Firms' maneuvering between institutional logics in the public sector for commercializing welfare innovations

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Abstract

The article aims to explore, through a micro level focus, how individual private firm actors maneuver between institutional logics embedded in different individual public actors operating at various levels in the public sector, when making efforts towards commercializing innovative welfare solutions developed through Public Private Innovation (PPI). Institutional logics are socially constructed patterns of taken-for-granted practices and belief systems that provide actors meaning. Therefore, knowing how to handle institutional logics becomes essential for private firm actors as institutional logics embedded in public actors influence whether private firm actors are successful or not in achieving commercialization in the public market. The study is based on an in-depth case-study containing 4 PPI projects that have succeeded in commercializing their solutions in one way or another. All projects focus on developing innovative solutions to the public health care system through a joint innovation process between public and private actors, which afterwards potentially can be commercialized in the public health care market. The preliminary findings show that private firms, who succeed in commercializing interact with public actors operating at various levels in the public sector using a top-down, bottom-up or mixed approach. The top-down approach shows that private firms handle institutional logics embedded in political and managerial actors by creating legitimacy and accept from above concerning their welfare solutions. The bottom-up approach exemplify that private firms handle institutional logics embedded in actors of health professionals by generating a need for new solutions from below and by gaining access to a network of health professionals in the broader public health care market. The mixed approach demonstrates that private firms handle institutional logics by combining interaction with actors across levels in the public sector, thereby mixing top-down and bottom-up approaches. As such, the three approaches point out that private firms, when handling institutional logics, can do this by either modifying them or integrating them. Finally, some firms end up avoiding them in their efforts to commercialize PPI solutions within the Danish public health care system and focus on other markets.

1. Introduction

Through a multiple case study the article explore in-depth how private firm actors who engage in Public Private Innovation (PPI) may handle institutional logics embedded in public actors within the Danish public health care system, when the firms seek to promote commercialization of welfare solutions.

It is important for firms to engage in relationships and interact with actors in their environment, especially their potential customers when they aim to commercialize (Walter et al., 2001; Anderson et al., 1994; Håkansson & Snehota, 1989). However, firms' interaction with potential customers in a PPI setting is very different versus a business-to-business setting because highly institutionalized sector differences are in play among actors within the public and private sector (Rainey & Bozeman, 2000). Public organizations are as potential customers very different from private firms in an essential way as the public sector holds institutional logics that differs and competes with those in the private sector (Saz-Carranza & Longo, 2012; Thornton & Ocasio, 1999, Anderson et al., 2010). Also, purchasing in the public sector in general is understood as a complex decision-making process involving many actors (Lau et al., 1999). As such, interaction with multiple public actors influencing a purchase decision becomes important for firms' commercialization of PPI solutions, as successful commercialization seem to include interaction with potential costumers (Jolly, 1997).

As the health care system seems to be a potential costumer market for innovative welfare innovations interaction with potential public customers may be complex because public actors influencing purchase decisions are scattered across different levels within the health care system and commercialization activities thus have to take into account a pre-existing network of actors, activities and resources, which is linked to the focal firm (Ford et al., 2010). Also, actors influencing a purchase decision may be carriers of diverse sub-logics, as organizations may contain more than one logic at the same time (Hinings, 2013). Particularly, PPI firms have to deal with public sector logics in political levels, management levels, profession levels, and procurement levels that reside across or in between local hospitals, regional units and within municipalities. As such, PPI projects form spaces where competing logics co-exist and are in interplay across the public and private sector.

As relationships with public actors outside the single firm may restrict PPI firms' opportunity to make autonomous commercialization choices a focus on how to handle the relationships is required (Ford et al., 1998). Drawing mainly on institutional logic theory we seek to empirically investigate how individual firm actors engaged in PPI handle commercialization by maneuvering between public sector logics within a complex public context in which the firms target their commercialization. We specifically focus on the public health care system.

