets. This type of approach has been applied successfully in IC management development projects (Lönnqvist, Sillanpää, & Carlucci, 2009) and was therefore considered a potential approach for this research. Features of Meritum Guidelines relate to the overall structure of the IC development process: it begins with the identification of strategic targets and proceeds to the recognition of key intangible resources. Finally, it ends up presenting measures for these intangible resources from the viewpoint of value creation.

The basic logics of the models actually look alike. For example, both models suggest that organization-specific intangible resources related to organizational objectives should be identified and managed, even though the way resources are identified differs in the models (Lönnqvist & Kujansivu, 2007). Benefits of the chosen approach relate to the consistency of measures with the targets of an organization, clear focus on strategically relevant issues, and personnel participation to the development of measures. These can also be seen as general success factors for the implementation of a measurement system (e.g., Lönnqvist *et al*.,

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2009). In addition, the workshop approach provides participants with an opportunity to learn about IC and its implications for the organizations' success.

Although all case organizations are non-profit organizations operating in the elderly care sector, their operational focus is somewhat different. The following brief descriptions of the organizations partly explain these differences.

NPO A is an old people's home that offers care, nursing, nutrition, research, and rehabilitation services for elderly people. The organization has five special care units that function as group homes offering long-term living for elderly people. A total of 80 people are living in dependent or heavily dependent care in the case organization. In addition, the organization offers recreational activities and short-term rehabilitation for elderly people. It has about 60 full-time employees and a group of volunteers who participate actively in the operations of the organization, e.g., by offering leisure activities.

NPO B offers short-term rehabilitation for people suffering from musculoskeletal diseases. The organization offers recreational activities and rehabilitation services aimed at maintaining and improving an individual's functioning capacity. Since 2004 respite care for the elderly (geriatric rehabilitation) and family care have been rapidly increasing sectors. The facility has 116 places for clients using rehabilitation and recreational services and serves over 1800 clients annually. The facility employs about 80 professionals with different areas of expertise. The facility also functions as the national resource centre for uncommon rheumatic diseases and inflammatory muscular diseases.

NPO C is a charity organization providing services to elderly people, mentally disabled children, young people with violent backgrounds and mental problems. The organization operates to alleviate loneliness, insecurity and depression among elderly people and other target groups. The organization operates locally in the city of Helsinki, but some services for the elderly are offered nationwide. The forms of services that the organization offers to elderly people include discussion groups, call centers, activity groups and sheltered accommodation unit. In addition, the organization mounts campaigns to recruit volunteers as friends for the elderly. It has about 45 employees and some 1,070 volunteers.

EMPIRICAL EXAMINATION

Organizational Objectives

At the beginning of each development project, the organizational objectives were identified as both the Danish guidelines and the Meritum Guidelines suggest. A summary of the objectives of each case organization is presented in Table 1 in the Appendix. Objectives were divided into two groups based on the conceptual framework (see Figure 1 in the Appendix): socially driven objectives and commercial objectives. As Table 1 shows, objectives related to the well-being of clients (e.g., quality of life) were prioritized in all case organizations.

In NPO A, the primary objective is to offer clients a good and dignified life. This includes maintaining happiness, quality of life and functional capacity. In NPO B, objectives relate first and foremost to the improvement of clients' overall functioning. In practice, this means the provision of safe care periods and comprehensive rehabilitation services. NPO B aims to maintain and improve clients' skills in everyday life, thus reducing the need for hospitalization. In NPO C, objectives were divided into two categories due to its two customer groups: senior citizens and volunteers. Regarding seniors, the organization aims to improve their well-being. This includes alleviating loneliness, the creation of a good (customer) relationship and chances to be together with other seniors. Regarding volunteers, the main objective is 'satisfied volunteers.' This consists of meaningful activities, chances to discover communal spirit and opportunities for social contribution.

In NPO A and NPO B, commercial objectives were also identified. These targets were considered important in order to ensure the continuity of operations. Financial success,

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the sufficient ratio of price and quality and the efficient utilization of capacity were considered essential targets in both organizations. In addition, success in competition and the expanding of the range of services were important targets in NPO B. In NPO C, commercial objectives were not emphasized. Although fund-raising is an essential activity, financial aspects were not underlined when strategic targets of the organization were specified.

Recognition of Key Components of IC

The links between the strategic objectives presented above and intangible resources were quite hard for workshop participants to perceive. Therefore, these upper level objectives were broken down into more practical and operational targets and, further, to everyday activities that assist in achieving these targets. This facilitated the identification of intangible resources that are significant in achieving first operational targets and finally the strategic objectives of the organization. It is not purposeful to discuss operational level targets in detail, but from the perspective of the overall process it is worth mentioning, because the approach might help other organizations in their respective processes. The key intangible resources of the case organizations are summarized in Table 2 in the Appendix.

As Table 2 shows, very similar intangible resources were emphasized in all three case organizations. All case organizations stressed the role of human capital. Professional competence, the attitudes of personnel as well as social skills are factors that are probably emphasized in all service operations due to their strong reliance on personal interaction. Concerning structural capital values, processes, working atmosphere and management procedures were essential intangible resources common to all cases. Regarding relational capital, customer relationships, relationships with different co-operative partners and the organizational image (called image/brand/reputation) were identified as the most important resources.

In NPO A and NPO B, which were organizations offering long-term living and rehabilitation services, the customer base was divided into two groups. First, there were individual clients, who receive the actual care and/or rehabilitation services and, second, there are organizational customers, who act as purchasers for a given service. In NPO C, this kind of division did not appear, even though sponsors are an important interest group, actually performing a similar task (financing) as organizational customers in other two case organizations.

When analyzing differences in organizational intangible resources, it could be recognized that differences stem from the diverse operating modes or differences in the actual service operations. For example, in NPO C the service operations are largely based on open networks of volunteers, which require different types of processes and management procedures compared with NPO A, which provides long-term care and residence for its clients. Similarly, in NPO B the short-term rehabilitation is a fixed-term intervention, where the strict planning and timing are emphasized (e.g., streamlining of internal processes).

In the workshops, very similar types of resources were recognized to what the top managers' of the case organizations emphasized in the interviews at the beginning of the research project. Some new ones were recognized in the workshops, but more importantly, the significance of different resources was analyzed more thoroughly than in interviews (e.g., the importance of social skills and interaction skills as a part of personal competence was underlined). In the workshops, participants also had an opportunity to analyze causal relationships between different intangible resources and value creation by constituting an overall picture of the significance of IC in their organizations.

Measurement of the Components of IC

After identifying the essential intangible resources, measures to assess their status were designed. Acknowledging the limited resources

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these organizations have for management, the aim was to utilize existing measures, managerial tools and procedures when possible. Typically, many of the existing methods and managerial tools can be efficiently utilized also for the purposes of IC management (e.g., Kim, Kumar, & Kumar, 2009). All the case organizations had various methods in use for information collection purposes, and it was not reasonable to develop overlapping methods for IC management. Next, the created methods, tools and measures are discussed.

NPO A: The measurement of employees' competence was carried out by designing and conducting a competence survey, which was used for collecting data into a competence matrix. The competence survey was considered as a useful tool also from the viewpoint of development discussions that have long been on the agenda and that were now launched along with the IC development project. Actual measures that can be drawn from the competence matrix are the level of professional competence, the ratio of personnel with professional qualifications and the level of interaction skills. Other measures related to human capital (e.g., the level of personal motivation, the level of organizational knowledge and the quality of training) were developed by utilizing the existing information collection tools (surveys). In addition, the knowledge flow survey was developed to measure the dynamics (i.e., the knowledge flows of an organization) of intellectual capital (see Laihonen *et al*., 2011, for a detailed description of this survey).

Concerning structural capital, new measures were developed regarding the level of managerial competence, the flow of information, fluency of processes and working atmosphere. Four different surveys provide information for these measures: (i) the knowledge flow survey; (ii) the so called trust survey that the organization had previously developed for measuring trust related issues within the organization; (iii) the ITE-survey (ITE is a self-evaluation method to support quality management, meant for social and health care organizations); and (iv) the recently developed competence survey.

The customer satisfaction survey and the related managerial procedures were also further developed during the project. The level of customer satisfaction (i.e., the satisfaction of senior clients, their family members and organizational customers) was considered as an important measure of relational capital as well as the performance of the organization (quality aspect). Measures regarding relational capital also consisted of measures concerning voluntary work (e.g., the quantity of volunteers, amount of their visits and the level of their satisfaction).

NPO B: Employee reviews were held once a year, which constitutes a good basis for the measurement and management of human capital. In addition, many other important aspects of IC, such as employees' motivation, working capacity and professional competence, were measured every other year. In the workshops, the importance of employees' interaction skills was emphasized, which underlined the need for new measures in that area. The number of training days was added as a new measure regarding human capital.

New measures for structural capital were also developed. Most of these measures are based on the information provided by the knowledge flow survey, the working capacity survey of employees and the ITE-survey. Employees' perceptions of organization's values, strategy and working atmosphere are subjective measures, whereas the amount of short term sick days is an objective measure relating to the same issues. Furthermore, the quality of human resources management, the flow of information, the level of documentation and functioning of certain key processes (i.e., the process of short-term rehabilitation and invoicing) are subjectively evaluated by the key participants of the respective process. In addition, a practical tool (a checklist) was developed to ensure the fluency and quality of the short-term rehabilitation process. Later on, this checklist could also support the development of some numeric measures for evaluating the quality of services.

Regarding relational capital, customer relationships are monitored with customer

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satisfaction surveys after each rehabilitation period. Another important measure observes the achievement of customers' goals for their short-term rehabilitation periods. The number of invitations for tenders and actualized purchase agreements were chosen as the measures for customer relations with organizational customers. One of the targets related to relational capital was to expand the supply of services. Related to this target, the number of customers per segment was introduced as a new measure. All measures of relational capital utilize the existing information sources.

NPO C: The development project focused on its voluntary work unit, not the entire organization. This posed some special challenges for the development work. In other workshops of the research project, IC management and measurement were considered as an organization-wide, strategic level management activity, not a task of one functional unit. Several types of measures developed in other case studies did not fit with the needs of a small unit, instead participants thought that these should be implemented as an organization-wide management tools. Nevertheless, participants perceived a need for new managerial tools and procedures (e.g., new surveys for personnel satisfaction, motivation and competence) at the organization level in order to gain an overall understanding about the status of IC.

One important issue that was highlighted in workshops was related to the value of voluntary work: participants underlined the importance of illustrating the societal significance of voluntary work and hoped for a measure that would show the monetary value of the work. Some methods and tools for this purpose do exist and one possible solution for calculating the value of voluntary work was discussed but not implemented within this project.

Based on the identified objectives and the key components of IC, several possible measures were proposed. As the most important result, the recruitment process of voluntary workers was analyzed and discussed. Participants thought that the development project enabled a more thorough discussion and analysis than would have been possible during their normal work. Some preliminary measures were also developed to support the follow-up of the process (e.g., percentages of volunteers receiving replies within three days of their application and that have interview scheduled within one month).

Another important result for NPO C was the modified knowledge flow survey implemented during the project. It gathered information about the volunteers' perceptions on four general themes: (1) acting as a volunteer, (2) co-operation with seniors, (3) NPO C and its operations, and (4) issues related to motivation and management. The questionnaire provided new information about the satisfaction of volunteers and it also helped to recognize some important development areas concerning internal processes.

The brand of the organization was identified as an essential part of the IC, since it is an asset that facilitates not only the fund-raising and campaigns but also the recruitment of new volunteers. The organization already had some measures for relational capital. For example, the numbers of the volunteers and donors were followed and a wide-ranging brand research had been implemented only a year ago.

ANALYSIS AND DISCUSSION

The theoretical framework of the paper highlighted the importance of three factors for IC management in non-profit organizations:

1. The recognition of organizational objectives (social and commercial);
2. The recognition of the key intangible resources;
3. The understanding about the dynamics that connects IC components to the value creation process.

Based on this three-fold approach, the paper described a research process that first aimed to illustrate the significance of IC in non-profit elderly care organizations and second, aimed

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to create measures that would support the IC management of these organizations.

At the beginning of the project, the case organizations had high expectations related to the concrete IC measures, but at the end of the project the most important result was an increased understanding of the role of IC in their operations. Many of the measures developed were well-known managerial tools, such as development discussions, competence surveys and measures for working capacity. Although the novelty value of the individual measures is modest, the main outcome of the research is more valuable.

The principal achievement was the identification and analysis (discussions in workshops) of intangible resources from the viewpoint of organizational objectives. This enhanced organizations' understanding on the intellectual capital as such and even more importantly, about its significance for the service operations and their objectives.

Concerning the measures, a relatively large number of possible IC measures were recognized and proposed. However, the number of measures implemented was in each case much reduced in the final phase mainly due to the lack of resources for measuring IC after the project. In addition, most of the measures were based on existing information. Nevertheless, some new practices and tools were also developed. In most cases, these new measures also required the development of new data collection procedures. A more efficient utilization of existing measures and information was emphasized in all case organizations as well as an idea of a managerial tool that collects measurement results into one location. This would facilitate monitoring of the development of measures over time.

In the evaluation workshops that followed the development phase, participants evaluated the process (its success factors and challenges), and benefits and outcomes of the project. Success factors identified were: workshops as a method, the competence of the project group (gained in previous development projects) and guidance/input of the facilitators. The main challenges of the project were haste in everyday operations and the lack of resources (i.e., time and orientation). In addition, especially at the beginning of the project, participants had some difficulties in understanding the concept of IC. Personnel changes during the project were also among the challenges.

The key benefit of the project in all cases was an increased understanding of intellectual capital and its significance. In addition to this learning aspect, practical tools for managing IC were developed and existing managerial systems were supplemented with IC aspects. At the time of evaluation (about 6 months after the workshops), the operational results of the project were not yet visible. In one organization (NPO C) the process in focus was perceived to be more efficient than before. In general, intellectual capital and the management of intellectual capital were considered as the most essential factors in this type of organizations (non-profit elderly care organizations) and one organization concluded that IC is for them an even more meaningful managerial aspect than a financial aspect.

CONCLUSION

As a conclusion of the research process described in this paper, intellectual capital seems to have a central role in non-profit organizations as the literature has also acknowledged (Kong, 2007b; Kong *et al*., 2008). This paper contributes to the earlier literature by its empirical focus. The paper described development processes of intellectual capital management in three non-profit elderly care organizations and provides important practical understanding about the possibilities of IC management in this particular context.

Although caring is highly labor-intensive, it necessitates many different forms of intangible resources. The essentiality of human interaction naturally highlights the role of human capital, but as the paper illustrated, relational and structural capital are also important facilitators and enablers of efficient and effective services.

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The relative importance between the components of IC varies between organizations. Organizations' objectives and strategies define which resources are the most important for a particular organization. Therefore, organizations should always start the management of their intellectual capital by studying their strategic objectives and proceed to the recognition of their key intangible resources. Different conceptual frameworks could support the recognition process by concretizing the concepts of intellectual capital and by creating a shared language within an organization. Both of these might lower the threshold for starting systematic management of intellectual capital.

This paper presented one possible solution which may help organizations to overcome obstacles on their way to initiate the management of IC. This approach utilized workshops where organizational objectives and key intangible resources for value creation were identified and analyzed together with the participants of the case organizations. The focal benefits of workshops relate to creating a common view about IC, its implications and connections with organizational objectives, and learning about the concepts of IC. This supports the implementation of IC management in an organization, since several people in the organization are already familiar with the topic and are able to perceive the organization in a new way.

Regarding the strategic objectives of an organization, it proved to be very useful approach to break them down into smaller and more concrete goals and further, into those everyday tasks and routines that aim, for example, at improved quality of life or well-being of clients. This might enhance the understanding of the role of a certain intangible resource (e.g., interaction skills) for the achievement of organizational objectives. The process also enhances the understanding of the significance of IC and those concrete methods and tools that could be used to illustrate its significance. For an individual employee, the process might explain what kind of concrete actions are required to increase IC and improve the results it evokes.

An important theme that emerged in the workshops relates to the straightforward aim of measuring IC. Even simple measures call for practices and processes through which the required information could be provided. This leads deeper into the management practices and problems than a straightforward measuring would imply. Therefore, when developing the management of intellectual capital in small and medium size organizations it is important to concentrate on the key resources and to carefully consider what kind of measuring information is needed and how this information can and will be utilized to support the management. Increasing the number of measures should not be the primary goal.

From the IC management point of view, simple basic tools, such as the employee reviews, competence surveys or matrixes and customer feedback systems are a good start if the information that they provide are effectively utilized. It is not reasonable to develop measures or approaches that are not closely connected to the organization's objectives and other management systems. The more efficient and systematic utilization of the existing information (e.g., the results of different surveys) might in many cases prove to be the most efficient and reasonable approach to initiate the IC management in practice and highlight the importance of different intangible resources.

From the viewpoint of future research this paper calls for a more thorough understanding of the actual value creation processes of elderly care and the relationships between different knowledge assets.

REFERENCES

Alvesson, M. (1993). Organizations as rhetoric: Knowledge-intensive companies and the struggle with ambiguity. *Journal of Management Studies*, *30*(6), 997–1015. doi:10.1111/j.1467-6486.1993.tb00476.x

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Beck, T. E., Lengnick-Hall, C. A., & Lengnick-Hall, M. L. (2008). Solutions out of context - examining the transfer of business concepts to nonprofit organizations. *Nonprofit Management & Leadership*, *19*(2), 153–171. doi:10.1002/nml.213

Choo, C. W., & Bontis, N. (2002). *The strategic management of intellectual capital and organisational knowledge*. Oxford, UK: Oxford University Press.

Danish Agency for Trade and Industry. (2000). *Guidelines for intellectual capital statements – key to knowledge management*. Copenhagen, Denmark: Author.

Edvinsson, L., & Malone, M. S. (1997). *Intellectual capital: Realizing your company's true value by finding its hidden brainpower*. New York, NY: Harper Business.

Fletcher, A., Guthrie, J., Steane, P., Roos, G., & Pike, S. (2003). Mapping stakeholder perceptions for a third sector organization. *Journal of Intellectual Capital*, *4*(4), 505–527. doi:10.1108/14691930310504536

Gummesson, E. (2000). *Qualitative methods in management research* (2nd ed.). Thousand Oaks, CA: Sage.

Guthrie, J., Steane, P., & Farneti, F. (2009). IC reporting in the Australian Red Cross blood service. *Journal of Intellectual Capital*, *10*(4), 504–519. doi:10.1108/14691930910996616

Kianto, A. (2007). What do we really mean by dynamic intellectual capital? *International Journal of Learning and Intellectual Capital*, *4*(4), 342–356. doi:10.1504/IJLIC.2007.016332

Kim, D., Kumar, V., & Kumar, U. (2009). A Framework of intellectual capital management based on ISO 9001 Quality Management System: The case study of ISO 9001 certified public R&D institute. *Knowledge and Process Management*, *16*(4), 162–173. doi:10.1002/kpm.333

Kong, E. (2007a). The human capital and human resource management relationships in non-profit organisations: Misunderstanding and implication. *International Journal of Knowledge Management Studies*, *1*(3-4), 471–483. doi:10.1504/IJKMS.2007.012536

Kong, E. (2007b). The strategic importance of intellectual capital in the non-profit sector. *Journal of Intellectual Capital*, *8*(4), 721–731. doi:10.1108/14691930710830864

Kong, E. (2008). The development of strategic management in the non-profit context: Intellectual capital in social service non-profit organizations. *International Journal of Management Reviews*, *10*(3), 281–299. doi:10.1111/j.1468-2370.2007.00224.x

Kong, E. (2009). Facilitating learning through intellectual capital in social service non-profit organisation. *International Journal of Learning*, *16*(2), 533–550.