In order to uncover the complexity of commercialization processes, it requires looking at what happens at the micro level (Barley & Tolbert, 1997; Perkmann, 2011) as this level contains what takes place when private actors interact with different public actors through concrete activities concerned with commercialization. However, there seem to be a shortage of research that has investigated how institutional logics play out in action at a micro level and how individuals proactively deal with those (Greenwood et al., 2011; Barley, 2008). As such, we intend to contribute to the further development of institutional logics theory. Also, as firms' external relations in commercialization processes of innovative solutions attract little attention in business research (Aarikka-Stenroos & Sandberg, 2012) we will empirically contribute further to the research in firms' commercialization processes through interaction with actors in their environment. Recent research show that commercializing innovative solutions requires acceptance and diffusion among multiple actors as commercialization tends to fail if it does not attract support from different actors in the environment (Aarikka-Stenroos, 2014). The research question put forward is: *How do private firms handle institutional logics embedded in public actors when the firms aim to promote commercialization of new innovative solutions developed through PPI relationships?*

The research grounded in this article illustrates how firms may enable themselves to understand and reflect consciously upon public sector logics and how to *maneuver* between logics within the public context. It may help firms to develop a better understanding of how public actors' logics influence purchase decisions, which seems central to successful commercialization. Furthermore, it may support firms to better understand and potentially influence different logics, and perhaps eventually change 'the rules of the game', when they seek to commercialize innovative solutions developed through PPI.

The article is structured as follows: First, we identify through means of institutional theory which public sector logics that influence the PPI context in the health care system. After presenting four in-depth cases consisting of four different PPI projects in the methodology section, we present the findings which give insight into how private firms interact with the identified multiple public sector logics in the PPI context in order to successfully commercialize new solutions. Finally we close the article with a conclusion, where implications are proposed.

2. Theoretical framework

2.1. Competing institutional logics embedded in individual public and private actors

To investigate the dissimilar public-private sector logics in PPI we draw on institutional logics research, an approach which emerged from Friedland and Alford (1991). They focused on society as a non-functionalistic inter-institutional system, thus rejecting a deterministic approach, as no institutional logic should be accorded a priori causal primacy. As such, logics on a macro level are available for individuals and organizations to elaborate and change. Recent research in institutional logics theory focuses on how different institutional logics co-exist (Dunn & Jones, 2010) and interest in competing logics have been increasing (Saz-Carranza & Longo, 2012; O'Neil & Ucbasaran, 2011; Lawrence, Suddaby, & Leca, 2009; Reay & Hinings, 2009; Marquis & Lounsbury, 2007). However, there seem to be scarcity in research that have investigated the deeper inner workings of competing institutional logics and how individuals proactively deal with those at the micro level (Greenwood et al., 2011). We aim to address precisely this by focusing on how individual actors in PPI firms handle institutional logics embedded in individual public actors, when the firms aim to promote commercialization of PPI solutions. As such, we bring in societal logics into an interaction approach focusing on firms' interaction with other organizational and individual actors.

Drawing on Friedland and Alford (1991), Thornton and Ocasio (2008) elaborate institutional logics theory and conceptualize logics on a societal macro level. Logics are defined as the structure in which organizational and individual actors are bound together by a taken-for-granted common meaning and belief system and its taken-for-granted practices that pre-dominate within organizations and individuals and provide meaning to their social reality (Thornton & Ocasio, 2008). As such, logics are both material and related to meaning (non-material). Practices are material activities that are fundamentally shaped by broader cultural frameworks or belief systems which provides order and meaning to a set of activities – a practice (Lounsbury & Crumly, 2007). Recent research has proposed the following societal institutional logics: Market, corporation, profession, state, family, religion and community (Thornton & Ocasio, 2012) emphasizing that these logics are always in a process of change. The institutional logics proposed on a societal level may express themselves in individuals and organizations; however, their domination may vary as individuals and organizations may have multiple goals and more than one logic at play at the same time (Öberg & Shih, 2014; Vargo S. L., & Lusch, 2008). In this article the focus will mainly be on variants of private sector logics and public sector logics in relation to the different levels within the health care system. The most relevant logics manifested in the public sector contain a state logic and (health) profession logic, whereas the private sector contains a market logic and corporation logic, and in joint public private relationships such as PPI projects the logics are considered as competing, but at the same time co-existing (Saz-Carranza & Longo, 2012). Profession logics may be present in both the public and private sector – however, we mainly focus on profession logics within the public health care system, as the empirical case study reveals that a health profession logic within this particular context seem to be significantly central when firms aim to promote commercialization of innovative PPI solutions.

The public sector logics are most commonly characterized as having goals directed towards the common good in society, and as seeking to advance the well-being of its citizens through the effective use of tax money, and beliefs such as political ideas need to be taken into account as well. The public sector is characterized as being rule driven and based on a bureaucratic organization form. As such, the public sector hold inherited elements connected to public bureaucracy grounded in predictability and rules defining relations between different levels and bureaucratic actors (Aberbach et al., 1981). Of course, bureaucracy may also be present in private firms (e.g. multinational corporations). However, the private sector logics, on the other hand, are mainly described as pursuing profitability (e.g. to satisfy shareholders opposed to the public sector focus where the citizens and common good are in focus), focusing on increasing growth within their firm, and building up competitive advantages to develop a good market position (Anderson et al., 2010; Thornton & Ocasio, 1999). Table 1 displays the main societal differences in institutional logics between the public and private sector.

Table 1: Basis characteristics of logics in the public and private sector (Source: Thornton et al., 2012)

	Private sector		***Public sector***	
Categories/characteristics	**Market**	**Corporation**	**State**	**Profession**
Economic system	Investor capitalism	Managerial capitalism (internal in a firm)	Welfare capitalism	Personal capitalism
Sources of legitimacy	Share price	Firm's market position	Democratic participation	Personal expertise
Sources of authority	Shareholder activism	Management	Bureaucratic domination; political parties	Professional association
Basis of norms	Self-interest	Employment in firm	Citizenship in nation	Membership in union
Basis of strategy	Increase profit	Increase firm size and diversification	Increase common good	Increase personal reputation and quality of craft
Informal control Mechanisms	Industry analysts	Organization culture	Backroom politics	Celebrity professional
Formal control Mechanisms	Enforcement of regulations	Board and management authority	Enforcement of Legislation	Internal and external peer review
Organization form	Marketplace	M-form organization	Legal bureaucracy	Network organization
Logic of exchange	Immediate best bargain	Personal career advancement	Political power	Personal career advancement
Basis of attention	Status in market	Status in	Status of interest	Status in

		hierarchy	group	profession

The institutional logics are displayed as ideal types. As such, they serve as an overall guide in understanding the differences in public private sector logics in PPI. To fully understand how individual firm actors handle institutional logics embedded in individual public actors there is a need for examining the logics as they manifest themselves in a concrete setting. This concrete setting is those activities surrounding the purchase decision that takes place within different levels and among diverse individual actors in the health care system. Thus, we will focus on the micro-level where the societal institutional logics are embedded and activated in individual actors. These individual actors within organizations in the public and private sector are influenced and shaped by the institutional logics related to each their sector. Also, institutional logics are affected and shaped by these individuals and organizations (Thornton et al., 2012; Reay & Hinings, 2009). As such, individuals within organizations in the public and private sector are in interplay with the institutional logics related to each their sector on the macro level – continuously producing and re-producing them while also being influenced by them making it possible to modify or even change institutional logics over time. In examining the micro level, however, one needs to be aware that individuals not always identify with prevailing logics as human behavior may be driven by multiple goals and perceivably irrational factors which guide their behavior (Ford, 1996).