Kong, E., & Prior, D. (2008). An intellectual capital perspective of competitive advantage in nonprofit organisations. *International Journal of Nonprofit and Voluntary Sector Marketing*, *13*, 119–128. doi:10.1002/nvsm.315

Kong, E., & Thomson, S. (2006). Intellectual capital and strategic human resource management in social service non-profit organisations in Australia. *International Journal of Human Resources Development and Management*, *6*(2-4), 213–231.

Laihonen, H., & Koivuaho, M. (2011). Knowledge flow audit: indentifying, measuring and managing knowledge asset dynamics. In Vallejo-Alonso, B., Rodriguez-Castellanos, A., & Arregui-Ayastuy, G. (Eds.), *Identifying, measuring, and valuing knowledge-based intangible assets: New perspectives* (pp. 22–24). Hershey, PA: Idea Group.

Laihonen, H., & Lönnqvist, A. (2010). Knowledge-based value creation: Grasping the intangibility of service operations in Finland. *International Journal of Knowledge-Based Development*, *1*(4), 331–345. doi:10.1504/IJKBD.2010.038042

Levy, Y., Murphy, K., & Zanakis, S. H. (2009). A value-satisfaction taxonomy of IS effectiveness (VSTISE): A case study of user satisfaction with IS and user-perceived value of IS. *International Journal of Information Systems in the Service Sector*, *1*(1), 93–118. doi:10.4018/jisss.2009010106

Lönnqvist, A., & Kujansivu, P. (2007). Designing and implementing an intellectual capital management system: applying the Meritum Guidelines in practice. *International Journal of Knowledge Management Studies*, *1*(3-4), 276–290. doi:10.1504/IJKMS.2007.012526

Lönnqvist, A., Sillanpää, V., & Carlucci, D. (2009). Intellectual capital management in practice: Assessment of implementation and outcomes. *Knowledge Management Research and Practice*, *7*(4), 308–316. doi:10.1057/kmrp.2009.22

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Meritum. (2001). *Guidelines for managing and reporting on intangibles, intellectual capital report*. Brussels, Belgium: European Commission.

Miles, I., Kastrinos, N., Flanagan, K., Bilderbeek, R., den Hertog, P., Huntink, W., & Bouman, M. (1995). *Knowledge-intensive business services: Users, carriers and sources of innovation (No. 15)*. Luxembourg: European Innovation Monitoring System.

Petty, R., & Gutherie, J. (2000). Intellectual capital literature review. Measurement, reporting and management. *Journal of Intellectual Capital*, *1*(2), 155–176. doi:10.1108/14691930010348731

Ramirez, A., & Janiga, K. (2009). Non-profit and for profit convergence: Are non-profits increasingly adopting private sector practices? *International Journal of Society Systems Science*, *1*(4), 307–324. doi:10.1504/IJSSS.2009.026507

Rastogi, P. N. (2003). The nature and role of IC. Rethinking the process of value creation and sustained enterprise growth. *Journal of Intellectual Capital*, *4*(2), 227–248. doi:10.1108/14691930310472848

Roos, G., & Roos, J. (1997). Measuring your company's intellectual performance. *Long Range Planning*, *30*(3), 413–426. doi:10.1016/S0024-6301(97)90260-0

Schiuma, G., Ordóñez de Pablos, P., & Spender, J. C. (2007). Intellectual capital and company's value creation dynamics. *International Journal of Learning and Intellectual Capital*, *4*(4), 331–341.

Sillanpää, V., Lönnqvist, A., Koskela, N., Koivula, U.-M., Koivuaho, M., & Laihonen, H. (2010). The role of intellectual capital in non-profit elderly care organizations. *Journal of Intellectual Capital*, *11*(2), 107–122. doi:10.1108/14691931011039633

Ståhle, P., Ståhle, S., & Pöyhönen, A. (2003). Analyzing organization's dynamic intellectual capital. A System-based theory and application. *Acta Universitatis Lappeenrantaensis, 152*.

Sveiby, K. (1997). *The new organizational wealth: Managing & measuring knowledge-based assets*. San Francisco, CA: Berrett-Koehler.

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, *68*(1), 1–17. doi:10.1509/jmkg.68.1.1.24036

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APPENDIX

Figure 1. A conceptual framework for illustrating the significance of IC in NPOs (adapted and combined from sources: Kong & Prior, 2008; Laihonen & Koivuaho, 2010)

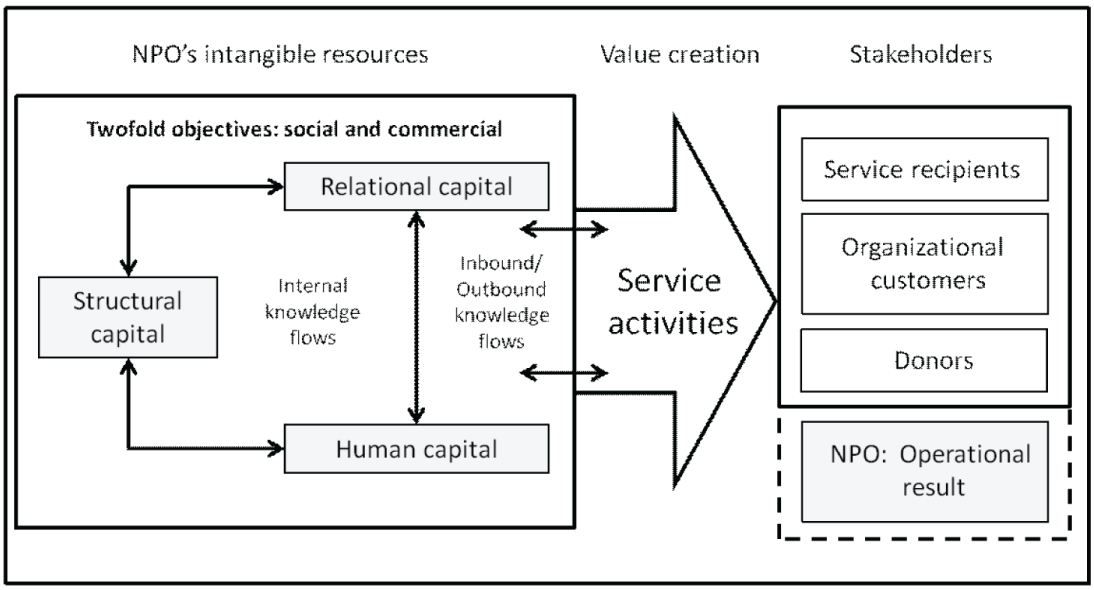

Figure 2. Steps of the research project

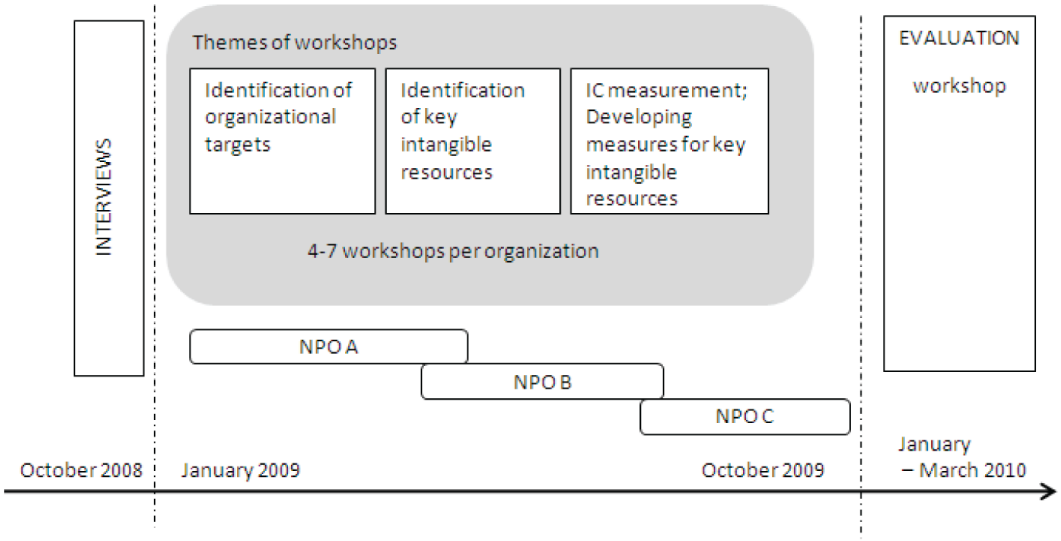

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Table 1. Dual objectives of case organizations

Organization	Socially driven objectives	Commercial objectives
NPO A	Good and dignified life: Capacity of the senior Happiness Quality of life	Financial success: Reasonable price Cost-efficiency Efficient capacity utilization
NPO B	Improving clients' abilities: Safe period of care Comprehensive rehabilitation Cutting off hospitalism	Commercial/financial success: Sufficient ratio of price to quality Success in competition Expanding the supply of services Efficient capacity utilization
NPO C	Strengthened seniors Reduction of loneliness; creating a good (customer) relationship, possibilities to be together with other seniors Satisfied voluntary worker: discovering communal spirit, meaningful activities, opportunities for social contribution	

Table 2. Key components of IC in case organizations

Human Capital	*Structural Capital*	*Relational Capital*
NPO A		
• Motivation • Competence Education Experience • Social skills, interaction skills • Organizational knowledge	• Values and leadership • Flow of information, Information systems • Processes • Working atmosphere • Distribution of tasks	• Customer relationships • Relations to partners • Reputation/Image
NPO B		
• Social skills, Interaction skills • Professional competence Level of education • Ability and willingness to cooperate • Personal characteristics • Attitude • Tacit knowledge	• Care and service processes • Working environment • Values • Management culture and processes • Documented information	• Reputation • Customer relationships: individuals, organizations • Relations to owner • Co-operative agreements • Image as an employer • Communication, marketing
NPO C		
• Personal characteristics • Professional competence • Social skills • Attitude • Tacit knowledge	• Values • Management culture • Working environment • Processes and systems • Documented information	• Volunteers • Brand • Strategic partners • Sponsors (organizations, individual donors) • Campaigns

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PAPER IV

Jääskeläinen, A., Sillanpää, V. (2013)

Overcoming challenges in the implementation of performance measurement - Case studies in public welfare services

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Overcoming challenges in the implementation of performance measurement

Case studies in public welfare services

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Abstract

Purpose – The paper aims to evaluate factors affecting the success of the measurement system implementation in the context of two case services with a specific measurement object – productivity.

Design/methodology/approach – Interviews with the users of new measurement systems are used to obtain information on the role of known technical and organizational success factors supporting measurement system implementation.

Findings – Two key factors were found to affect the success of the measurement system development project. First, the commitment of the operative level was achieved. Second, the chosen measurement tool was suitable for the identified managerial requirements of the organization.

Research limitations/implications – In order to improve external validity, it would be useful to assess the implementation of measurement systems with a similar approach in different organizations. Could the positive results described in this study be replicated?

Practical implications – The practical implications of this study are twofold. First, the study describes a potential and fresh approach towards measurement of performance and productivity in public organizations. Second, the experiences described can assist public managers to avoid pitfalls in the implementation of measurement systems.

Originality/value – Various challenges in developing measurement systems in the public sector context are well studied. It is important to better understand how to overcome the problems. In comparison to many existing studies, this research provides more specific and detailed knowledge related to a successful development project.

Keywords Change management, Development project, Performance measurement, Productivity, Public service, Public sector organizations, Finland, Performance management systems

Paper type Research paper

1. Introduction

Many public organizations have implemented performance measurement systems since the 1990s. Functional performance measurement systems are powerful managerial tools by offering quantitative and compact information supporting decision-making. There is evidence of successful implementation of performance measurement systems (Wisniewski and Olafsson, 2004). Still today too many projects

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fail and the development work is wasted. This reflects in the many studies reporting various challenges and reasons for not being successful in developing measurement systems (Poister and Streib, 1999; Wisniewski and Stewart, 2004; Rantanen *et al.*, 2007). Technically perfect systems are useless if they are not integrated into organizational management and structures. Despite the extensive implementation of measures, measurement culture is still in its infancy in public organizations (Fryer *et al.*, 2009).

There is a need to learn more about the best practices for implementing performance measurement. More specific knowledge and empirical experience is needed. This study aims to contribute to the prior discussion by examining measurement system development for a specific purpose (productivity monitoring and improvement) in a specific context (public welfare services). Productivity (ratio between output and input) is a key success factor for any organization and can be seen as an essential part of organizational performance. However, performance measurement systems in the public sector do not often specifically address issues related to productivity (Hodgkinson, 1999). Productivity is rather problematic as a concept since it is plagued by a negative image. Employees commonly link productivity development to the cutting of costs and laying off of employees, although productivity can also be improved by improving outputs and processes. Productivity measurement in the public sector can be criticized for not capturing the unique characteristics of services. Service productivity models address aspects of service quality alongside with traditional efficiency perspective (e.g. Grönroos and Ojasalo, 2004). In any case, developing measurement with the aim of productivity improvement can be especially demanding from the point-of-view of implementation.

The objective of this study is to evaluate the success factors of a measurement system implementation in the context of two public welfare services. In addition to the main objective, the functionality of the matrix method in the public sector productivity and performance measurement is examined. An early application of the matrix method was carried out by Riggs (1986). The method has been applied in many industries (Dervitsiotis, 1995). However, there are few reported studies on its application, especially in the public sector.

The paper starts with a literature review which acts as a basis for an interview study. The empirical study is related to a productivity measurement system development project carried out in the Social Services Department of the City of Helsinki (Finland) during 2007-2008. New measurement systems for child day care and elderly care were developed. Since the work created a fairly positive attitude towards productivity measurement as opposed to earlier experiences over several decades, it was deemed worth investigating what had been done differently.

2. Literature review

2.1 Challenges in developing performance measurement systems

The adoption of performance measurement systems is a change which may entail several challenges. These challenges can be examined from different perspectives. According to Lönnqvist (2004), designing a performance measurement system involves choosing measurement objects and defining measures, whereas the phase of taking measures into use can be referred to as implementation. Each phase has its own specific characteristics.

The designing of performance measurement systems is a key phase and the foundation for implementing and using the measures (Lönnqvist, 2004). Some general challenges in the design phase relate to the difficulty of identifying the linkages between measures, poorly defined measures, the time and expense involved, the measurement of qualitative phenomena and striving for perfection (Bourne *et al.*, 2003). There are many context-specific technical challenges in measuring qualitative aspects of public service provision (Gupta, 1995). According to Rantanen *et al.* (2007), the key challenges in designing performance measures in public organizations relate to the difficulties in solving the conflicts between the needs of various stakeholders and the difficulties in target setting. For example, different stakeholders may have varying opinions on the purpose for measurement (e.g. monitoring, reporting, strategic management, benchmarking) which all represent a specific set of requirements for performance measures (Vakkuri and Meklin, 2006; Wisniewski and Stewart, 2004). This may result in a substantial number of measures, which, in turn, impairs the usefulness of the systems (Rosen, 1993).

The implementation of measurement systems is a critical phase which has its own obstacles such as obscure language (Coate, 1993), mistrusts of measurement, lack of credibility and usefulness (Cavalluzzo and Ittner, 2004), lack of standards and timeliness, substantial investment of time and resources (Pollanen, 2005) and lack of highly-developed IT systems (Chan, 2004; Cavalluzzo and Ittner, 2004). Rantanen *et al.* (2007) have perceived that:

- the personnel does not understand the objectives of measurement development;
- too many responsible persons leads to non-responsibility;
- the personnel does not understand the usefulness of the project and ignores or resists it/
- overlapping projects hamper the measurement project because they take up resources.

In addition to the significant number of studies on the challenges in performance management system development there are also studies on the means for overcoming the challenges. The following section presents the current knowledge on the issue with special reference to management systems implementation.

2.2 Means for overcoming the implementation challenges

Lönnqvist (2004) and Kasurinen (2002) have identified two tasks in implementing performance measurement systems. Organizational implementation refers to informing personnel on the measurement, training them in using performance measurement, obtaining commitment among personnel and testing the measurement system in practice. Technical implementation, on the other hand, is related to the content of a measurement system and the creating of an appropriate information system. Hence, from the technical point-of-view success in the design phase is essential, whereas in the organizational implementation issues related to change management are in the spotlight.

The measurement system, as such, may be evaluated from the perspectives of reliability (consistency of the measurement results), validity (the ability to measure what it is intended to measure), practicality (benefit-burden ratio) and relevance (usefulness of the measurement results for the users of the measures) (Hannula, 2002).

The often stressed technical success factor of any performance measurement effort is functional information systems (Nudurupati *et al.*, 2010).

One of the main reasons for the failure of performance measurement system development projects is the sole emphasis on the top level of an organization (Kaplan, 2001). It is hard to empower employees to a change process with a top-down, authoritarian management style (Coate, 1993). It is vital to crush the resistance among middle management in order to achieve success in performance development efforts (Chan, 2004; Rosen, 1993). Performance measurement mandated organizational top-down by political decisions is likely to be symbolic with limited use and influence on internal operations (Cavalluzzo and Ittner, 2004).

Communication with the employees is an essential task throughout the change process (Zimmerman, 1995). Communication can be related to the rationale for making the changes and factors that will be affected (and factors not affected). In addition, it includes listening to the concerns of employees. (Robbins, 2002) Committing employees is a key part of a successful change process. Performance measurement systems in the public sector are often designed by individuals other than their actual users (Vakkuri and Meklin, 2006). User participation to measurement system development has been noted to improve the commitment towards performance measurement (Likierman, 1993).

Ferlie and Bennet (1992) stress the role of change agents in implementing changes. Change agents are the early learners transmitting their energy, enthusiasm and knowledge to others both directly and through symbolic activity of various kinds. In the discussion of the performance measurement system design process, the role of facilitator has been emphasized (Wouters, 2009). Finally, in implementing any management system it is also necessary to obtain support from the top (Coate, 1993).

2.3 Summary

There are several quite well known challenges hampering the implementation of measurement systems in public organizations. There are also many factors in the prevailing literature which have been argued to improve the possibilities of success in implementing measurement systems (Table I).

The factors listed in this section may be regarded as criteria for the successful implementation of performance measurement systems. If an organization masters all these factors the chances of success should be quite high. Therefore, these factors are used as a basis in the empirical examination of this study. The main interest is in examining how these factors may be taken into account in practice in developing measurement systems.

Table I.
Factors affecting success in performance measurement system implementation

Technical factors	Relevance of the system
	Validity of the system
	Reliability of the system
	Practicality of the system
	Functionality of IT systems
Organizational factors	Committing the employees and middle management
	Communication with employees and middle management
	Participators of development work (e.g. facilitators)
	Getting the support from the top management

3. Empirical examination

3.1 Description of the context and measurement system development project

This study relates to a productivity measurement system development project carried out during 2007 and 2008 in the City of Helsinki, Finland. The starting point for the development work was the deficiencies identified in the previous measurement system, which was developed in the early 1990s. The previous system provided information on the productivity trend of a large organizational entity (e.g. the whole department). According to the earlier perceptions, the specific deficiencies of the system were related to the lack of relevance from the point-of-view of operational management.