3. Method

3.1. Multiple case study

PPI projects are the empirical context of the study. They are typically established as development projects, usually extending over a few years, aiming to develop innovate welfare solutions targeted the public health care system through joint interaction between public and private actors (Weihe et al., 2011). A general argument for the value of PPI is that to be able to develop innovative welfare solutions there is a need to combine knowledge that cuts across the public and private sectors (Klijn & Teisman, 2003). PPI is alongside with public innovation an increasing phenomenon in Denmark and PPI projects have especially been established with an aim to develop innovative welfare solutions targeted health care (Brogaard & Petersen, 2014). As such, this article will focus on PPI projects centered on the public Danish health care system.[1]

[1] After the Danish national structural reform which was implemented in 2007, the Danish health care system consist of 5 regions with responsibility for the Danish hospitals and 98 municipalities with responsibility for prevention, rehabilitation of patients when they are released from the hospital, dental care for children, home health care, treatment of abusers and health care services for children. The regions revenues consist of 80 % state funding and 20 % from the municipalities (a basic contribution per citizen and an activity determined contribution related to how many times a citizen is hospitalized).

An explorative in-depth case study is conducted based on four finished PPI projects which focus on developing innovative solutions to the Danish public health care system through a joint innovation process between public and private actors. Prior to the case selection 16 interviews have been conducted with private firm actors – each of them has participated in at least one PPI project (Appendix 1 provides a full overview of the 16 firms). Based on a review of the 16 interviews, including the story of the PPI projects the firms had been engaged in, the four cases have been selected. The four cases were selected because they give particular good insight into explaining how private firms may handle institutional logics embedded in different actors in the public health care system when they seek to promote commercialization. As such, we have chosen to investigate four cases in depth, as few in depth cases most suitably illustrate the interaction between firms and their environmental context (Dubois & Gadde, 2002).

The interviews in the four in-depth cases focused on the course of the innovation process and commercialization activities in specific PPI projects. We especially drilled into situations where firms' engagement involved interaction with different actors which they perceived central to their commercialization activities. Each interview lasted for about 1 ½ hours and has been recorded, transcribed and analyzed afterwards. The interviews were semi-structured. An interview guide based on the research question guided the interviews while we as researchers also were open to empirically driven topics or themes emerging along the way. Through the analysis of the transcripts identifiable topics or themes related to the research question has been labeled as a way to guide the review of the transcripts (Miles & Huberman, 1994).

Based on these firms' experience of which public actors seem relevant during commercialization, we identified the relevant public actors influencing a purchase decision at different levels within the health care system. These actors are characterized by their medical profession, purchasing occupation, managing occupation and political occupation – all representing the levels relevant for commercializing PPI solutions in the health care system. Subsequently, interviews have been carried out with 5 individual public actors with PPI experience containing actors having a medical profession, 2 public purchasers, a politician and a public manager. These public actors are represented at different levels in the public health care system. Furthermore, secondary data in the form of documents about the health care system was gathered as background information.

3.2. Four PPI cases: Public actors at different levels in the public health care system

In the following the four cases will be presented narratively before the findings will be offered. The story of the four cases is told in a way that put particular emphasis on the institutional logics that played a *dominating* role when the firms aimed at commercializing their welfare solutions developed in PPI projects. The stories will focus on present co-existing logics as they manifest themselves in individual firm actors in PPI and in individual public actors which may influence a purchase decision at different levels within the health care system. Overall the four cases illustrate the occurrence of different variants of public sector institutional logics at different levels which is illustrated in table 2.

Table 2: Different levels in the health care system

Cases	**Levels within the public health care system**
Primarily illustrated in case 1 and case 4	Profession logic/level: Public actors with a *medical/health profession*
Primarily illustrated in case 2	Political logic/level: *Politicians* focusing on health care
Primarily illustrated in case 3	Purchasing logic/level: Public *purchasers* with experience in PPI public procurement: - regional procurement department level and local procurement department level at hospitals - procurement department in municipalities
Primarily illustrated in case 1 and case 2	Management logic/level: Public *managers* in the health care system

The levels are all related to the operating part of the healthcare system consisting of regions with responsibility for hospitals, and municipalities mainly with responsibility for prevention, rehabilitation of patients when they are released from the hospital and home health care among others. Both regions and municipalities are governed politically and they also consist of central health administrations in addition to operational health organizations such as hospitals (regions) and nursing homes (municipalities). Of course, the national level also influence purchase decisions within the health care system indirectly, e.g. through national laws, standards and EU directives. On the national level The Ministry of Health is in charge of the administrative functions in relation to the organization and financing of the Danish health care system. However, our focus lies within the operating part of the health care system, where firms in PPI are in interplay with logics related to public actors in the health care system.

The story of case 1

Case 1 consists of a firm that was founded as a spin-off of an existing firm in Denmark in 2008. The firm was founded as it started to collaborate with a Danish hospital through a PPI project and the project period lasted for 1 ½ year. The aim of the project was to develop a pipe system for automatic transportation of blood samples in hospitals. Their entry point to the hospital was based on informal network as the firm founders knew a board member in the hospital located within the same region as the firm. The hospital board member once announced that a problem within hospitals was the great amount of time spent on transporting blood samples. He mentioned that a well reputed doctor and professor had come up with an idea to develop transport pipes for transportation of blood samples – the doctor just needed to find a firm to develop the idea with. Two persons from the firm received contact details of this well reputed doctor and professor who was a manager of the laboratory department at the hospital. The firm new how to develop such transport pipes and had expertise in developing them for other industries such as the food industry. They were intrigued by the problem the hospital had and were eager to solve it; however they were aware that the hospital system was a whole new market for them and they had no prior business experience with the health care system. The firm met a couple of times with the doctor and they came to trust that the doctor could support them in developing the transport system. The doctor had a dominant role as the firms' gatekeeper to the hospital system as he helped the firm to gain access to the hospital. As the firm did not have any experience or knowledge of health care they were dependent on having access to the hospital in order to observe the work flows carried out by health care employees across different departments, which were involved in the blood sample work processes. Communicating face to face with employees became a part of a time-consuming learning process for the firm during the first period of the project as they had to learn to understand the vocabularies and different patterns of practice and mindsets related to health care employees. Within ½ year a prototype was developed.

The doctor then helped them arrange meetings with the hospital management which, as decision makers, has an influence on a purchase decision. The firm was told by the doctor that a general norm among hospital managers most often is related to buying new products for the lowest price in order to follow the year's budget – even though the products may save the hospital resources in the longer run. The doctor seemed to possess medical prestige and he participated in the first meeting together with the firm and hospital management. At the meeting, he helped convince the management to make an agreement with the firm about making a laboratory for the newly developed blood sample transport system within the hospital as the product lived up to the medical quality requirements necessary for transporting blood samples. At the same time, the firm convinced the management by talking about their technological knowhow related to the transport system. The hospital management became willing to pay for the installment for testing the product and if the management did not want to buy it afterwards they would tear the laboratory down again. Bio analytics, nurses among others were attached to the laboratory and more well-documented professional tests were made on a larger amount of patients over the next period of time. Installing the system also included changes in work routines which required that the doctor persuaded other health professionals to change practice. In the beginning some resistance was present among health professionals.

After the project period of 1 ½ years where the product was developed by the firm and tested at the hospital, the doctor and professor who functioned as the firms' gatekeeper also became a central reference when the firm made contact to other hospitals to sell the product. He knew many doctors at different hospitals and he talked to them about the new transport system. Also, he wrote articles about it in medical magazines distributed to Danish hospitals. During commercialization of the transport system to different Danish hospitals, where the product was implemented and sold, the firm understood that the laboratory doctors and hospital managers at the other hospitals had heard about the transport system from other medical professionals. In short, the product help optimizing blood transportation by ensuring faster analytical responses resulting in significant time and cost savings for the hospital while relieving patient anxiety. The documentation developed through tests in the first PPI project and later at other hospitals which had bought the product seem to have made it easier for the firm to export the product to multiple countries afterwards (Japan, Norway among others), because they could demonstrate that the product is used in their home market.