Social Services Department and its two high-volume services (child day care and elderly care) were chosen as a pilot context for productivity measurement development project for two reasons. First, the department is very significant from the point-of-view of productivity – it is clearly the largest in Helsinki (and also in Finland) and consumes an essential part of the financial resources. There are 12,000 employees in the Social Services Department with an annual expenditure of €1,000 million. Second, it was regarded that there were most challenges in the productivity measurement social services and if these challenges would be solved the new knowledge could be applied in other departments.

It was decided that the development work should begin from the operative level. In this way it would be possible to take the specific characteristics of the services into account and to gain more managerial relevance. Operative level measures would later be the starting point for aggregations in order to calculate productivity figures for the upper organizational levels. This approach reflects the idea of so called component productivity measures suggested for complex service operations (McLaughlin and Coffey, 1990).

A working team was selected from both two pilot services. Both teams included an external facilitator (one of the authors) and four to five persons (managers, analysts, controllers and statistical experts) from the case organization. The actual design work was carried out in workshop events. Both working teams developed their own measurement systems during a period of 20 months. In both cases, ten workshops were needed in order to achieve a satisfactory result (tested measurement system ready for use). Prior to starting the actual work, the main phases and tasks in the measurement system development were communicated to the representatives of the case services (see change plan). The detailed steps of the development work are described in Figure 1.

The external facilitator presented different measurement approaches from the literature, asked questions and directed the discussion as well as the design work. He also carried out most of the test calculations. The chosen framework for measurement was a so-called productivity matrix (see Appendix 1 – Table AI). In the matrix method, a set of direct and indirect productivity measures are used to compose a single measurement result. Every measure has its own weight (0-100) in the calculations. In a traditional application of the matrix, the expected values of different measures are scaled in order to produce a score from 0 to 10 for each measure. By first multiplying the score of each measure by the weights and then summing up the results, the matrix produces a total score from 0 to 1000.

The matrices developed in the case services of this study include five to six measures related to aspects of efficiency and service quality. Not everything was changed at once but existing information and systems was utilized whenever possible.

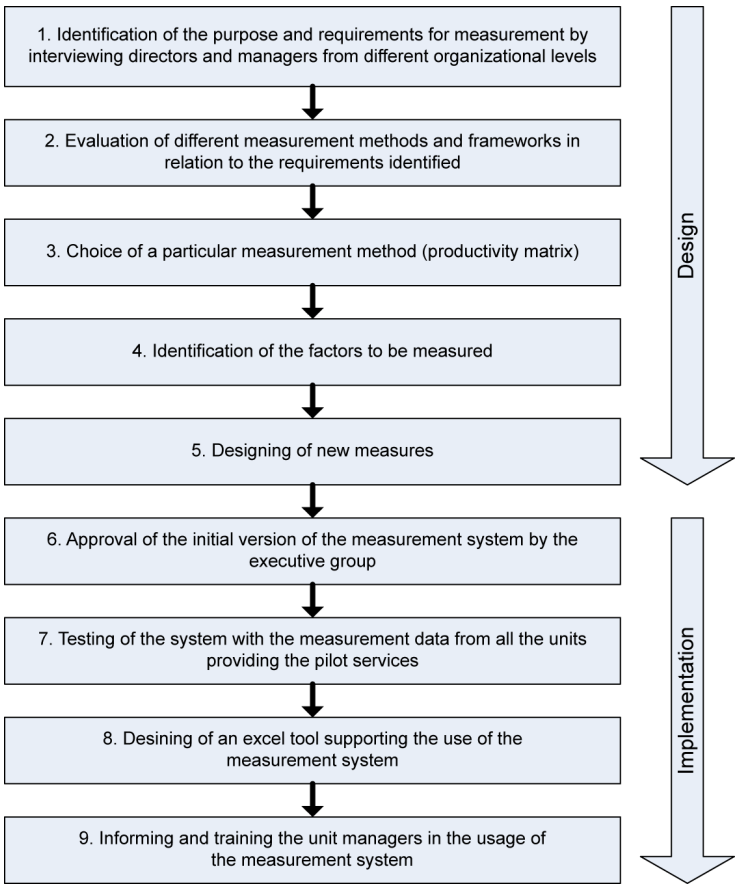

Figure 1.
Steps in the development process

Scales were defined in a way that an average unit would get a score of 4. The matrix method was not commonly known in the case organization prior to the development project. In addition to the extended examination of productivity, a key difference between the new and old approach of productivity measurement relates to the examination of smaller organizational entities (single services).

3.2 Data and methods

Ten persons working in the case organization were interviewed individually in spring 2009. The duration of one interview was approximately one hour. The respondents had been involved in the measurement system development project and therefore most of them knew the details well. In addition, the interviewees had been involved in informing and training hundreds of unit managers about the new measurement approach and possessed good knowledge from the field. The respondents were managers on various levels, controllers and analysts. At the time of the interviews, the matrix had only been used to a limited extent. However, the respondents already possessed an adequate amount of experience due to the extended implementation phase. Since the new approach to measurement had received positive feedback and

was already being implemented to other services, the chosen cases were deemed worth to be studied already four months after the development work was finalized.

The 22 questions of the semi-structured interviews (see Appendix 2) were defined on the basis of the results of the literature review. A set of factors supporting implementation of measurement systems was chosen. Due to the extent of some factors more than one question per factor was used. The interviewing was carried out by a researcher who had not been involved in the development of the measurement systems. The interview data was recorded and transcribed. The answers were classified by the authors with the method of classification (Bryman and Bell, 2007) in relation to the factors summarized at the end of the literature review. This may be referred to as theory-based qualitative content analysis (Krippendorf, 1980). The analysis was based on the assessment of both authors. The results of analysis were sent to the representatives of the studied organization. They were discussed and commented in the meetings of the steering group of the research and development project. In this phase, no major changes to the analysis or results occurred. However, this improved the interpretation level of the observations since the analysis was not solely done by the researchers.

3.3 Results

3.3.1 Technical factors. Relevance. Matrix was considered a promising way of measuring productivity among respondents. According to one respondent (one of the coordinators in the project) "it is a decidedly positive thing". The matrix was considered a managerial tool, especially for the operative (unit) level. This view became evident in all interviews. The matrix supports management by giving information about the unit: the level of different factors and how things are developing. It assists in setting targets and planning development actions and enables comparison between different units.

When respondents were asked how the new measurement system differed from the old one, two respondents stated "like day and night". The matrix has a wider perspective towards productivity, which was considered the most essential difference between the systems. The new systems are fundamentally different regarding perspectives and the utilization options. In the new system, unit managers are able to control the productivity development of their units, which was not possible in the old system. Implementation of the new measurement system had opened discussion about factors affecting the productivity and correlations between different factors. According to one respondent, some issues were easier to address at the time of the interviews, since the new measurement system had made them more visible.

Validity and reliability. According to the respondents, the validity of the measurement system is at a relatively good level. Most of them reported that the matrix covered substantial factors related to the productivity of operations. The actual validity of the measures will become evident only after a couple of years. Few respondents perceived deficiencies related to aspects of quality, effectiveness and human resources (e.g. competencies of the personnel are not captured). This may have something to do with the fact that people tend to understand the concept of productivity in different ways.

Respondents were asked to assess the reliability of the measurement system and consider problems or challenges (e.g. possibilities of manipulation) related to the reliability of the system. None of the respondents considered manipulation of results a

substantial reliability risk. The risk of manipulation was reduced by selecting such measures for the matrix that are received straight from the information systems. On the other hand, many of the respondents did not believe that anyone would even try to manipulate the results, since the organization stores measurement data for many years and manipulation would easily show up.

Challenges to the reliability of measurement relate mainly to the data in information systems. Data registration practices change over time, and all changes should be documented, otherwise the results cannot be comparable. According to a few interviewees, the importance of registration practices is possibly not understood well enough at the unit level. Some respondents also perceived a lack of competence in registration practices among personnel as a problem in units. In the future, a detailed guideline for using the matrix and generating measurement results will be needed in order to ensure the reliability of results.

Practicality. At the time of the interviews, the matrix was considered fairly laborious, since part of the data had to be entered manually into the matrix. It therefore requires more work than the traditional system. According to one respondent, organizing the utilization of the matrix was a challenge. It should be decided who coordinates the matrix, shares tasks etc. All the respondents considered the accounting principle of the matrix to be easy to understand after the idea of the matrix had been presented. The visual form of the matrix was considered a practical benefit of the system, since it enables managers to control the values of central measures at a glance.

Functionality of IT systems. According to the respondents, IT systems have a crucial role in the implementation of the new measurement system. An excel-based solution was temporarily used for the matrix. It was perceived as a good tool that reduced manual work, but which would not be sufficient in the future. In the future the aim will be to get automated data collection from data base to matrix without manual work. Deficiencies in the IT systems that complicate the overall reporting appeared to be a general challenge in the organization.

3.3.2 Organizational factors. Committing and communicating the middle management. The new measurement system was positively received by middle management (unit managers). The measures in the matrix had raised some discussion among managers (e.g. why some measures were selected and not others), but there had been no active negative criticism of the new measurement system.

Factors positively affecting the acceptance of the measurement included validity of measures, familiarity of measures and the broad perspective on productivity produced by the matrix. The matrix provides new uses for the measurement information: it enables target setting at the unit level and comparison between different units. Representatives of unit managers participated in the development work from the outset, and the views of unit managers external to the working teams were also taken into account by collecting comments from colleagues during the development work. All unit managers agreed that the purpose of the matrix (a managerial tool for the unit managers) was a significant factor in promoting the system at the unit level.

The principle of measurement in the matrix (only factors that the unit is able to affect are included) was also considered a positive factor promoting the system. The principle of measurement stemming from the unit level was considered essential in general. According to one respondent "You cannot succeed if you don't succeed at the unit level".

Briefings and training sessions had been held for unit managers. However, the respondents agreed that more training was needed. The managers had received basic information on the measurement system and the measurement results of their own units but advanced training in utilizing the matrix as a managerial tool was still missing. The next step should also be the informing of unit employees since the majority of them were not aware of the use and details of the matrix.

Participators of development work. Respondents were asked how successful the working team was regarding both the composition of the team and the cooperation of various types of experts in the team. The compositions of teams were typically considered successful. According to one respondent: "we had just the right people in the right place". Due to the relatively small size of the teams and the various types of experts as team members, fruitful discussion was generated. The expertise, motivation and commitment of team members were considered essential success factors of the teams. The role of the external facilitator was also considered focal for the success.

Cooperation between team members was considered successful in both teams. Positive and open atmosphere, willingness to cooperate, discipline in the team, motivation and interaction in the team were factors conducive to cooperation. Team members with different backgrounds and competences complemented each other well and the opinions of each participant were appreciated in the team. According to one respondent, familiar team members enhanced cooperation.

Getting the support from the top management. The initiative for the project came from the top level. Almost all the respondents agreed that top management was well committed to the project. The project had been chosen as one of the top projects in the department. It had been presented a few times in the executive group and discussed regularly among top management. Upper level managers also commented on the measures and their views were included in the matrix.

3.4 Analysis of the results

The project created a positive attitude towards productivity in the organization. Unit managers were really eager to see and compare the measurement results in the training sessions. Discussion on the causes of the results and the differences between the units started immediately. This was exceptional since productivity measurement was traditionally regarded as something negative. In addition, the measurement system was intended to be taken as an essential part of the reward system which may reflect the satisfaction with the end result. Since the matrix development work in the case services of this study, the development work has been expanded to more than ten other services in the case department with the same framework.

What was it then that yielded the positive result? One general issue was external facilitation which provided extra resources for the task. In these two cases, external expertise was needed especially in the technical issues of the development work (e.g. various measurement methods available). In addition, external facilitation provided frames for the development with schedules, phases and steps. Hence, some of the potential problems such as lack of time or change plan were at least partly removed.

The most essential issues, however, may be condensed into two points. First, the commitment of the operative level was achieved. Due to earlier experiences, it was decided that the focus should be on the operative level, which certainly supported the

task. In addition, the composition and the atmosphere in the development teams were factors assisting the work. The work would have not succeeded without individual power figures facilitating the work and ensuring that certain tasks were done on time.

In contrast to the development of the previous system, representatives of the services participated the design process and were given an opportunity to influence the result as well. This seemed to be an important factor facilitating the project. A potential risk in the approach chosen could be that productivity is measured in a way that is favorable from the perspective of operative managers but not from the perspective of the whole organization. This risk must be acknowledged even though it should not be a real problem when the measurement systems are approved by upper level managers.

According to the respondents, the technical criteria of the measurement system such as validity, reliability and practicality were fulfilled fairly well, which was a reason for the organizational commitment. Finally, training related to the measurement system was received positively by the operative managers, which will certainly also have an essential role in the future use of the measurement system.

The second key reason for the success was the fulfillment of managerial requirements in the organization. A measurement system that could be used by operative management was needed. The detailed managerial requirements such as the opportunity to compare similar units, the possibility to utilize information from existing measures and the controllability of the factors measured were identified early on. From various options a conventional one was dismissed. Instead, a matrix method was chosen since it was considered to satisfy the requirements well. The matrix provided more systematic analysis for the measurement results as well as focused and condensed information. In the application of the matrix method the managerial needs were taken into account, e.g. by paying attention to the measurement of service quality. Also Hodgkinson (1999) has addressed that ignoring quality in the evaluation of public services may impair the motivation to improve productivity. It was also necessary to gain the approval of the executive group representing the views of top management. Even though the matrix method was considered a non-traditional way of productivity measurement, the functionality in the purposes of operative management was seemingly a crucial issue. Finally, the comprehensive testing of the systems supported the fulfillment of some managerial requirements such as comparison between similar units.

Table II summarizes the key results of this study by presenting different tasks that facilitated the development work. It should be noted that quite many of them were accomplished early in the design work (see Figure 1). They are related to both technical and organizational factors (see Table I) but it could be argued that organizational factors related to change management were even more important.

Finally, it should be noted that the work was not yet over at the time of the interviews. For example, detailed instructions, more training as well as improved IT systems are still needed. The main challenge was related to the IT systems in the organization. At the time of the interviews, some of the information for the matrix was entered manually, since the information systems were inadequate. Another challenge was related to the measurement at the upper levels of the organization. The new measurement approach had just been introduced at the operative level, the next step was planned to be the application of the new ideas at the upper levels of the organization (which still applied old practices). According to one respondent, the old and new systems are not mutually exclusive when productivity at the upper levels of

Commitment of the operative level	Measurement system suitable for managerial requirements
Choice of an approach focusing on the operative level	Identification of managerial requirements
Composition of the working team	Evaluation of several potential measurement methods
Taking the views of operative management into account	Choice of a method most suitable for the needs without restrictions
Functionality of the measurement system	Keeping the requirements for measurement in mind in applying the chosen method
Informing and training operative managers	Gaining approval from the executive group
	Comprehensive testing of the system

Table II.
Summary of factors affecting the success of development work

the organization is examined. Many of the managers were still waiting for further training on the new measurement system. A complete implementation of a new measurement system in such large organizations requires time and resources. Patience and support from the top were still needed in order to carry out all the tasks needed properly.

4. Conclusions

This study analyzed measurement system development project from the perspective of known success factors. According to the results, there were two key aspects affecting the success of the project. First, the commitment of the operative level was achieved. Second, the measurement tool (matrix) was suitable for the managerial requirements of the organization. This study highlighted the positive aspects in the measurement system implementation project. It should be noted that there were also difficulties. For example, the measurement of service outputs and quality was a challenge that needed compromises. Measurement of quality and outcomes has been regarded as a greatest technical challenge in performance measurement of public services (Poister and Streib, 1999).

In general, there are numerous studies on the factors affecting the success of measurement system development. The key contribution of this research relates to the specific purpose and setting. Productivity measurement system development in the context of public welfare services is challenging both technically and in terms of adopting and implementing the system. The experiences described demonstrate that it is possible to avoid many of the known pitfalls by approaching the issue organizationally bottom-up. This enables the development of a measurement culture and the familiarization of the personnel with the issue. In addition, the actual technical measurement system is likely to be more functional and useful for managerial purposes.

There are limitations in this study which also open up paths for further research. It would be useful to assess the implementation of productivity measurement systems in different public organizations. Could the results described in this study be replicated? The services examined in this study were fairly similar – different contexts may pose also different challenges. Some specific features of Nordic public sector, most notably egalitarianism and incremental change efforts (see Johnsen *et al.* 2006) may have had

some effect on the observations of this study. In addition, the starting point of the studied organization was rather advanced. In some other (possibly smaller) organizations with less history of performance measurement and with a lack of available measurement data, much more time may have been required for designing new measures and deciding on the measurement scales to be used.

The respondents of this study represented the view of managers (main users of measurement systems) – the view of operative employees was not studied. The study was not able to obtain understanding on the possibly conflicting views of different personnel groups. Finally, this study examined the result of the project fairly soon after the design work was completed and therefore yielded information on implementation of measurement. It would be fruitful to assess the situation after a few years in order to obtain knowledge on the usage of new measurement systems. What impacts have been achieved, have there been any concrete changes in certain operations? For example, some issues related to IT system development and changes in organizational structures unveiled after this study was carried out.

References

Bourne, M., Neely, A., Mills, J. and Platts, K. (2003), "Implementing performance measurement systems: a literature review", *International Journal of Business Performance Management*, Vol. 5 No. 1, pp. 1-24.

Bryman, A. and Bell, E. (2007), *Business Research Methods*, 2nd ed., Oxford University Press, Oxford.

Cavalluzzo, K.S. and Ittner, C.D. (2004), "Implementing performance measurement innovations: evidence from government", *Accounting, Organizations and Society*, Vol. 29 Nos 3-4, pp. 243-267.

Chan, Y. (2004), "Performance measurement and adoption of balanced scorecards – a survey of municipal governments in the USA and Canada", *International Journal of Public Sector Management*, Vol. 17 No. 3, pp. 204-221.

Coate, E. (1993), "The introduction of total quality management at Oregon State University", *Higher Education*, Vol. 25 No. 3, pp. 303-320.

Dervitsiotis, K.N. (1995), "The objectives matrix as a facilitating framework for quality assessment and improvement in education", *Total Quality Management*, Vol. 6 Nos 5/6, pp. 563-570.

Ferlie, E. and Bennet, C. (1992), "Patterns of strategic change in health care: district health authorities respond to AIDS", *British Journal of Management*, Vol. 3 No. 1, pp. 21-37.

Fryer, K., Antony, J. and Ogden, S. (2009), "Performance management in the public sector", *International Journal of Public Sector Management*, Vol. 22 No. 6, pp. 478-498.

Grönroos, C. and Ojasalo, K. (2004), "Service productivity: towards a conceptualization of the transformation of inputs into economic results in services", *Journal of Business Research*, Vol. 57 No. 4, pp. 414-423.

Gupta, A. (1995), "Productivity measurement in service operations: a case study from the health-care environment", *Managing Service Quality*, Vol. 5 No. 5, pp. 31-35.

Hannula, M. (2002), "Total productivity measurement based on partial productivity ratios", *International Journal of Production Economics*, Vol. 78 No. 1, pp. 57-67.

Hodgkinson, A. (1999), "Productivity measurement and enterprise bargaining - the local government perspective", *International Journal of Public Sector Management*, Vol. 12 No. 6, pp. 470-481.

Johnsen, Å., Norreklit, H. and Vakkuri, J. (2006), "Introducing a Nordic perspective on public sector performance measurement", *Financial Accountability & Management*, Vol. 22 No. 3, pp. 207-212.

Kaplan, R.S. (2001), "Strategic performance measurement and management in nonprofit organizations", *Nonprofit Management & Leadership*, Vol. 11 No. 3, pp. 353-370.

Kasurinen, T. (2002), "Exploring management accounting change: the case of balanced scorecard implementation", *Management Accounting Research*, Vol. 13 No. 3, pp. 323-343.

Krippendorf, K. (1980), *Content Analysis: An Introduction to Its Methodology*, Sage, Newbury Park, CA.

Likierman, A. (1993), "Performance indicators: 20 early lessons from managerial use", *Public Money & Management*, Vol. 13 No. 4, pp. 15-22.

Lönnqvist, A. (2004), "Measurement of intangible success factors: case studies on the design, implementation and use of measures", Doctoral dissertation 475, Tampere University of Technology, Tampere.

McLaughlin, C.P. and Coffey, S. (1990), "Measuring productivity in services", *International Journal of Service Industry Management*, Vol. 1 No. 1, pp. 46-64.

Nudurupati, S.S., Bititci, U.S., Kumar, V. and Chan, F.T.S. (2010), "State of the art literature review on performance measurement", *Computers and Industrial Engineering*, Vol. 60 No. 2, pp. 279-290.

Poister, T.H. and Streib, G. (1999), "Performance measurement in municipal government: assessing the state of the practise", *Public Administration Review*, Vol. 59 No. 4, pp. 325-335.

Pollanen, R. (2005), "Performance measurement in municipalities: empirical evidence in Canadian context", *International Journal of Public Sector Management*, Vol. 18 No. 1, pp. 4-24.

Rantanen, H., Kulmala, H.I., Lönnqvist, A. and Kujansivu, P. (2007), "Performance measurement systems in the Finnish public sector", *International Journal of Public Sector Management*, Vol. 20 No. 5, pp. 415-433.

Riggs, J.L. (1986), "Monitoring with a matrix that motivates", *Performance Management Magazine*, Vol. 4 No. 3, pp. 13-19.

Robbins, S.P. (2002), *Essentials of Organizational Behavior*, 7th ed., Prentice Hall, Upper Saddle River, NJ.

Rosen, E.D. (1993), *Improving Public Sector Productivity – Concepts and Practice*, Sage, Newbury Park, CA.

Vakkuri, J. and Meklin, P. (2006), "Ambiguity in performance measurement: a theoretical approach to organisational uses of performance measurement", *Financial Accountability & Management*, Vol. 22 No. 3, pp. 235-250.

Wisniewski, M. and Olafsson, S. (2004), "Developing balanced scorecards in local authorities: a comparison of experience", *International Journal of Productivity and Performance Management*, Vol. 53 No. 7, pp. 602-610.

Wisniewski, M. and Stewart, D. (2004), "Performance measurement for stakeholders – the case of Scottish local authorities", *International Journal of Public Sector Management*, Vol. 17 No. 3, pp. 222-233.

Wouters, M. (2009), "A developmental approach to performance measures – results from a longitudinal case study", *European Management Journal*, Vol. 27 No. 1, pp. 64-78.

Zimmerman, J.H. (1995), "The principles of managing change", *HR Focus*, Vol. 72 No. 2, pp. 15-16.

Appendix 1

Measurement result	Unit cost for weighted care day, €	Customer satisfaction of parents (survey result 1-5)	Number of children per number of employees	Degree of utilization of premises (%)	Percentage of S2 children	Rate of short sickness absences of employees (%)
10	35.00	4.40	5.7	100	40	2.0
9	35.50	4.37	5.6	99	36	2.5
8	36.00	4.34	5.4	98	32	3.0
7	37.00	4.31	5.2	97	28	3.5
6	38.00	4.28	5.0	96	24	4.0
5	39.00	4.24	4.8	94	20	5.0
4	40.00	4.20	4.6	92	16	6.0
3	42.00	4.10	4.4	90	12	7.0
2	45.00	4.00	4.2	85	8	8.0
1	48.00	3.80	3.9	80	4	9.0
0	52.00	3.60	3.6	75	0	10.0
Score						
Weight	45	15	15	15	5	5
Weighted score						
Total score						

Table AI. Example of a matrix-based measurement system

Appendix 2. The interview structure

Part I – Technical factors affecting implementation

(1) Relevance of measures:
- How would you describe the relevance of chosen measurement approach from the perspective management?
- What are the most central benefits and uses of the new measurement system?
- Have you utilized the matrix measurement? If yes, how?
- How does this measurement system differ from the previous?

(2) Validity and reliability of measures:
- Does the measurement system offer essential information about productivity?
- How do you consider the reliability of the new measurement system? What challenges there are?

(3) Practicality of measures:
- Do you consider the measurement system as a laborious accounting approach?
- Is the accounting principle of the matrix easy to perceive?

(4) Functionality of IT systems:
- What was the role of IT-systems in the implementation of the measurement system?

Part II – Organizational factors affecting implementation

(1) Committing the middle management:
- How did the unit managers receive the new measurement system? How did they comment on it in the training?

- What factors affected the positive/negative acceptance of unit managers?
- How did the purpose of use of the measurement system (tool for the unit managers) affect the promotion of the system?
- How did the chosen principle of measurement (including only factors that can be affected) affect the promotion?

(2) Communication with middle management
- Were unit managers' opinions taken into account in the measurement solution? If yes, how?
- Did unit managers receive enough training to utilize the measurement system?
- Are all managers and employees in units aware of the purpose of use of matrix and details related to use of it?

(3) Participators of development work:
- Was the composition of the working team successful?
- How did the cooperation of various types of experts in the team succeed? What promoted or hindered it?

(4) Getting the support from the top management:
- Was the top management committed to the project? If yes, how was the commitment achieved?
- Was the top management's opinion taken into account in the measurement solution? If yes, how?

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PAPER V

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Measuring the impacts of welfare service innovations

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Measuring the impacts of welfare service innovations

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Abstract

Purpose – Earlier research highlights the need for the welfare service sector to measure the impacts of their services. However, it seems that the welfare services lack measures to show their long-term effects and impacts. This paper aims to present a framework to measure the multidimensional impacts of welfare service innovations and report the empirical results from two case studies.

Design/methodology/approach – In the first part of the paper, the impact measurement literature is reviewed and a framework for measuring the impacts of welfare services is presented. The empirical part of the paper reports the application of the framework in two cases for measuring the impacts of interventions in welfare services in Finland. The aim of the case studies was to assess and illustrate the usefulness of the framework designed.

Findings – The framework proposed in the research may serve as a practical tool for decision-makers for assessing the impacts of different services and service innovations in the welfare service sector. This type of assessment is needed, for example, when new service innovations are designed and budgeted for.

Originality/value – This research introduces a framework for measuring the impacts of welfare services at different levels. In addition, the paper provides information about the measurement process and challenges related to the implementation of impact measurement.

Keywords Performance measurement, Impacts, Welfare services, Public sector, Performance measures, Public sector organizations, Welfare

Paper type Research paper

1. Introduction

Existing research highlights the need for the welfare service sector to measure the impacts of their services (e.g. Linna *et al.*, 2010; Sillanpää, 2011). Basically, the success and performance of welfare services can often be defined only on the basis of their long-term effectiveness (e.g. Porter, 2010; Lönnqvist and Laihonen, 2012). However, it seems that welfare services lack measures to demonstrate the various long-term effects and impacts of their operations.

Welfare services aim at satisfying customer needs for health care, social services and education. Because welfare services are mainly financed by public funds, the main challenge regarding welfare services for public administration is to decide how to use scarce resources in order to produce effective services for clients, i.e. how to use limited public funds as efficiently as possible. Because of this productivity challenge, new innovations in the welfare service sector are sought. The development of new services and service provision models entails the consideration of two focal aspects: to develop services that have a positive effect on the well-being of clients, and to produce services without wasting public money. Service innovation aims to capture both of these aspects. Measuring the impacts of service innovation is crucial in order to assess how new services meet these requirements and their effects at the service system level. Decision makers need information on the impacts of different service options in order to compare solutions in service provision and select the most effective ones. The aim of this research is to

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design a framework for measuring the impacts of welfare service innovation and to evaluate its functionality in two empirical cases.

In the first part of the paper, a literature review recaps the existing knowledge on impact measurement in welfare services. Next, a framework for measuring the impacts of service innovation in welfare services is constructed. In the empirical part the framework is applied in two cases for measuring the impacts of interventions carried out in welfare services in Finland. The first case describes measuring the impacts of a new service model designed for homeless people, and the second one describes the measurement of the impacts of the deinstitutionalization of disabled people. The aim of the case studies was to empirically evaluate the usefulness of the designed measurement framework and to learn about the actual impacts achieved by these new services.

2. Literature review

2.1 Factors related to impact measurement in welfare services

In Finland, as in many other countries, welfare services are mainly financed by the public sector and provided either by their own units or in co-operation with non-profit and for-profit organizations. Welfare services include health care, education, and social services (OECD, 2000). The context of welfare services is characterized by tax-based funding, multiple stakeholders, non-profit orientation, increasing demand, and customer expectations (e.g. Lönnqvist and Laihonen, 2012; Conaty, 2012; Sillanpää *et al.*, 2010). In the past two decades there have been significant changes in the public sector worldwide. Now public sector organizations are expected to be managed more like businesses, to be customer oriented, more focussed on outputs and outcomes rather than inputs, and to become more efficient and effective (Hoque, 2008; Jansen, 2004).

The literature divides the performance of welfare services into four elements: inputs/resources, throughputs/processes, outputs, and outcomes/impacts (see e.g. Jansen, 2004; Jääskeläinen, 2010; Packard, 2010; Sillanpää, 2011). In these models inputs/resources refer to tangible, intangible, and financial resources that are prerequisites for organizations to perform their tasks, e.g. employees, facilities, and financial resources. Processes relate to the production of services and include, e.g. management and customer service processes. Outputs refer mainly to the quantitative results of organizations' operations, like number of care days provided/clients served, whereas outcomes/impacts refer to qualitative, in many cases intangible longer term effects resulting from outputs, like changes in clients' health and well-being. Impacts may also be considered as all changes resulting from an activity or organization, both intended and unintended, negative and positive, and long- and short-term effects (Dawson, 2010). Performance can be examined from different aspects; as the actual results of activities, or how an activity is carried out, or as an organization's ability to achieve results in the future (Lönnqvist, 2004).

In welfare services, success and performance can be defined according to their long-term effectiveness (Porter, 2010; Lönnqvist and Laihonen, 2012), which highlights the need for impact measurement. In practice, managers of welfare services consider the outcomes/impacts to be a focal part of the performance. Earlier research indicates that while the elements of performance are measured actively in welfare service organizations, there are still development needs regarding more comprehensive measurement systems that include aspects of long-term effectiveness (Sillanpää, 2011; Linna *et al.*, 2010). In impact measurement, organizations emphasize qualitative effects at individual level, which is natural, since their mission is to improve the well-being of clients. Welfare services are usually the results of the combined efforts of several public, private and third-sector service providers. This co-operation can be seen as inter-agency supply chains

(Callender, 2011) or as a welfare service system or as a network (Lönnqvist and Laihonen, 2012) that creates value for clients, and actors have certain roles in the setting. In order to avoid sub-optimization, actors need to be aware of the impacts of their services on other actors and throughout the system. Thus the impacts of a certain service should be measured more widely than at organizational and individual level, i.e. at the service system level. This is especially important when a service innovation is introduced into the context, since it may have unforeseen effects on the use of other services.

Impact measurement is a challenging task for many reasons. Before conducting the measurement, one should be aware of different actors (and stakeholders) and their relationships in the context, and how they affect the outcome. Potential impacts should be identified beforehand in order to understand what it is important to measure. Based on this it is possible to measure what impacts were realized. In addition, the time perspective for the realization of the impacts needs to be analyzed in order to understand when expected impacts are measurable (Vuolle, 2011; Kujansivu and Lönnqvist, 2009; Flatau and Zaretzky, 2008). Thus the measurement of impacts requires a profound understanding of the context in question, such as a particular welfare service, its stakeholders, targets of stakeholders, and anticipated impacts.

2.2 Measuring impacts in welfare services

Traditionally the impact measurement of service innovations or interventions in welfare services has been conducted using different types of economic evaluations, such as cost-benefit analysis and cost-effectiveness analysis, which seem to have a dominant role in assessing the impacts of services and interventions (e.g. Clark *et al.*, 1998; Jones *et al.*, 1994). The underlying task in these economic evaluations is to find out how scarce resources should be used to maximize benefits. The rationale in economic evaluations is to provide systematic means of comparing the costs of an activity or program with its outcomes. The features of economic evaluation include a focus on a specific intervention or program, the implementation of a systematic assessment of both costs and outcomes, the inclusion of a comparison (before-after, control groups), and an attempt to combine costs and outcomes in the final analysis.

One of the economic evaluation models is Social Return on Investment (SROI) that has its roots in social accounting and cost-benefit analysis. SROI describes the social impact of an organization's operations in monetary terms relative to the investment required to create that impact. The methodology has various benefits: for example, it involves stakeholders, includes a thorough analysis of outcomes and impacts with their valuation, and it can be used as a practical management tool enabling informed decision making on a regular basis (Lingane and Olsen, 2004; Polonsky and Grau, 2011). However, the basic assumption of monetizing outcomes limits the applicability of SROI in welfare services, since the major outcomes of welfare services relate to qualitative, intangible aspects that are not accurately monetized (e.g. what is the monetary value of improved health, quality of life).

In these economic analyses, costs are usually assessed on the basis of service consumption. In outcome measurement a wide variety of measures is in use. Probably the most standardized outcome measures can be found in health care services focussing on health-related outcomes (e.g. EuroQol, 15D, Health Utilities Index) (Simonen *et al.*, 2011) whereas outcome measures in social services appear to be more ambiguous (e.g. Flatau and Zaretzky, 2008).

A specific challenge in measuring the impacts of welfare services is to comprehensively capture various impacts at different levels (e.g. impacts on the quality of life at individual

level and on the costs at service system level). There are not many systematic impact measurement models in the literature. One such model is by Crook *et al.* (2005) who propose a conceptual framework of three levels for analyzing outcomes of the care system for the homeless: system level, program/organization level, and individual level. In the model, system-level outcomes include cost savings across systems, lowering of access barriers, networking among community organizations, and aggregation of client-level outcomes. Service program or organization-level outcome measurement is typically based on the aggregation of client-level outcomes, like changes in behavior, health, social relations, employment, and overall quality of life.

Traditionally welfare service organizations have been interested in the impacts of their services at individual level, such as changes in their clients' health and well-being (e.g. Jääskeläinen, 2010; Packard, 2010). However, as mentioned earlier, welfare services are produced in co-operation with various organizations, which can be seen as a welfare service system that creates value for clients, and the actors have certain roles in it (Porter, 2010; Lönnqvist and Laihonen, 2012). The introduction of a new service in a certain context can decrease the demand for another while increasing the demand for a third. This highlights the need to measure the impacts of a certain service more widely, i.e. on the service system level. The introduction of a new service model has certainly effects on organizational level also. For example, a new type of competence may be required from an organization in order to maintain its role in the network. However, when developing new services in the service system the main interest of public administration is to develop services that have an effect on the well-being of clients (qualitative impacts at the individual level) and to produce services without wasting public money (quantitative, monetary impacts at the service system level).

The measurement of performance impacts may be considered as a process of three phases: analyzing contextual factors, identifying business performance impacts, and defining performance measures (Vuolle, 2011). First, the level of analysis, the goals of stakeholders and the purpose of measurement are defined. In the second phase different types of impacts (tangible/intangible, financial) at various levels are identified and chosen for measurement. In the third phase, actual measures (quantitative, qualitative, financial) and ways of measuring (objective, subjective, direct vs indirect) for each impact are developed.

In the author's view, the literature lacks information on how to measure the multidimensional impacts (tangible, intangible, financial on individual and system level) of welfare service innovations. Thus, the author constructed a new framework for measuring the impacts of welfare service innovations (Figure 1).

3. Conceptual framework

3.1 Introduction of a new impact measurement model

In the line with the observations presented in the previous section, the new framework divides impact measurement into two levels: the service system level, which includes service providers/organizations related to the context, and individual level, which includes actual service users (Figure 1). The basic idea in the framework is to measure certain clients' use of various services in a certain time frame before the introduction of a new service and in a certain time frame after the introduction of the service. In the framework, impacts on service system level relate to tangible (financial, quantitative) impacts, which illustrate changes in the patterns of service use, whereas impacts on individual level relate to changes in the quality of life, and are intangible and qualitative in nature. The difference between the two sets of measurement results (before and after)

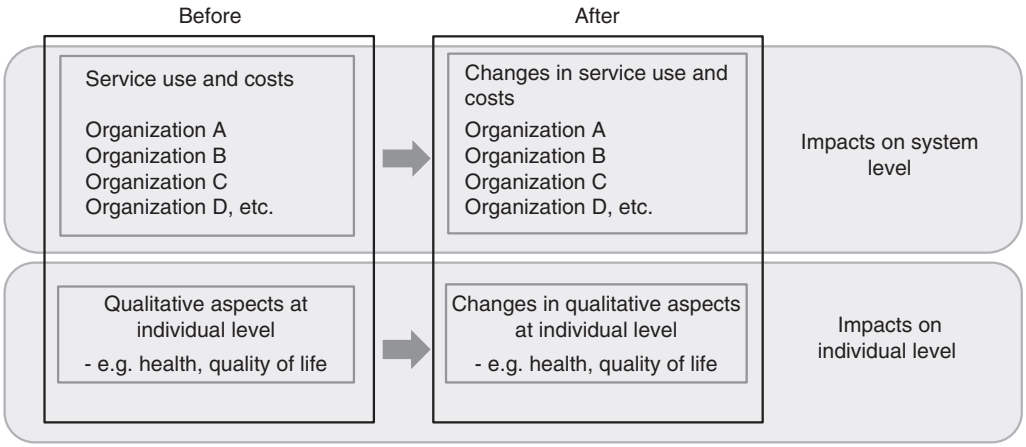

Figure 1.
Framework for measuring the impacts of welfare services

shows the change, i.e. the impacts achieved by the service innovation. The applicability of the framework is examined in two case studies.

Figure 1 presents the overall structure of the measurement model. In order to apply the framework in practice, a sequential process model was developed for measuring the impacts of service innovations (Table I).

Before the implementation of the measurement, the contextual factors have to be analyzed in order to select appropriate actors and services for the comparisons. In addition, the time frames for comparisons and data sources have to be specified. The measurement of impacts is based on service consumption and outcomes at the individual level, which is considered an accurate way to measure the outcomes or value created in welfare services (e.g. Porter, 2010; Flatau and Zaretzky, 2008).