The story of case 2

Case 2 consist of a firm founded in Denmark in 2002 as a spin-off of an existing firm. It happened as the founders of the firm started a PPI project with a Danish Hospital. Their entry point to the hospital was based on informal network as they knew a doctor which was close to the management at the hospital located within the same region as the firm. Through informal conversations with this doctor and manager the firm developed the idea for a PPI project. The PPI project got the name 'The Patient Briefcase' and it lasted for 3 years. The Patient Briefcase allows the hospital to provide telemedical treatment and control of their COPD/Chronic obstructive pulmonary disease patients, while the patients are staying in their own homes. After the project period the hospital purchased the product from the firm and an operating agreement about running the Patient Briefcase for patients in treatment of COPD was made.

There are two central similarities with case one. First, as the firm did not have any experience or knowledge of health care they were dependent on having access to the hospital in order to attain knowledge about work flows carried out by employees across different departments. In this process, communicating with employees became part of a learning process for them during the first period of the project. Second, the firm had a gatekeeper in the form of a doctor, which helped them gain access to the hospital. He especially played a central role in talking with the hospital management about putting hospital facilities into disposal for developing and testing the product in the beginning of the project period. Later, he approved the medical quality of the product in front of the management, which as overall decision makers has a particular influence on a purchase decision. The doctor helped the firm convincing the management about the financial benefits gained by buying the product. As such, he had an influence on the management. However, opposed to case 1 the political level was also involved in the process where the project was developed. During this process the firm made contact to national politicians, e.g. the minister of health who visited the firm after the product had been tested and documentation of the timesaving benefits etc. had been documented. By having a dialogue with national politicians the firm aimed to change the setup of the national law concerned with the financial rates, which each hospital receive from the state when patients are hospitalized. In order to secure that hospitals would still possess an incitement to provide treatment and control of their COPD patients, while the patients are staying in their own homes and are not hospitalized, the firm was lobbying for a law change concerned with giving hospitals financial rates for COPD patients receiving telemedical treatment in their home. The political level involved national politicians and the health minister among other politicians had visited the firm during the project period. The politicians heightened telemedicine as a relevant theme on the national political agenda and in relation to this they also influenced the need for a law change, which eventually was made by the national assembly.

Opposed to case 1, the firm did *not* succeed in commercializing the product to other hospitals in Denmark after the project period where the product was developed. As such, as a gatekeeper, the doctor only succeeded in helping the firm gain access to the management level at the hospital which he was a part of himself, and not to the hospital system as a whole. Therefore, the firm itself started to contact different hospitals in different Danish regions with an aim to present test documentation and sell the new product. However, managers at other Danish hospitals did not agree to buy the new product in spite of the documentation of the products' several benefits provided by the firm. Therefore, the firm gradually gained knowledge about health care systems in different countries and found Norway and England as promising markets for commercializing telemedical solutions. Especially, Norway was promising because its health care system is build up in a way where each hospital has less autonomy to decide whether a new solution is going to be purchased and implemented compared with those in Denmark.

The story of case 3

Case 3 consist of a firm founded in Denmark in 1970. The firm is a manufacturer of beds, side tables among other things targeted hospitals and nursing homes. The firm is situated in Denmark and has 35 employees.

Their products are developed in close cooperation with staff groups in the nursing sector as well as hospital sector. Apart from being the supplier to the Danish market, the firm is exporting products primarily to the Scandinavian market and the Netherlands as well as to a smaller degree to countries in Europe, Asia and Africa. The PPI project this firm engaged in was a 3 year PPI project about developing an intelligent hospital bed for the future. The intelligent bed is developed in collaboration between a hospital (within the Central Denmark Region), a municipality and four firms in total with the firm as a frontrunner among the firms. The development task was launched by the Central Denmark Region as the EU tender form 'competitive dialogue' and the tender was won by the firm. Therefore, the firm has been certain about a sale to the hospital which consist of a delivery of a certain amount of hospitals beds after the development period in the project.

The most central element in the development of the bed is that the value proposition was targeted hospitals in the beginning of the project period – however, over time the firm became more focused on further developing a bed which could be used for patients in the home and not only in hospitals (when patients are not hospitalized but arrive to their homes after they come back from the hospital, the expenses for the patients shift from the hospitals to the municipalities). As such, the firms' logic seems to be dealing with increasing diversification in order to make the best amount of profit from the bed they were developing for the hospital partner in the project. This logic manifested itself as the firm expanded its focus from focusing on developing value to the hospital participating in the project to developing a bed which additionally focused on value for municipalities. The firms' decision to do this expansion in the value proposition did not take place as an isolated decision. This focus emerged simultaneously with the development of the bed as the firm interacted with public purchasers in Danish municipalities. Through dialogue the firm realized that one central element to take into account is not to develop a too expensive bed, as it experienced that the purchasers seemed to comply with a logic about buying at a low cost. As such, the firm seems to balance between creating an innovative and expensive product with a more narrow focus on keeping the product at a low cost. In developing the innovative flexible bed the firm has aimed to balance these two factors by making the basis for the bed fairly simple and at a low-cost while also making it possible to add on extra innovative equipment on the bed making it more expensive. The new kind of bed developed through the project period is thus not a 'typical' hospital bed but it can be suited to fit into a living room in patients' homes (e.g. the bed can be separated and made into a comfortable chair), which makes it attractable for municipalities buying beds for patients that lie within their responsibility.

The story of case 4

Case 4 consist of a firm founded in Denmark in 1997. The firm has 17 employees and is a manufacturer of person lifts, transport chairs and other equipment used in the health care system. The firm was engaged in a PPI project which lasted for about 1 ½ years. During the PPI project the firm collaborated with a hospital and another firm. The aim of the project was to develop a prototype of a mobile person lifter, which can handle overweight (bariatric) patients with virtually no effort for the caregiver. The product is motor-driven, drives sideways, turns on the spot and has an active positioning system making it possible to place the patient correctly, both in beds and in chairs.

During the project period the firm interacted with health professionals and patients in order to identify user needs and experiences. In the first part of the project period an engineer and a designer working in the firm visited the project partner hospital several times. At the hospital they for instance observed the workflow of a hospital porter in order to identify potential challenges in the existing work practices. Also, interviews were made with patients and health professionals including nurses and hospital porters among others. The approach used for the development of the product was very much based on user-driven innovation including interaction with health professionals and patients. The firms' aim seemed to be concerned with developing and testing a product which fitted user needs in the best possible way. In relation to this the firm aimed to develop documentation of the user-benefits the product made which is concerned with creating a better work environment for especially nurses and hospital porters when working with overweight patients. As such, the firm seems to be focused on developing a beneficial market position among firms developing person lifts and similar products by developing a unique product.

After the project period where the product had been tested at the hospital which was the project partner the firm contacted other Danish hospitals with the aim to sell the product. The firm also wanted to focus on exporting the product, but it knew that it had to succeed in implementing the product at multiple hospitals in order to create more references before they would be able to export the product. However, the firm did not succeed in commercializing the product as it experienced that the hospitals declined to buy the product because they wanted to keep fairly short term budgets. As the firm a year after the end of the project period still had not succeeded in commercializing the product it started to look for public funding opportunities. Specifically, the firm searched for funds focused on helping the testing of new innovative products. Eventually, the firm received public funds which made it possible to test the product at 9 Danish hospitals using the funds they received. 3 of these hospitals bought the product afterwards. The main focus of the firm, however, was to commercialize the product internationally and to use the 3 Danish hospitals as references. The firm has currently succeeded in commercializing the product to hospitals in USA. This case share similar characteristics with case 2 as the firms in both cases mainly focus on exporting the products they have developed in the PPI project they have been engaged in.