Planning	Familiarization with the context and the service innovation
	Literature review, interviews with experts in the field (e.g. managers of unit, representatives of municipals)
	Analyzing the context and selecting the actors in the service system for the measurement (before – after)
	Selecting services to be measured according to the context
	Setting criteria for individuals whose service use will be measured
	Planning the data collection
	Time frames for the comparison (before – after)
	Specifying data sources
Implementation	Implementation of data collection
	Informing potential participants about the research (handouts, brochures), drawing up license applications to authorities
	Recruiting participants, obtaining written approvals from participants
	Requesting information of participants' service utilization and costs from different authorities (after licenses were granted)
	Interviews with participants
	Setting up client data base for tracking service use of individuals under study
Analysis	Analysis of quantitative data
	Combination of different data sets, calculations, comparisons (before-after)
	Analysis of qualitative data
	Interviews, non-financial impacts
	Conclusions

Table I.
Sequential process model for impact measurement

Welfare service information on individual level is strictly confidential. In practice, the implementation of measurement requires written informed consent both from individuals under study and the authorities providing services. Authorities have various polices and requirements (e.g. regarding how to inform participants), which have to be taken into account when applying for permission and in data collection, otherwise it may cause difficulties and delays in the measurement. This is a critical point in the measurement process, since without clients' and authorities' approval the implementation of measurement is impossible. It should be noted that authorities' requirements regarding access to information, and thus the related data collection procedures, vary in different countries due to national law and regulations.

4. Methodology

4.1 Data and research methods

The empirical part of the research includes the measurement of performance impacts in two cases. In case A the aim was to measure the impacts of a new type of accommodation model, Housing First (HF), for homeless people. In case B the impacts of the deinstitutionalization of disabled people were measured. In both cases the extent and costs of service utilization for a certain period of time were calculated before and after the intervention. The services examined varied between cases, since homeless people and disabled people have different service needs. However, in both cases health and social services formed the main group of services under study.

Information on service utilization at individual level and costs related to the service use was obtained from client databases administrated by different authorities, e.g. the city social and health care office, the police services, and hospital districts. Obtaining the information required permission both from the individuals under study and the relevant authorities, since the information on service utilization of health, social, and legal services at the individual level is strictly confidential.

In addition to quantitative and financial information, qualitative information on the effects of interventions was gathered through semi-structured interviews. The themes of interviews (qualitative effects of interventions) were drawn from the relevant literature. In case A the qualitative effects of interventions were assessed by interviewing six clients, and in case B the family members of five clients (one client answered questions herself). Interviews were conducted by two researchers in case A and one researcher in case B. Most of the interviews (ten) were conducted as face-to-face interviews by researchers, in case B there was one telephone interview, and one interview was conducted by a nurse. The duration of the interviews varied from 30 to 90 minutes. The interviews were tape-recorded and transcribed later.

4.2 Case A: measuring impacts of HF model for homeless people

The Finnish government's program to reduce homelessness (2008-2011) presented a significant shift toward "HF" principles in Finnish social policy. Briefly, the idea of "HF" is to arrange permanent apartments for long-term homeless people, and then to offer the needed support. So far the emphasis in Finland, as in the other Nordic countries, has been on the so-called staircase model, according to which homeless people may "earn" the permanent apartment if they are able to demonstrate a certain type of behavior, such as abstinence from intoxicants. Most homeless people are not able to do this, which means that they are unable to get a permanent home, and homelessness continues. According to the "HF" model appropriate housing is a prerequisite for solving other social and health problems, not the other way round (Tainio and Fredriksson, 2009). Research on "HF"

reports better results than other models in terms of cost effects by reducing the use and costs of various health, social, and legal services (e.g. hospital care, emergency room, shelters, arrests by police). "HF" seems also to achieve better qualitative outcomes, for example in terms of housing retention and various aspects related to the quality of life (e.g. Stefancic and Tsemberis, 2007; Massachusetts Housing and Shelter Alliance (MHSA), 2008; Mondello *et al.*, 2007).

In case A the aim was to measure the impacts of a HF unit. The unit under study is operated by a third-sector organization. It has 22 residents and is located in Tampere, Finland. All residents have their own flats and tenancy agreements. In addition to accommodation, the unit offers support needed by residents, e.g. help with everyday errands (like help with filling out forms, going to grocery stores, cleaning) and assistance in rehabilitation. The personnel guide residents to preventive services (e.g. regular health services) early enough to avoid the use of more intense services, like hospital or other institutional care. The City of Tampere purchases the services the unit offers its residents. Residents are allowed to consume alcohol in the unit if they do not disturb others. All residents have a history of long-term homelessness and alcohol abuse. Residents have moved to the HF unit either from the street, various institutions, or shelters. Fifteen of the residents participated in the research that was carried out in 2010.

In the research residents' service utilization of health, social, and legal services was traced for five months before moving to the unit and five months during occupancy of the unit. These services were selected because earlier research indicates that HF has impacts on the use of these services. Tracing longer histories would have been beneficial, but at the time of the research historical data were available only for five months after the move to the unit.

The qualitative impacts of living in the HF unit were assessed by interviewing six residents. The interviewees were asked to assess the benefits and downsides of the unit, how moving into the unit had affected to their lives in terms of health, relationships to friends and family, personal financial situation, and what aspirations they had for the future (themes of interviews in Appendix 2).

4.3 Case B: measuring the impacts of deinstitutionalization of disabled people

In case B the impacts of deinstitutionalization of disabled people were measured. Since the 1970s deinstitutionalization and shifting services from institutions to the community has been one of the targets in Finnish social policy (Niemelä and Brandt, 2008). However, in 2009 about 2,000 disabled people were still living in institutions in Finland. The case study is part of a project that aims at fostering the deinstitutionalization process in Finland. The aim of the case study was to provide information on the impacts of deinstitutionalization for the project and for the various stakeholders, like municipalities and the Ministry of Social Affairs and Health to assist in decision-making and planning the deinstitutionalization process.

In case B, the unit under study offers community-based living and care for disabled people, and is owned by a third-sector organization. The municipalities in the area purchase the services of the unit for their residents. The unit has 15 residents, most of whom are severely disabled with considerable need for care and support. Each resident has his/her own apartment, and five units form one group home. Eight residents participated in the research. These participants had long histories of living in institutions; the majority of them had lived in an institution for over 30 years. All participants in the research had moved from the municipal federation's institution, that is, in the process of deinstitutionalization.

Service utilization and costs related to service use were tracked for a year in the institution and for a year in a community care unit. The services studied included basic care and accommodation, health services, and other services and costs (see Appendix 3). These were selected on the basis of earlier research related to the cost-effectiveness of deinstitutionalization (e.g. Beecham *et al.*, 1997; Spreat *et al.*, 2005; Knapp *et al.*, 2005).

The qualitative impacts of the community-based care were assessed by six interviews. In five cases family members of residents were interviewed because residents themselves were unable to speak. One resident answered the questions by herself. The aim of the interviews was to ascertain the impacts of the move to community-based care on the lives of the residents and their family members. The themes of the interviews were drawn from earlier research related to the outcomes of deinstitutionalization (e.g. Health Service Executive (HSE), 2011; Mansell *et al.*, 2007; Spreat *et al.*, 2005) and included impacts on the various aspects of quality of life and financial situation (see Appendix 2).

5. Results

5.1 Case A

Impacts on the service system level. According to the analysis, the biggest changes in the service utilization and costs relate to institutional care, accommodation in shelters, and welfare services for alcohol abusers; costs were reduced by 53 percent in these services (see Appendix 1). Another major difference was in hospital care: before moving to the unit, residents spent 45 days in hospital, costing €20,849. After moving to the unit, no one had hospital stays. Rents added to living costs, which was obvious, since earlier people had no accommodation. When the costs of all services used before and after the move were calculated and compared, the cost savings were €59,897 (38 percent) over a five-month period, which indicates €143,753 cost reduction per year for 15 people (roughly €9,600 savings per person per year).

Impacts on the individual level. In general the interviewees preferred the unit to their earlier lives in shelters or on the streets. The biggest benefits of the unit related to privacy and physical aspects, like location near services and comfortable new homes. Now everyone had their own flats, whereas earlier many residents had shared rooms if they lived in a shelter. Support from personnel for everyday life was also highly appreciated by interviewees. Most of the interviewees (four out of six) reported no downsides in the unit. A couple of residents considered the unit an institution, because it had camera monitoring in the yard and hallways.

Living in the unit had many positive impacts on the lives of residents. Related to health effects, all the interviewees mentioned a decrease in alcohol consumption, and the personnel's support was appreciated in efforts to reduce the alcohol abuse. Some residents (three out of six) also reported better access to regular health services and rehabilitation. Most of the interviewees (four out of six) perceived no changes in relationships with friends and family members. They were relatively content with their personal financial situation. The rent was considered high, but the residents receive housing benefit from the government, which ensures a relatively decent income.

In summary, the residents of the HF unit were more satisfied to their lives after moving to the unit compared with the situation before the move. Their quality of life had improved in many aspects; e.g. health, feeling of security, privacy, and access to the support they needed.

5.2 Case B

Impacts on the service system level. Basic care and accommodation formed the biggest group of costs in both settings. In the institution, the total cost of institutional care (for a year for eight clients) was €644,595 and in community-based care €635,935. So the cost of basic care and accommodation diminished by €8,660 in community-based care. The distribution of costs changed with the move away from the institution: the municipalities' share of basic care and accommodation diminished by €39,270, whereas clients' share rose by €1,542 and the contribution of central government rose by €29,068.

The utilization of health services decreased significantly after the clients moved into community-based care (see Appendix 3). The move to community-based care indicated a change in the production and consumption patterns of health care services. The institution produced nearly all services clients used, and service usage was included in the fee for basic care regardless of the actual use of those services. In community-based care, special services are acquired from outside service providers according to clients' needs, which added the costs.

In other services and costs the extent of the use of day activities diminished notably in community-based care, while the costs rose substantially. The definition and content of day activities varied between the institution and the community unit; in the community care unit the regular everyday life included activities defined as "day activities" in the institution. Another significant increase in this group related to the cost of medicines: in the institution the medication was included in the nursing fee, whereas in the community medicines added notably to costs. Client's other expenses (e.g. clothing, daily purchases) rose, whereas the costs for family members declined, because the distance and travel costs of visits diminished.

When the total costs of the two service models are compared, the cost of institutional care was €659,484 and for community-based care €702,995, so the cost of community-based care was €43,511 (7 percent) higher for eight disabled people (average €5,400/person) than the institutional care over one year. The municipalities share of the payment diminished (by €15,700), whereas the shares of clients and the social insurance institution increased.

Impacts on the individual level. Impacts on the quality of life. Most of the interviewees assessed that the residents now had better access to services than when in the institution. Most of interviewees (four out of six) were satisfied with the opportunities for day center activities and rehabilitation. In general the interviewees were satisfied with the residents' access to the services they needed and opportunities to participate in various activities. Overall, the activity in the community-based care was considered better than in the institution.

Three interviewees perceived positive health impacts during the stay in the community-based unit. Earlier one client was regularly hospitalized, but the preventive care in the unit had reduced the need for hospital care. Two residents' aggressions had diminished, and one resident had become physically stronger because of regular rehabilitation. According to the interviewees, the residents now had better opportunities for privacy than before. In the institution the residents usually had a roommate, whereas in the community they had their own apartments.

The move to community care had significant positive effects on social relations and communication between residents and their family members. Because of the shorter distance, family members visited the residents more often. The communication between family members and personnel was more intense, and family members were more aware of the doings of residents. According to one interviewee: "During the past

40 years there were not many people who knew about my sister's affairs when I called. Now things are totally different; I can call or visit whenever I feel the need to ask about something."

Residents' life satisfaction was difficult to assess, since most of participants (five out of six) were unable to speak. According to family members' observations the clients appeared to be more satisfied with their lives than in the institution. The interviewees appreciated that individual needs and preferences were acknowledged in the care, which affects the overall happiness and satisfaction. Because of the nearby location, the family members were able to visit residents more often, and now they were aware of what was going on. The move to the unit had concerned family members; especially access to health services, but everything had gone well.

The move to the community-based unit had only minor impacts on the financial situation of residents or family members. Income and spending patterns changed with the move to the community; now residents pay separately for different services based on the use (e.g. rents, nursing fee, meals, medication, health services), but they also receive more financial support from the government.

6. Discussion

This paper demonstrates how the impacts of service innovation can be measured in the welfare service context. In both cases the underlying reason for the measurement was decision-makers' information needs regarding the impacts of new types of service in the welfare sector. In addition to client outcomes, the effects of new services at the system level have to be taken into account, since the introduction of new services may have unforeseen impacts on actors in the network.

The analysis of the results in both cases reveals that the service innovations had significant effects both at system and individual level. In both cases, the measurement indicates that service use patterns and total costs changed with the introduction of a service innovation. In case A, the introduction of the HF unit reduced the unintentional use of crisis services, whereas the use of preventive services increased. The use of acute health services also declined substantially in case B, and the use of rehabilitation services increased, which also suggests a shift toward preventive services. The service innovation appeared to reduce the total costs in case A, whereas in case B the total costs increased. In both cases, the distribution of costs changed with the new type of service model; the share of the municipalities diminished whereas the contributions of central government and clients increased.

In both cases the interventions had significant effects on the well-being of clients. The measurement of outcomes at the individual level was based on interviews with clients and/or guardians, which may be considered to be subjective qualitative measures. The themes of the interviews were based on the earlier literature on the impacts of interventions in those particular contexts, and included a relatively wide range of aspects of qualitative, client-related outcomes. In addition to the interviews, quantitative information on changes in service use patterns may serve as indirect measures of quality of life; i.e. if a client's need for crisis services (police, ambulance) was reduced, probably the overall life management and quality of life was improved.

The framework presented in the paper illustrates objects and levels of measurement (what to measure), whereas the sequential process model illustrates actual steps in the measurement (how to measure). Both the framework and the sequential process model for measuring the impacts seemed to work fairly well in the context of welfare services;

in both cases the measurements indicated significant changes related to system and individual levels and provided valuable information for decision makers, especially for planning and budgeting purposes. The framework presented in the paper has certain similarities with the SROI analysis. The major difference in these methods relate to the measures of outcomes; SROI analysis attempts to present all outcomes in monetary or quantitative measures, while the framework presented in this paper relies on qualitative measures when measuring intangible, qualitative outcomes that are difficult to monetize.

There are some limitations regarding the results and the framework as a measurement instrument. In the cases reported in this paper, the time span was relatively short. A longer time period would have been beneficial for assessing longer term effects. The implementation of this type of measurement entails gathering a wide range of confidential data, which is difficult, or may be impossible for an organization to obtain. Data collection is also time-consuming and relatively costly. Thus this type of impact measurement is rather a tool for decision makers to measure the impacts of alternative service solutions at the system level, conducted by a research institute or some governmental agency, than a management tool at the organizational level.

7. Conclusion

Impact measurement of welfare services is a complicated and challenging task. Welfare services, which are usually produced in co-operation with various actors in the public, private, and third sectors, aim to enhance the well-being of clients. Because of scarce resources and productivity challenges in the public sector, the well-being of clients cannot be achieved at any cost. Service innovations that provide value for clients without wasting public funds are sought. Information on impacts related to different services is needed in order to select those that produce effective results at reasonable costs: i.e. are cost-effective. In order to assess the success or failure of new service models and interventions decision makers need information on their long-term impacts at various levels, i.e. at the individual and at the service system level.

The aim of this research was to find out how the impact measurement of welfare service innovations could be carried out. In the paper, a framework for measuring impacts of welfare service innovations at different levels was introduced and applied to two cases. The empirical results of the research indicate that the welfare service innovations under study had significant effects both at individual and service system level. The framework along with the sequential process model presented in the research worked fairly well as a tool for measuring and demonstrating impacts at various levels.

The research presented in this paper is one attempt to develop impact measurement of welfare services. The framework introduced could serve as a tool for decision makers to measure the impacts of alternative service models on the way to developing effective service systems, and avoiding sub-optimization. However, many questions related to the impact measurement and management of welfare services remain unanswered and require further research, for example, how this type of measurement tool could be utilized as part of management in welfare services, how to commensurate various quantitative and qualitative outcomes of welfare services, and how to co-ordinate the measurement at various levels (individual, organizational, system level) in a way that it facilitates the development and management of efficient welfare services.

References

Beecham, J., Knapp, M., McGillow, S., Donelly, M., Kvanagh, S., Fenyo, A. and Mays, N. (1997), "The cost-effectiveness of community care for adults with learning disabilities leaving long-stay hospital in Northern Ireland", *Journal of Intellectual Disability Research*, Vol. 41 No. 1, pp. 30-41.

Callender, G. (2011), "Alignment of inter-agency supply chains to enhance public sector performance management", *International Journal of Productivity and Performance Management*, Vol. 60 No. 1, pp. 9-23.

Clark, R.E., Teague, G.B., Ricketts, S.K., Bush, P.W., Xie, H., McGuire, T.G., Drake, R.E., McHugo, G.J., Keller, A.M. and Zubkoff, M. (1998), "Cost-effectiveness of assertive community treatment versus standard case management for persons with co-occurring severe mental illness and substance use disorders", *Health Services Research*, Vol. 33 No. 5, December, Part 1, pp. 1285-1308.

Conaty, F.J. (2012), "Performance management challenges in hybrid NPO/public sector settings, an Irish case", *International Journal of Productivity and Performance Management*, Vol. 61 No. 3, pp. 290-309.

Crook, W.P., Mullis, R.L., Cornille, T.A. and Mullis, A.K. (2005), "Outcome measurement in homeless systems of care", *Evaluation and Program Planning*, Vol. 28 No. 4, pp. 379-390.

Dawson, A. (2010), "A case study of impact measurement in a third sector umbrella organization", *International Journal of Productivity and Performance Management*, Vol. 59 No. 6, pp. 519-533.

Flatau, P. and Zaretzky, K. (2008), "The economic evaluation of homelessness programmes", *European Journal of Homelessness*, Vol. 2 December, pp. 305-320.

Health Service Executive (HSE) (2011), "Time to move from congregated settings, a strategy for community inclusion", report of the Working Group on Congregated Settings Health Service Executive.

Hoque, Z. (2008), "Measuring and reporting public sector outputs/outcomes, exploratory evidence from Australia", *International Journal of Public Sector Management*, Vol. 21 No. 5, pp. 468-493.

Jääskeläinen, A. (2010), *Productivity Measurement and Management in Large Public Service Organizations*, TUT Publication 927, Tampere University of Technology, Tampere.

Jansen, E.P. (2004), "Performance measurement in governmental organizations: a contingent approach to measurement and management control", *Managerial Finance*, Vol. 30 No. 8, pp. 54-68.

Jones, K., Colson, P., Valencia, J.D. and Susser, E. (1994), "A preliminary cost effectiveness analysis of an intervention to reduce homelessness among the mentally ill", *Psychiatric Quarterly*, Vol. 65 No. 4, pp. 243-256.

Knapp, M., Comas-Herrera, A., Asin, J., Beechman, J. and Pendaries, C. (2005), "Intellectual disability, challenging behavior and cost in care accommodation: what are the links?", *Health and Social Care in the Community*, Vol. 13 No. 4, pp. 297-306.

Kujansivu, P. and Lönnqvist, A. (2009), "Measuring the impacts of an IC development service: the case of the pietari business campus", *Electronic Journal of Knowledge Management*, Vol. 7 No. 4, pp. 469-480, available at: www.ejkm.com (accessed May 16, 2012).

Lingane, A. and Olsen, S. (2004), "Guidelines for social return on investment", *California Management Review*, Vol. 46 No. 3, pp. 116-135.

Linna, P., Pekkola, S., Ukko, J. and Melkas, H. (2010), "Defining and measuring productivity in the public sector: managerial perceptions", *International Journal of Public Sector Management*, Vol. 23 No. 5, pp. 479-499.

Lönnqvist, A. (2004), *Measurement of Intangible Success Factors: Case Studies on the Design, Implementation and Use of Measures*, TUT Publication 475, Tampere University of Technology, Tampere.

Lönnqvist, A. and Laihonen, H. (2012), "Welfare service system productivity: the concept and its application", *International Journal of Productivity and Performance Management*, Vol. 61 No. 2, pp. 128-141.

Mansell, J., Knapp, M., Beadle-Brown, J. and Beecham, J. (2007), "Deinstitutionalisation and community living – outcomes and costs: report of a European Study", Vol 2, main report, Tizard Centre, University of Kent, Canterbury.

Massachusetts Housing and Shelter Alliance (MHSA) (2008), "Home & health for good. A statewide pilot housing first program", Progress report, MHSA, Boston, July.

Mondello, M., Gass, A.B., McLaughlin, T. and Shore, N. (2007), *Cost of Homelessness. Cost Analysis of Permanent Supportive Housing*, Maine Department of Health and Human Services, Greater Portland, ME.

Niemelä, M. and Brandt, K. (2008), "Kehitysvammaisten yksilöllinen asuminen. Pitkäaikaisesta laitosasumisesta kohti yksilöllisempiä asumisratkaisuja", Reports No. 2007: 73, Ministry of Social Affairs and Health, Helsinki.

OECD (2000), *Employment Outlook*, OECD, Paris.

Packard, T. (2010), "Staff perceptions of variables affecting performance in human service organizations", *Nonprofit and Voluntary Sector Quarterly*, Vol. 39 No. 6, pp. 971-990.

Polonsky, M. and Grau, S.L. (2011), "Assessing the social impact of charitable organizations – four alternative approaches", *International Journal of Nonprofit and Voluntary Sector Marketing*, Vol. 16 No. 2, pp. 195-211.

Porter, M.E. (2010), "What is value in health care?", *The New England Journal of Medicine*, 23 December, pp. 2477-2481.

Sillanpää, V. (2011), "Performance measurement in welfare services: a survey of Finnish organizations", *Measuring Business Excellence*, Vol. 15 No. 4, pp. 62-70.

Sillanpää, V., Lönnqvist, A., Koskela, N., Koivula, U-M., Koivuaho, M. and Laihonen, H. (2010), "The role of intellectual capital in non-profit elderly care organizations", *Journal of Intellectual Capital*, Vol. 11 No. 2, 107-122.

Simonen, O., Blom, M. and Viitanen, E. (2011), "Knowledge of effectiveness and its application in secondary healthcare management", *International Journal of Productivity and Performance Management*, Vol. 60 No. 8, pp. 797-812.

Spreat, S., Conroy, J. and Fullerton, A. (2005), "A cost-benefit analysis of community and institutional placements for persons with mental retardation in Oklahoma", *Research in Developmental Disabilities*, Vol. 26 No. 1, pp. 17-31.

Stefancic, A. and Tsemberis, S. (2007), "Housing first for long-term shelter dwellers with psychiatric disabilities in a suburban county: a four-year study of housing access and retention", *The Journal of Primary Prevention*, Vol. 28 Nos 3-4, pp. S265-S279.

Tainio, H. and Fredriksson, P. (2009), "The Finnish homelessness strategy: from a 'stair-case' model to 'housing first' approach to tackling long-term homelessness", *European Journal of Homelessness*, Vol. 3 December, pp. 181-199.

Vuolle, M. (2011), *Measuring Performance Impacts of Mobile Business Services from the Customer Perspective*, TUT Publication 1013, Tampere University of Technology, Tampere.

Further reading

Pinkney, S. and Ewing, S. (2005), "How does this help again? Economic evaluation and homelessness policy", Looking Back, Looking Forward: A Quarter-Century of Social Change 2005, Proceedings of the Australian Social Policy Conference, Sydney, New South Wales, 20-22 July.

About the author

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Appendix 1

Services	Amount of service utilization Before	Amount of service utilization After	Difference in amounts Quality	Costs of service utilization (€) Before	Costs of service utilization (€) After	Difference in costs €
Institutional care, accommodation in shelters, welfare services for alcohol abusers	1,540 days	16 days	−1,524 days	121,357	3,374	−117,983
Number of arrests by police	2	2	−22	4,512	376	−4,136
GP visits	21	221	+1	2,119	2,220	+101
Nurse visits	8	12	+4	278	452	+174
Hospital care (days)	45	0	−45	20,849	0	−20,849
Emergency room	5	61	+1	3,473	1,962	−1,511
Visits to specialized health care	7	2	−5	2,236	526	−1,710
Ambulance	12	6	−6	1,061	530	−530
Cost of support in the HF unit					52,797	+52,797
Rents in the HF unit					33,750	+33,750
			Total costs (€)	155,884	95,987	59,897

Table AI.
Impacts of Housing First-unit on service utilization and costs

Appendix 2. Themes of interviews.

Themes of interviews in Case A.

(1) Benefits and downsides of the HF unit;

(2) changes in life after the move to the unit, related to;

- daily activities (e.g. participation to arranged activities, hobbies);
- state of health.
  - possible effects to alcohol abuse; and
  - effects to risk-taking behavior (e.g. use of ambulance, police services).
- relationships to friends;
- relationships to family members and other relative; and
- financial situation.

(3) aspirations for the future;

- how is the life after one or two years.

Themes of interviews in Case B.

(1) Impacts on the quality of life; changes related to;

- access to services needed;
- opportunities to participate activities;
- health and personal skills;
- privacy;
- social relations;
- resident's satisfaction with life and feel of safety; and
- satisfaction and trust of family members.

(2) impacts on the financial situation;

- role of family members in the care/service provision and impacts on financial support from the family; and
- impacts on resident's personal financial situation.

Appendix 3

Services	Amount of service utilization		Difference in amounts	Costs of service utilization (€)		Difference in costs
	Before	After	Quality	Before	After	€
Health services						
Visits to GP, nurse, emergency room	124	40	−84	Included	4,036	+4,036
Hospital care (days)	15	0		4,080	0	−4,080
Specialized health care (visits)	3	9	+6	900	2,802	+1,902
Dentists	9	2	−7	Included	148	+148
Laboratory	69	9	−60	Included	315	+315
Dental hygienist	16	2	−14	Included	148	+148
Rehabilitation/therapists	74	160	+95	498	16,087	+15,589
Chiropodist	2	11	+9	Included	645	+645
Total costs of health services (€)				***5,478***	***24,181***	***+18,703***
Other services						
Day center/workshop	720	203	−517	Included	+16,396	+16,396
Transportation (taxi)				Included	1,422	+1,422
Medicines				Included	15,487	+15,487
Instruments/devices				Included	1,478	+1,478
Other expenses				2,101	8,096	+5,995
Costs for family members				7,310	0	−7,310
Total costs of other services (€)				***9,411***	***42,879***	***+33,465***
Total costs				***14,889***	***67,060***	***+52,168***

Table AII.
Impacts of community-based care on service utilization and costs

PAPER VI

Sillanpää, V. (2015)

Designing Measures for Managing the Effectiveness for Integrated Service Delivery – The Case of a Geriatric Outpatient Clinic

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Designing Measures for Managing the Effectiveness for Integrated Service Delivery:
The Case of a Geriatric Outpatient Clinic

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ABSTRACT

Health and social services are increasingly produced in cooperation among several specialized organizations. This has increased the importance of service integration in the sector. While the literature acknowledges the need for performance measurement addressing outcomes and effectiveness of service integration, not enough is known about applying such measurement practices. This paper examines the design of a performance measurement system to support the effectiveness management of an integrated service delivery. The research identifies three aspects of effectiveness – community, client and network level. Empirical examination reveals that success factors for design of measures for integrated service delivery include consensus on the targets, coordination and fluent cooperation among actors in the network. The paper contributes to performance measurement literature by illustrating how the design of system level measurement is carried out in practice and analyzing the lessons learned.

Keywords: *Case Study, Effectiveness, Finland, Performance Management, Performance Measurement, Service Integration, Welfare Services*

INTRODUCTION

Need for System-level Management of Welfare Services

Effectiveness has become a focal performance criterion in health and social services. One reason for this has been the New Public Management, which emphasizes the need to modernize the public sector. Public organizations are expected to be managed more like enterprises and become more customer-oriented, focused on outcomes rather than inputs, and be more efficient and effective (Barretta & Busco, 2011; Jansen, 2008).

Outcomes and effectiveness in many fields of welfare are produced in cooperation among different organizations in the health and social sectors (e.g. Axelsson & Axelsson, 2006; Hansson et al., 2010). Since the 1990's increased attention has been paid to cooperation as a means to achieve more effective and efficient public sector services (e.g. Kurunmäki & Miller, 2011). Along with the increasing cooperation, service integration has become an important issue in welfare services

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(e.g. Axelsson & Axelsson, 2006; Hansson et al., 2010). Integrated service delivery strategies are deemed a solution to rising costs, low quality of care and dissatisfied clients (Evans & Baker, 2012), and in recent years much research on collaboration (e.g. Qvretveit, 2002) and the evaluation of integration of services has been conducted (e.g. Ahlgren & Axelsson, 2005; Axelsson & Axelsson, 2006; Standberg-Larsen & Krasnik, 2009). The management and coordination of intra- and inter-organizational cooperation are challenging, and research generally aims to find concrete tools and guidelines for collaboration and service integration (e.g. Qvretveit, 2002; Hansson et al., 2010). Better tools for managing integration are needed, since many integration efforts have failed (Qvretveit, 2002). There may be concern that service integration has become means without ends or an end in itself. The academic literature emphasizes process rather than outcome in initiatives to apply service integration in practice, ultimately producing relatively scant evidence of the outcomes of integration (Wistow & Dickinson, 2012).

Increasing cooperation and integration in health care and other welfare services indicate that performance management at the organizational level is not sufficient to ensure high performance of the service system. Organizations may have conflicting goals and focus primarily on their own performance rather than the overall ability of the system to serve customers. This puts performance management activities in a new perspective. Managers need information on system-level performance (e.g. Callender, 2011). This has been recognized in public management literature and the focus is moving towards inter-organizational governance, which emphasizes the role of long-term inter-organizational relationships and the governance of processes as solutions for more effective public services (Osborne, 2006). However, limited attention has been paid to studying how management control practices like performance measurement are applied in practice within inter-organizational relationships, or what public network performance is (Barretta & Busco, 2011).

Effectiveness of welfare services at the service system level is usually assessed by utilizing different types of evaluation approaches. The role of economic evaluation is established especially in the field of healthcare (Drummond et al., 2005; Brazier et al., 2007), but applied also in social services (Flatau and Zaretzky, 2008; Jones et al., 1994). Key motivation for conducting economic evaluation is its ability to provide systematic analysis of different alternatives in service production for decision makers at the service system level (i.e. public administration). Economic analyses seek to identify and to make explicit the set of criteria that is useful in deciding among different uses of scarce resources. Key characteristics of economic evaluations, regardless the area it is applied in features the inclusion of the costs and consequences of activities (Drummond et al., 2005, p. 9). Focal benefits of evaluation approach relate to its ability to provide information of effectiveness of operation. However, since evaluations are usually conducted on an ad hoc, retrospective basis by external evaluators, and results are communicated in the format of extensive evaluation reports, their usability as managerial tools is limited (Nielsen & Ejler, 2008). Managerial purposes require different types of performance measurement systems. Performance measurement, which can be defined as *"the process of defining, monitoring, and using objective indicators of the performance of organizations and programs on a regular basis"* (Poister, 2003, p. 1) tracks the results as an integral part of operation and is conducted by internal managers, appears as a more applicable tool for managing effectiveness (Nielsen & Ejler, 2008). Next, performance measurement as theoretical approach of this research is discussed.

Theoretical Approach of the Study and Research Gap

Performance measurement is the crucial element of performance management, which can be defined as a process by which the organization manages its performance in line with its strategies and objectives (Bititci et al., 1997). As a diverse and multidisciplinary research area, the

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field of performance measurement lacks a cohesive body of knowledge (e.g. Franco-Santos et al., 2007). Thus, in the field of performance measurement, theoretical approach refers to contributions made by management researchers in various disciplines, like in strategy management, operations management and management accounting rather than solid knowledge within a certain discipline (ibid). While performance measurement appears as a promising approach in managing effectiveness, there are several gaps concerning the current knowledge of performance measurement literature related to measuring the effectiveness of integrated service delivery and welfare service systems (e.g. Barretta & Busco, 2011; Conaty, 2012; Provan & Milward, 2001). Traditionally performance measurement research is focused on organizations. Recently the performance measurement of inter-firm cooperation and networks have received increasing attention both in business (e.g. Busi & Bititci, 2006; Kaplan et al., 2010; Parung & Bititci, 2008; Pekkola, 2013) and the public sector literature (e.g. Murray et al., 2000; Conaty, 2012). Simultaneously, the performance focus in the research literature has shifted from improving processes and outputs to longer-term outcomes and impacts and the value that co-operative service delivery creates for its clients (e.g. Barretta & Busco, 2011; Halligan et al., 2012; Laihonen et al., 2014; Porter 2010). In spite of recent development in the area of performance measurement research, there is very little empirical research that explores the performance measurement and management in collaboration (e.g. Bititci et al., 2012), especially in the area of welfare services.

Earlier research on how to carry out a successful measurement project at organizational level abound (e.g. Jääskeläinen, 2010; Bourne et al., 2000; Neely et al., 2005; Rantanen et al., 2007; Saunila et al., 2012). However, little is currently understood about how to develop performance measurement that captures effectiveness in inter-organizational co-operative settings in the welfare sector. Examples from business (e.g. Kulmala & Lönnqvist, 2006; Pekkola, 2013) are not necessarily applicable to public sector welfare services for many reasons; for example in the public sector partnerships and networks are usually imposed by superior authority rather than resulting from voluntary cooperation, which may affect the motivation and interest of participants for development work (Halligan et al. 2012). Common challenges in social and healthcare service networks include unclear roles and responsibilities (e.g. Hansson et al., 2010), which challenges the start of performance measurement in inter-organizational cooperation. In public service networks with various stakeholders and levels of analysis even the content of performance appears unclear (e.g. Barretta & Busco, 2011; Conaty, 2012). In efforts to measure the effectiveness of integrated service delivery, the number of stakeholders with varying targets and performance criteria makes even agreeing on a holistic and balanced definition of effectiveness difficult (e.g. Conaty, 2012; Evans & Baker, 2012, Provan & Milward, 2001).

To conclude, there appears to be lack of knowledge on applying performance measurement approach in measuring effectiveness of welfare services at system level. This research aims at fulfilling the research gap by examining how the performance measurement approach can be applied to measure the effectiveness of integrated service delivery in welfare services. This research focuses on the *design phase of measurement*, since the first steps of measurement are the most critical for the successful use of performance measurement later on (e.g. Bourne et al., 2000; Rantanen et al., 2007). Performance measurement design entails 1) consideration of what to measure and then 2) how to carry out the measurement development (e.g. Bourne et al, 2000; Jääskeläinen et al., 2009). In this research, defining *elements of effectiveness* of the service system is a prerequisite for specifying the aspects that should be measured. Another focal question is to understand how the measurement design process can be implemented in practice in the context of inter-organizational cooperation in the welfare service sector. This research contributes to the conceptual understanding on performance measurement design in the case of effectiveness in co-operative settings in welfare services. From a practitioner perspective, this

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paper explains how to design measures of effectiveness that are relevant managerial tools at welfare service system level.

Next, the design process of performance measurement focusing effectiveness in welfare services is discussed based on earlier research literature.

LITERATURE REVIEW: PERFORMANCE MEASUREMENT DESIGN AT SERVICE SYSTEM LEVEL

Performance measurement implementation is usually divided into three main phases: design, implementation and use of measures (e.g. Bourne et al., 2000). The first task in designing measures is to identify the purpose of the measurement, which should be linked to the organization's objectives. In the context of networks, the measurement should support the objectives of the network (e.g. Bourne et al., 2000; Neely et al., 2005). Thus, the measurement design requires consensus on the objectives and the purpose of the measurement among actors in the network. (Cunha et al., 2008; Kaplan et al., 2010). Cunha et al. (2008) point out that defining indicators should be a joint effort during the network set-up.

In efforts to measure effectiveness, the consensus of the target of measurement, i.e. on the concept of effectiveness should be reached among network participants. Effectiveness is a challenging concept, especially regarding welfare services, since there are various key stakeholders ranging from individual clients (beneficiaries) to employees of service provider organizations and taxpayers, whose frequently conflicting needs and goals the effective service system should fulfill (Porter, 2010; Provan & Milward, 2001). Consistent with the multiple-stakeholder perspective, welfare service systems can be measured at different levels of analysis (e.g. Provan & Milward 2001; Crook et al., 2009; Strandberg-Larsen & Krasnik, 2009). Usually the frameworks proposed in the literature include three levels of analysis, for example, Provan & Milward (2001) distinguish levels of community, network and its organizational participants, whereas the classifications by Strandberg-Larsen & Krasnik (2009) and Crook et al. (2005) include system level, organization level, and individual level.

At the community level, the aim of the network usually relates to improved access, utilization, responsiveness and integration of services while maintaining or reducing costs. Thus, effectiveness at community-level can be evaluated by assessing the aggregate outcomes for clients of the network, and by estimating the overall costs of service (Crook et al., 2005; Provan & Milward, 2001). According to Crook et al. (2005), system-level outcomes include cost-savings across systems, lowering access barriers, networking among community organizations, and aggregation of client-level outcomes. The literature on welfare services suggests that aspects related both to client outcomes (e.g. changes in the quality of life, functional status, mortality) and costs have central role when measuring the overall performance of the system (Porter, 2010; Strandberg-Larsen & Krasnik, 2009). In addition to these, there are other criteria according to which community-level effectiveness can be measured, like the ability to build social capital and a public perception that a problem is being solved (Provan & Milward, 2001).

Effectiveness at the network level relates to the network's ability to provide its clients with the services needed at the right time. Effectiveness criteria at the network level include having suitable organizations providing essential services in the network, integration and coordination of services in order to avoid overlap and sub-optimization, creation and maintenance of actors coordinating the network, member commitment to network goals and cost of network maintenance (Provan & Milward, 2001). Effectiveness criteria at participant level include both criteria related to specific organizations and clients. Measures related to organizations in the network relate to

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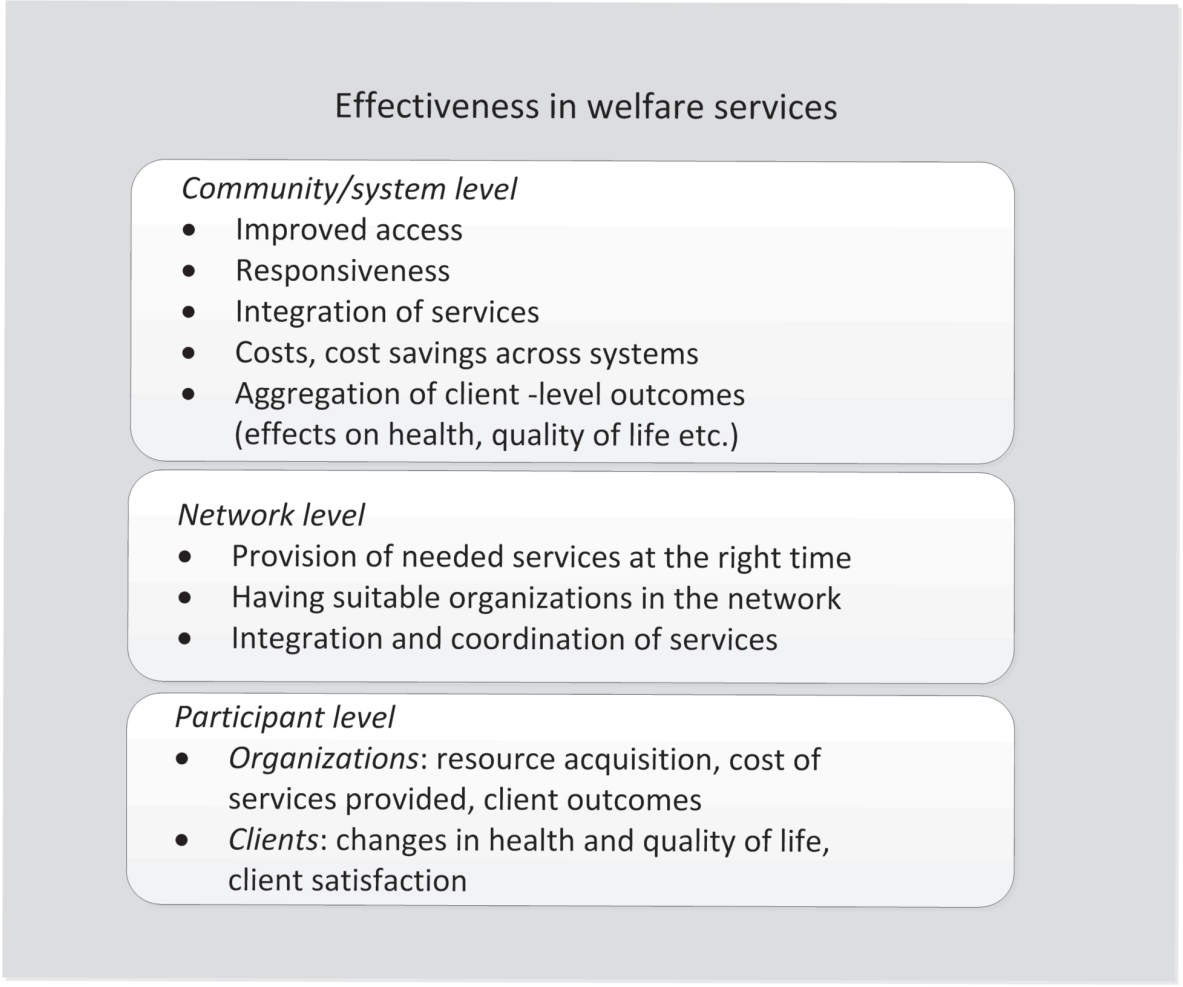
resource acquisition, cost of services provided, and client outcomes. The client-level includes measures related to changes in health and the quality of life of clients receiving services, and client satisfaction (e.g. Crook et al., 2005; Provan & Milward, 2001).

Based on the literature, Figure 1 proposes a conceptual framework for effectiveness in welfare services. Consonant with earlier literature (e.g. Crook et al., 2009; Provan & Milward 2001; Strandberg-Larsen & Krasnik, 2009) Figure 1 divides effectiveness into three levels of analysis: community/system level, network level, and participant level, which includes both organizations participating in the network and individual clients. The overall effectiveness of the welfare service system is based on interactions across all three levels of analysis (e.g. Crook et al., 2009), indicating that all three levels of analysis should be measured for a holistic view of the effectiveness of the system.

Usually the actual design of performance measurement is organized as a series of workshops led by a facilitator or consultant (Bourne et al., 2002; Lönnqvist, 2004; Pekkola, 2013). The facilitator's contribution is considered crucial to the success of the design process (Bourne et al., 2002; Jääskeläinen et al., 2013). In inter-organizational cooperation, the role of facilitator is further emphasized (e.g. Axelsson & Axelsson, 2006; Pekkola, 2013). The literature suggests that the successful design of performance measurement system assumes the participation of employees in the operative level in the development work (Jääskeläinen et al., 2013; Rantanen

Figure 1. Effectiveness in welfare services



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et al., 2007). The composition of the workgroup and a positive atmosphere are considered focal factors promoting the development of performance measurement systems in both public welfare services (Jääskeläinen et al., 2013) and collaborative business networks (Kaplan et al., 2010; Pekkola, 2013). Inter-organizational collaboration in public health is often organized in the form of multidisciplinary teams, a small group of people representing different professions who together across organizational boundaries provide services to a specific group of clients. The active involvement of representatives from multidisciplinary teams is vital to the successful development of performance measures in welfare service systems (Axelsson &Axelsson 2006).

The design phase is critical in the development of any performance measurement system since it forms the foundation for the implementation and actual use of measures. Problems in the design phase may entail more problems later on (e.g. Jääskeläinen et al., 2009; Rantanen et al., 2007). Busi & Bititci (2006) point out that major barriers to the successful implementation of a collaborative performance management system relate to difficulty in developing a collaborative culture and in developing appropriate performance measures. According to Rantanen et al. (2007), the main challenges in designing performance measurement systems in the public sector are due to the involvement of many stakeholders, causing difficulties in accommodating the conflicting needs of stakeholders and difficulties in target setting. Public sector welfare service organizations have numerous measures in use (Jääskeläinen, 2010; Linna et al., 2010; Martin & Kettner, 2010; Sillanpää, 2011) and selecting appropriate measures from those available or developing new measures is challenging. Moreover, in the welfare service context, financial measures dominate (Saunila et al., 2012) even though the most focal measurement objects in health and social services relate to qualitative, intangible issues (e.g. satisfaction and well-being of clients, quality of life) that are difficult to measure (Jääskeläinen et al., 2009; Martin & Kettner, 2010; Sillanpää, 2011) and not measurable with financial measures. Other challenges in performance measurement development in the public sector include lack of ownership of the project, opposition of personnel to performance measurement (cultural issues), and overlapping/competing projects that impede the progress of the development work (Jääskeläinen, 2010; Rantanen et al., 2007).

Summarizing the literature, recent developments in welfare services (cooperation, new public management) underline the need to acquire knowledge about performance, and especially the effectiveness of services provided in cooperation. From the performance measurement perspective, the literature currently reveals little of how managers perceive effectiveness at the service system level (what to measure) and how a performance measurement system supporting the management of effectiveness in co-operative settings could be designed (how to measure) in the context of welfare services. In the next section, the empirical research attempts to answer these questions.

EMPIRICAL EXAMINATION: CONTEXT AND METHODS OF RESEARCH

The empirical part of the research includes a qualitative case study (Gummesson, 2000) describing the development of a performance measurement system for a new type of service, the geriatric outpatient clinic Geripol, organized as inter-organizational cooperation in a large Finnish municipality. The practical aim of the development work was to design a performance measurement system to support the performance management of Geripol, especially in terms of quality and effectiveness. The municipality had a separate productivity measurement framework including costs and productivity. The aim of empirical research was to examine how the conceptual framework of effectiveness based on the research literature can be operationalized and if the identified factors related to design of performance measures, i.e. workshops as working

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method, participants from multidisciplinary teams, role of facilitator, and challenges related to the design process, apply in the context of inter-organizational cooperation in welfare services. Case study was considered an appropriate research approach because the author sought a rich understanding about the real-life phenomena under study (Yin, 2009). The case study was conducted as an action research project with twofold objectives: solving a practical problem and contributing to prior knowledge (Coughlan & Coghlan, 2002). Action research, which can be seen as a variant of case research, is applicable in situations such as this, where the aim is to develop a new solution to a problem of which little is so far known. In action research, researchers act as participants "on site" rather than as outside observers, thereby gaining insights into unstructured situations and variables/issues that may not initially be apparent (Westbrook, 1995). The action research project was carried out in the form of workshops facilitated by two researchers. Research project included one group interview before the workshops and five workshops. Figure 2 illustrates the themes and schedules for workshops. This research approach afforded the researchers many-sided data and an opportunity to utilize many different types of sources of evidence, like administrative documents (reports, proposals), e-mail correspondence, interviews, and participant observation (e.g. Yin, 2009). The main data collection methods were participant observation during workshops and a group interview at the beginning of the project. In the workshops one of the researchers worked mainly as facilitator, whereas the other focused on collecting data by making notes on conversations during the workshop. After each workshop, the researchers analyzed the notes and made summaries of workshops that were discussed with participants at the beginning of the next workshop session. Thus participants had an opportunity to comment on the researchers' observations and analyses, and data collection and analysis was an iterative process that continued throughout the development work. The researchers thereby accessed in-depth information about the development process and the concept of effectiveness and the participants' interpretation of it. The author was one of the facilitators in the development project. The process and the participating actors are described in the next chapter.

The geriatric outpatient clinic was launched in 2011. The clinic's services are produced through cooperation of various operational municipal service units, including the outpatient departments of three geriatric hospitals, primary health care, and home care, which are located in different administrative departments. Some services may be purchased from other service providers, like companies or non-profit organizations. Integrated service delivery, right from the referral of clients to supportive home care, including timely institutional care and specialized health care, is deemed a prerequisite for the successful operation of Geripol. One of Geripol's main tasks is to coordinate service production so clients get the services they need at the right time. Clients' service needs are assessed by Geripol, and clients are referred to the services they need, either produced by own units or purchased from companies. Coordinating the client referral process is one of the main changes that Geripol has entailed; client referrals were previously made by family doctors in primary health care. For the clients, coordination is the main benefit of Geripol as they now should receive all the services they need from one service counter.

The overall goal of Geripol is to enable elderly people to live at home and support home care, thereby reducing the use of institutional care. Home care is considered beneficial for both clients and service system; clients prefer living in their own homes and receiving the care and support they need there. The reduction in institutional care means substantial overall savings in elderly care. Besides the traditional outpatient clinic operations, Geripol aims to offer geriatricians' services in clients' homes, which would be conducive to living at home and also cater for clients in need of demanding specialized care. Housecalls made by a multidisciplinary team, including a geriatrician, a nurse and the client's dedicated caregiver are the core of Geripol's operations. One of the main advantages is the support the geriatrician offers the elderly person's home care

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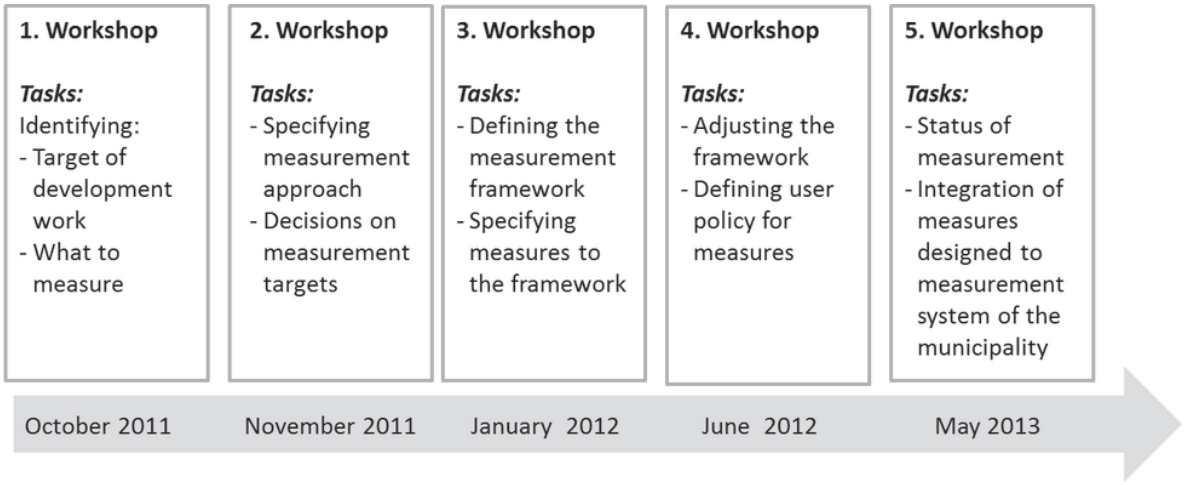
Figure 2. Outline of workshops



team; consultation to the client's general practitioner in primary health care and training for home care staff. Dissemination of geriatric expertise and on-the-job learning are also among Geripol's targets. In addition to professional nursing staff, clients' family members are encouraged to be active (if possible) in supporting the client.

RESULTS

The Design Process in Geripol

The design of measurement was carried out as a development project comprising five workshops. Figure 2 illustrates the main tasks and the schedule of workshops, which were preceded by a group interview between the researchers and working group to survey the activities and targets of Geripol, current measurement practices and development needs regarding measurement. The working group in the municipality consisted of representatives of both the service provider and purchaser; the purchasing manager of elderly care services, the coordinator of elderly care services (purchaser), the manager of hospital care for elderly (provider), the development manager of institutional care (provider), the chief medical officer of geriatrics (consultant/developer of Geripol), and a professor of geriatrics serving as an expert in this project and also chairing another group developing efficiency measures for all elderly care services in the municipality. Workshops were organized by the research and evaluation manager of the municipality.

At the beginning of the development work, the task was to identify the target of the development project. A comprehensive picture of Geripol, its operations and stakeholders was drawn to illustrate the connections between the various organizations and stakeholders forming the network. The main target of the measurement development work was to design measures to evaluate the outcomes and effectiveness of Geripol services. Organizations in the network had numerous measures already in use for evaluating the effects of elderly care services, especially clinical measures assessing the health outcomes of institutional care. However, in addition to effects on clients, the working group identified several other targeted impacts related to Geripol, e.g. cost savings, intensified cooperation within the network, effects on institutional care, home care and primary health care, and changes in the competence of primary health care and home care personnel.

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During workshops 2 - 4 the measurement approach was specified, which entailed identifying different perspectives related to the effectiveness of Geripol activities. During the development work, three main perspectives of effectiveness were identified: community, client, and management/production of services. Numerous measures were proposed and discussed in the workshops on the performance of Geripol. The aim of this development project was to create measures for the purchaser's use, which underlined the role of measures concerning effectiveness related to clients and community. According to the purchaser-provider model, the purchaser determines effectiveness, while the provider's task is to decide how to achieve it (how to manage the network). Hence only a few measures related to processes or cooperation were included in the framework. A definition of user policy for measures was proposed in the fourth workshop. In the user policy, the following issues were identified for each measure: name, measurement target (what to measure), formula for the measure, current value, target value, data needed for the measurement, person responsible for the measurement, and how the results were to be reported. In the final workshop the status of measurement and the integration of measures throughout the measurement system were discussed.

The duration of development project was relatively long (about 19 months), which influenced the composition of the working group; for example, in the third workshop representatives of all major actors/organizations in the network were present (altogether 12 participants), while in the final workshop there were only two participants present from the municipality (the coordinator of elderly care services and the coordinator of the development project). However, the core working group was active at the beginning of the project when the most important decisions about the framework and measures were taken (workshops 1-3). Another reason for variation in the working group composition was overlapping development projects; there were at least two projects running concurrently; one for productivity and another for the effectiveness of all elderly care services.

The Resulting Measurement System

Table 1 presents the results of the measurement development work in the case of Geripol. Effectiveness was divided into three perspectives: community, network and client, which facilitated the identification of measurement objects and the actual design of measures. At the community level, the aim of Geripol is to decrease the use of institutional care (and increase home care). The number of home care clients transferring to institutional care in relation to the number of residents in the municipality aged over 75 years was considered a suitable measure of effectiveness at the community level. Community perspective refers to the whole municipality, not just elderly care services. At the network level, access to services, level of cooperation in service provision, upgrading employees' competence and number of home calls conducted by the geriatrician were chosen as measurement objects. At the level of clients, measurement targets included stakeholder satisfaction (clients and family members), changes in clients' well-being, and use of emergency and unplanned institutional services.

Many of the measures, especially those related to clients' clinical aspects, were in use in municipality's elderly care. However, most of the measures required modification of current measurement and a renewal of procedures for data collection and analysis. Existing measures relate to organizations or service units in the network while the new measures of Geripol relate to the entire network. This necessitated changes to current measurement processes. The measures related to inter-organizational cooperation are new and new data collection procedures are needed in order to implement them.

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Table 1. Measures of effectiveness in Geripol

Perspective	Measurement Object	Measure
Community	- Relational number of clients moved from home care to institutional care	- Number of clients moved from home care to institutional care in relation to numbers of citizens of municipality aged over 75 years
Management of the network	- Access to the service - Cooperation - Competence - Home calls	- Clients who got care in 1-7 days/all clients - Number of house calls conducted by multidiscipline team (geriatrician and nurse from home care unit) - Competence survey - Home calls/all visits to Geripol (%)
Clients	- Satisfaction of stakeholders (clients, family member etc.) - Use of hospital emergency and hospital care - Changes in client's quality of life - Changes in client's ability to function	- Stakeholder survey - Number and cost of visits to emergency room, unscheduled care days/treatment periods - Measurement of quality of life before – after treatment by Geripol - Measurement of functionality (clinical measures e.g. DRS, ALD, MAPLE) of clients before – after treatment by Geripol

At the time of the last workshop (May 2013), the purchaser had decided to implement new measures in the 2014 purchasing contracts regarding Geripol services. However, for many measures issues related to user policy were still in progress.

ANALYSIS OF FINDINGS

The case study analyzed in this paper presents a development project for designing system-level performance measures for a welfare service. The aim of the development work was to design measures related to the effectiveness of a newly launched service, the geriatric outpatient clinic Geripol. The starting point was to design measures of effectiveness for the purchaser's use, which evidenced the purchaser's powerful influence on and role in the target setting of the development project. Initially many different types of objectives related to the operations of Geripol were identified and discussed among the actors in the network. In order to clarify the big picture, and prioritize different targets, the objectives were structured into three levels of analysis based on stakeholders. The focal result of the development project relates to identifying different perspectives on effectiveness; community, client, and network management. Identifying different levels and targets related to each of them was a crucial step in deciding what to measure. This also served to clarify causal relationships between different perspectives; i.e. what should happen in service production (network management level) in order to achieve certain effects on clients, which eventually manifest as welfare effects at community level.

Effectiveness on client level was considered paramount in the measurement framework. This view was strongly supported by the purchasing manager of elderly care services, who stated that "Client is the one who steers the whole thing". Nearly all measures developed relate to the qualitative aspects of client outcomes, either directly (satisfaction, quality of life or functioning ability) or indirectly (access to services, number of home calls by multidisciplinary team, relative number of home calls). At the network level, measures were intended to support the management and development of cooperation. However, the management of the service integration process was not of the main interest in this development work, and therefore the number of measures related

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to management and coordination activities was limited. On the community level, the long-term effectiveness of the Geripol services was linked to the number of home care clients entering institutional care compared to the entire elderly population of the municipality. The measures developed seemed to cover the main aspects of effectiveness at different levels of the welfare service system (cf. Crook et al., 2005; Provan & Milward, 2001), and thus providing a holistic approach for performance measurement in this context. Measures of costs and productivity were not included in these measures since they were already included in the existing measurement framework of the municipality.

Designing performance measures in the public sector is challenging (e.g. DeGroff et al., 2010; Jääskeläinen et al., 2009; Linna et al., 2010; Rantanen et al., 2007; Saunila et al., 2012). The literature suggests that one of the major challenges in designing measures at system level in public welfare services is to reach agreement on common targets and purposes of the measurement (e.g. DeGroff et al., 2010; Rantanen et al., 2007). However, consensus on the main objectives and purposes of the measurement was attained early and relatively easily in this development project, since the main target of the network's operations was clear to all participants from the beginning of the development work. Different options of measurement objects and actual measures were discussed actively in workshops and there were no major disagreements between participants about measurement. In case of minor disagreements, facilitators mediated by asking more details about different opinions, and discussions on different aspects were facilitated to reach mutual understanding of measurement. In Geripol, challenges in the design of measures related to imbalance in existing measures; many established measures were in use for some aspects, especially clinical outcomes of care, while for other aspects there were no existing measures. Those measures already in use had to be modified to the network level. For example, measures related to clients' well-being have been established in the organizations, but the level of analysis had to be modified so as to include the clients of Geripol, not all clients in the elderly care sector or in just one organization. In addition to the existing measures, the measurement system includes many new measures, especially related to network management. The implementation of those will require time, resources, and coordination.

The development work was facilitated by two researchers, and the workshops were coordinated by the research and evaluation manager of the municipality. The roles of outside facilitators and the in-house coordinator were crucial to the progress of the development work; the facilitators planned the overall content and schedules for the workshops and the coordinator scheduled them. The working team included representatives from the various organizations and professions of the network, which should ensure successful implementation of the measurement system (e.g. Jääskeläinen et al., 2013; Axelsson & Axelsson, 2006; Rantanen et al., 2007; Pekkola, 2013). However, the service network was relatively new, and roles and responsibilities were still to some extent unclear, which manifested as lack of strong coordination in the development project. Participants were also involved in other concurrent development projects (one of which related to the same theme) and this hampered the development project. Concurrent projects caused confusion among participants; e.g. some became frustrated or were too busy, which possibly undermined motivation and participation. At the end of the project, issues related to the user policy, like source data for measures and responsibilities regarding the implementation and coordination of measurement were partly still in progress.

In summary, the main findings of the measurement development project related to the identification of different levels of effectiveness and including all levels in the measurement solution. This promoted the more comprehensive measurement of the effectiveness of the welfare service system. The conceptual framework presented in the paper (Figure 1) was beneficial in the identification of the focal elements of effectiveness in this context. The division of effectiveness

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into three perspectives was beneficial for performance measurement, but also for the overall performance management of the network in the future. The working group participants had common objectives for operations at the beginning of the development project, which advanced the definition of measurement objectives and measures. Workshops led by outside facilitators appear as a beneficial working method in designing performance measurement in co-operative settings such as the one examined in this study. The most focal benefits relate to the development of measurement system in cooperation among participants of the network, organized content and schedules, consultation provided by facilitators, and the facilitators' mediating role. The working group consisted of representatives from different organizations and professions, which is a prerequisite for the successful implementation and use of measures.

Clients as stakeholders of Geripol did not participate the development project, which is one of limitations of this research. However, client perspective was underlined by all participants, and the measurement solution includes various measures related to clients, e.g. direct feedback from clients, which indicates that clients' perspective is well acknowledged in measurement. Challenges related mostly to network coordination and competing development projects that participants were involved in. Presumably these factors affected the schedule of the project; the design phase alone took about 19 months, which is relatively long compared with earlier experiences in the business sector (cf. Bourne et al., 2000).

DISCUSSION AND CONCLUSION

In welfare services a more holistic approach in performance measurement and management is needed in order to avoid sub-optimization and achieve a higher level of effectiveness. While performance measurement appears promising approach in managing the effectiveness of welfare service system, research literature lacks the knowledge on how to apply it. This paper aims to contribute to the existing performance measurement literature by examining how the design of system level performance measurement targeting the measurement of effectiveness in welfare service system can be conducted. This research focuses on two focal questions in the design phase of the measurement: what to measure and how to carry out the development process in the context of inter-organizational co-operative setting.

In order to specify what to measure, this research presents a conceptual framework based on the existing literature including three perspectives on effectiveness – community, client and network management level. Whereas the earlier literature (e.g. Provan & Milward, 2001) proposes frameworks for evaluating network effectiveness at different levels, this research takes a step forward and applies such a framework in practice in the context of integrated service delivery. The framework presented in the research facilitated the identification of perspectives of effectiveness and targets related to each, which was crucial in order to prioritize and design measures. This was also helpful in illustrating the links between different perspectives; i.e., how service production (network level) affects clients, which in turn has effects at community level. Client perspective is focused in the measurement solution, either directly or indirectly, which is obvious in the context of welfare services.

To answer the question how to carry out the development process, this research implements the performance measurement design process in the context of welfare services and analyzes findings based on the earlier research literature. Earlier literature (e.g. Cunha et al., 2008; Kaplan et al., 2010) suggests that consensus on the network's target and the use of measures should be reached at the beginning of the development work. According to the results of this research, that is not a specific challenge, if the purpose and use of the measurement system are decided

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beforehand, which is beneficial for the development project. Successful implementation of the measurement system requires representation and fluent cooperation of different professionals in the design phase (e.g. Axelsson & Axelsson, 2006). In this research, different organizations of the network were represented fairly well, which should enable successful implementation of the measurement system. Also, this research confirms earlier research (e.g. Axelsson & Axelsson, 2006; Bourne, 2002; Jääskeläinen, 2010; Lönnqvist, 2004; Pekkola, 2013) that contribution of outside facilitators is important in the development process. Factors identified in the earlier literature, like unestablished roles and responsibilities in the network (e.g. Hansson et al., 2010) and overlapping projects (Rantanen et al., 2007) were the main challenges that prolonged the measurement design process. Thus, the results of this research support the previous literature of the design process in many ways. However, results of this research further underlines the role of coordination; while the design process of this research entails many success factors, like the consensus of targets, outside facilitation and multidisciplinary development team, strong coordination that clarifies roles and responsibilities would have been needed in order to accomplish the task in a reasonable time.

Traditionally, the evaluation of effectiveness in welfare services is conducted by utilizing different types of economic evaluations (e.g. Nielsen & Ejler, 2008). This research has extended the scope of performance measurement approach to the measurement of effectiveness by operationalizing the concept of effectiveness in the context of integrated service delivery in welfare services and by suggesting and empirically applying a method (design process) for carrying out the measurement development. The key findings of this research relate to the identification of perspectives of effectiveness in the welfare service system and to the designing a measurement system that includes relevant perspectives. According to the present research, the more holistic measurement and management of effectiveness in welfare service system may be attained by understanding the diverse perspectives of effectiveness and taking different perspectives into account in measurement and management. The research adds to existing performance measurement literature by illustrating how the design of system level measurement that supports the integrated service delivery can be carried out in practice in the context of welfare services.

This research suggests that performance measurement approach is applicable in designing measures for effectiveness in the context of welfare service system. The conceptual framework of effectiveness and the sequential design process (workshops) are beneficial tools in designing measures of effectiveness for integrated service delivery in welfare services. Since objectives of this research were twofold: to solve a practical problem of how to measure effectiveness of a service provided in cooperation (Geripol) and to contribute to prior knowledge of performance measurement, action research was chosen as a suitable research method for the study. Action research entails many benefits, like access to real, complex decision making situations, but it has certain limitations. Research results acquired through action research are situational and contextually embedded (e.g. Coughlan & Coghlan, 2002). Thus, the results of this research, like measures developed cannot be adopted directly in any situation in measuring effectiveness in health care services or welfare services in general. Instead, both the conceptual framework and the measures need to be modified according to the strategic objectives of the network and the needs of the particular decision-making situation. The present research includes only the design phase of performance measurement, and is thus unable to add knowledge about actual implementation or use of system level performance measurement, for example, how data is collected for measures, how organizational objectives are linked to objectives of the network and how network-level measures are integrated into the management systems of individual organizations. Further research is therefore needed about the implementation and actual use of measures to support the management of effectiveness in the welfare service systems.

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REFERENCES

Ahgren, B., & Axelsson, R. (2005). Evaluating integrated health care: A model for measurement. *International Journal of Integrated Care*, *5*, e01–e09. PMID:16773158

Axelsson, R., & Axelsson, S. B. (2006). Integration and collaboration in public health – a conceptual framework. *The International Journal of Health Planning and Management*, *21*(1), 75–88. doi:10.1002/hpm.826 PMID:16604850

Barretta, A., & Busco, C. (2011). Technologies of government in public sector's networks: In search of cooperation through management control innovations. *Management Accounting Research*, *22*(4), 211–219. doi:10.1016/j.mar.2011.10.002

Bititci, U., Garengo, P., Dörfler, V., & Nudurupati, S. (2012). Performance measurement: Challenges for tomorrow. *International Journal of Management Reviews*, *14*(3), 305–327. doi:10.1111/j.1468-2370.2011.00318.x

Bititci, U. S., Carrie, A. S., & McDevitt, L. (1997). Integrated performance measurement systems: A development guide. *International Journal of Operations & Production Management*, *17*(5), 522–534. doi:10.1108/01443579710167230

Bourne, M., Mills, J., Wilcox, M., Neely, A., & Platts, K. (2000). Designing, implementing and updating performance measurement systems. *Journal of Operations & Production Management*, *20*(7), 754–771. doi:10.1108/01443570010330739

Bourne, M., Neely, A., Platts, K., & Mills, J. (2002). The success and failure of performance measurement initiatives, Perceptions of participating managers. *International Journal of Operations & Production Management*, *22*(11), 1288–1310. doi:10.1108/01443570210450329

Brazier, J., Ratcliffe, J., Salomon, J. A., & Tsuchiya, A. (2007). *Measuring and Valuing Health Benefits for Economic Evaluation*. Oxford, New York: Oxford University Press, Inc.

Busi, M., & Bititci, U. (2006). Collaborative performance management: Present gaps and future research. *Journal of Productivity and Performance Management*, *55*(1), 7–25. doi:10.1108/17410400610635471

Callender, G. (2011). Alignment of inter-agency supply chains to enhance public sector performance management. *International Journal of Productivity and Performance Management*, *60*(1), 9–23. doi:10.1108/17410401111094286

Conaty, F. J. (2012). Performance management challenges in hybrid NPO/public sector settings: An Irish case. *International Journal of Productivity and Performance Management*, *61*(3), 290–309. doi:10.1108/17410401211205650

Coughlan, P., & Coghlan, D. (2002). Action research for operations management. *International Journal of Operations & Production Management*, *22*(2), 220–240. doi:10.1108/01443570210417515

Crook, W. P., Mullis, R. L., Cornille, T. A., & Mullis, A. K. (2005). Outcome measurement in homeless systems of care. *Evaluation and Program Planning*, *28*(4), 379–390. doi:10.1016/j.evalprogplan.2005.07.011

Cunha, P. F., Ferreira, P. S., & Macedo, P. (2008). Performance evaluation within cooperate networked production enterprises. *International Journal of Computer Integrated Manufacturing*, *21*(2), 174–179. doi:10.1080/09511920701607907

DeGroff, A., Schooley, M., Chapel, T., & Poister, T. H. (2010). Challenges and strategies in applying performance measurement to federal public health programs. *Evaluation and Program Planning*, *33*(4), 365–372. doi:10.1016/j.evalprogplan.2010.02.003 PMID:20303176

Drummond, M. F., Sculpher, M. J., Torrance, G. W., O'Brien, B. J., & Stoddart, G. L. (2005). *Methods for the Economic Evaluation of Health Care Programmes*. New York: Oxford University Press Inc.

Evans, J. M., & Ross Baker, G. (2012). Shared mental models of integrated care: Aligning multiple stakeholder perspectives. *Journal of Health Organization and Management*, *26*(6), 713–736. doi:10.1108/14777261211276989 PMID:23252323

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Flatau, P., & Zaretzky, K. (2008). The Economic Evaluation of Homelessness Programmes. *European Journal of Homelessness*, *2*(12), 305–320.

Franco-Santos, M., Kennerley, M., Micheli, P., Martinez, V., Mason, S., Marr, B., & Neely, A. et al. (2007). Towards a definition of a business performance measurement system. *International Journal of Operations & Production Management*, *27*(8), 784–801. doi:10.1108/01443570710763778

Gummesson, E. (2000). *Qualitative Methods in Management Research*. Thousand Oaks, California: Sage Publications Inc.

Halligan, J., Sarrico, C. S., & Lee Rhodes, M. (2012). On the road to performance governance in the public domain? *International Journal of Productivity and Performance Management*, *61*(3), 224–234. doi:10.1108/17410401211205623

Hansson, J., Qvretveit, J., Askerstam, M., Gustafsson, C., & Brommels, M. (2010). Coordination in networks for improved mental health service. *International Journal of Integrated Care*, *10*(25), 1–9. PMID:20922065

Jääskeläinen, A. (2010). *Productivity Measurement and Management in large Public Service Organizations. TUT Publication 927*. Tampere: Tampere University of Technology.

Jääskeläinen, A., & Lönnqvist, A. (2009). Designing operative productivity measures in public services. *VINE: The journal of information and knowledge management systems, 39*(1), 55-67.

Jääskeläinen, A., & Sillanpää, V. (2013). Overcoming challenges in the implementation of performance measurement: Case studies in public welfare services. *International Journal of Public Sector Management*, *26*(6), 440–454. doi:10.1108/IJPSM-12-2011-0014

Jansen, E. P. (2008). New Public Management; perspectives on performance and the use of performance information. *Financial Accountability & Management*, *24*(2), 169–191. doi:10.1111/j.1468-0408.2008.00447.x

Jones, K., Colson, P., Valencia, J. D., & Susser, E. (1994). A Preliminary Cost Effectiveness Analysis of an Intervention to Reduce Homelessness Among the Mentally Ill. *The Psychiatric Quarterly*, *65*(4), 243–256. doi:10.1007/BF02354302 PMID:7831412

Kaplan, R. S., Norton, D. P., & Rugelsjoen, B. (2010). Managing Alliances with the Balanced Scorecard. *Harvard Business Review*, (January-February): 114–120.

Kulmala, H., & Lönnqvist, A. (2006). Performance measurement of networks: Towards a non-financial approach. *International Journal of Networking and Virtual Organizations*, *3*(3), 299–316. doi:10.1504/IJNVO.2006.010953

Kurunmäki, L., & Miller, P. (2011). Regulatory hybrids: Partnerships, budgeting and modernising government. *Management Accounting Research*, *22*(4), 220–241. doi:10.1016/j.mar.2010.08.004

Laihonen, H., Jääskeläinen, A., & Pekkola, S. (2014). Measuring performance of a service system – from organizations to customer-perceived performance. *Measuring Business Excellence*, *18*(3), 73–86. doi:10.1108/MBE-08-2013-0045

Linna, P., Pekkola, S., Ukko, J., & Melkas, H. (2010). Defining and measuring productivity in the public sector: Managerial perceptions. *International Journal of Public Sector Management*, *23*(5), 479–499. doi:10.1108/09513551011058493

Lönnqvist, A. (2004). *Measurement of Intangible Success Factors: Case Studies on the Design, Implementation and Use of Measures, TUT Publication 475*. Tampere: Tampere University of Technology.

Lönnqvist, A., & Laihonen, H. (2012). Welfare service system productivity: The concept and its application. *International Journal of Productivity and Performance Management*, *61*(2), 128–141. doi:10.1108/17410401211194644

Martin, L. L., & Kettner, P. M. (2010). *Measuring the Performance of Human Service Programs*. Thousand Oaks, California: Sage Publications, Inc.

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Murray, C. J. L., & Frenk, J. (2000). A framework for assessing the performance of health system. *Bulletin of the World Health Organization*, *78*(6), 717–731. PMID:10916909

Neely, A., Gregory, M., & Platts, K. (2005). Performance measurement system design. A literature review and research agenda. *International Journal of Operations & Production Management*, *25*(12), 1228–1263. doi:10.1108/01443570510633639

Nielsen, S. B., & Ejler, N. (2008). Improving Performance? Exploring the Complementarities between Evaluation and Performance Management. *Evaluation*, *14*(2), 171–192. doi:10.1177/1356389007087538

Osborne, S. P. (2006). The New Public Governance? *Public Management Review*, *8*(3), 377–387. doi:10.1080/14719030600853022

Packard, T. (2010). Staff Perceptions of Variables Affecting Performance in Human Service Organizations. *Nonprofit and Voluntary Sector Quarterly*, *39*(6), 971–990. doi:10.1177/0899764009342896

Parung, J., & Bititci, J. (2008). A Metric for Collaborative Networks. *Business Process Management Journal*, *14*(5), 654–674. doi:10.1108/14637150810903048

Pekkola, S. (2013). *Performance Measurement and Management in a Collaborative Network, Acta Universitatis Lappeenrantaensis 534*. Lappeenranta: Lappeenranta University of Technology.

Porter, M. E. (2010). What is Value in Health Care? *The New England Journal of Medicine*, *363*(26), 2477–2481. doi:10.1056/NEJMp1011024 PMID:21142528

Provan, K. G., & Milward, H. B. (2001). Do Networks Really Work? A Framework for Evaluating Public-Sector Organizational Networks. *Public Administration Review*, *61*(4), 414–423. doi:10.1111/0033-3352.00045

Qvretveit, J. (2002). How to run an effective improvement collaborative. *International Journal of Health Care Quality Assurance*, *15*(5), 192–196. doi:10.1108/09526860210437403

Rantanen, H., Kulmala, H. I., Lönnqvist, A., & Kujansivu, P. (2007). Performance measurement systems in the Finnish public sector. *International Journal of Public Sector Management*, *20*(5), 415–433. doi:10.1108/09513550710772521

Saunila, M., Ukko, J., Rusila, P., & Rantanen, H. (2012). Challenges of performance measurement and management in public healthcare services. *World Review of Entrepreneurship, Management and Sust. Development*, *8*(2), 181–195.

Sillanpää, V. (2011). Performance measurement in welfare services: A survey of Finnish organisations. *Measuring Business Excellence*, *15*(4), 62–70. doi:10.1108/13683041111184116

Strandberg-Larsen, M., & Krasnik, A. (2009). Measurement of integrated healthcare delivery: A systematic review of methods and future research directions. *International Journal of Integrated Care*, *9*(2), e01–e10. PMID:19340325

Westbrook, R. (1995). Action research: A new paradigm for research in production and operations management. *International Journal of Operations & Production Management*, *15*(12), 6–20. doi:10.1108/01443579510104466

Wistow, G., & Dickinson, H. (2012). Integration: Work still in progress. *Journal of Health Organization and Management*, *26*(6), 676–684. doi:10.1108/14777261211275881 PMID:23252320

Yin, R. K. (2009). *Case Study Research, Design and Methods* (4th ed.). Thousand Oaks, California: Sage Publications, Inc.

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