4. Findings

4.1. Case 1, 2, 3 and 4: Institutional logics in play

The variants of institutional logics identified in the four cases are sub-logics which have also been recognized across several other PPI projects, which were highlighted in the 16 interviews made with PPI firms prior to the case selection. As such, these sub-logics manifest themselves across organizations within the health care system. The emergence of such sub-logics is beyond the scope of this article. However, critical events or macro level changes in the environment, such as new regulatory systems in health care as shown by Scott et al. (2000), may trigger change and emergence of new logics (e.g. logics more focused on price compared to quality in health organizations' buying criteria).

Case 1 especially illustrates how PPI firms maneuver between public sector logics embedded in actors related to the medical **profession** and **management** level within the health care system.
In this case, two dimensions of institutional logics embedded in public and private actors seem to dominate.

	Private sector		***Public sector***	
Characteristic	**Market**	**Corporation**	**State**	**Profession**
Organization form	Marketplace	M-form organization	Legal bureaucracy related to management decisions	Professional network mobilized to attract attention
Logic of exchange	Immediate best bargain	Personal career advancement	Political power (indirect)	Personal career advancement

Note: The logics which seems to dominate during the PPI project are highlighted with orange

As the institutional logics are ideal types, a pure representation of the logics is not empirically possible but variants of them are manifested. The logic that dominates the profession level is especially related to the network form of organization practiced by a well-recognized doctor. Through interaction with this doctor possessing profession logics, the firm succeeded taking advantage of his professional network relations within the health care system while, at the same time, enacting the firms' own logic by viewing the health care system as its marketplace for commercialization of the product. Thus, both a public sector profession logic and a market logic seem to co-exist in a similar way as found by Saz-Carranza & Longo (2012) in their study of logics in public-private joint ventures.
Also, the doctors' professional network relations gave the firm access to the management level. This level seems to be dominated by the state logics' dimension about legal bureaucracy especially focusing on

enforcing pre- determined budgets given from above. A state logic concerned with political power is also revealed here. Making efficient use of tax money seem relevant, because hospitals are subject to a political system accountable for spending tax money with moderation. The firm states:

The financial crisis and the political pressure on hospitals have been good, because now they are more focused on looking at how they spent money and buy things, and also buy things which will rationalize the day-to-day running.

As such, elements of a market logic may also be traced within the public sector as hospital managers seems focused on getting a good bargain, although the overall logic is related to political power.
It seems necessary to convince hospital managers during firms' commercialization activities, as there has been a shift in the culture of buying within the last couple of year. The decision to buy has shifted from the doctors being the primary decision makers, to the hospital managers being the primary decision makers controlling the overall budget across all the hospital departments. As such, if a doctor at a department in a hospital wishes to purchase an innovative solution which requires extra resources not to exceed the department budget, the management will have the power to transfer more resources to a specific department. This is done especially when an innovative solution may be cost-effective for the hospital as a whole in the long run.

The firm also expresses that interacting with health professionals not being doctors was also important and that they possessed a different logic from managers and doctors. During interactions the firm realized that it needed to adjust its messages targeted the employees (e.g. nurses and hospital porters), as they viewed introduction of new time saving products as a threat to their jobs. However, the firm gained support from the well-recognized doctor who communicated with the employees in a way that made the product they developed seem beneficial for them as hospital employees.
Most essential for the firm during interaction with health professionals was the continuously interaction with the doctor who possessed a large network and had authority to persuade other health professionals as well as public managers. The importance of the professional network logic is illustrated by the following statement made by the doctor:

I have this enormous network, right, and I have connections with laboratories around the country… and I write to them with latest news and considerations and such.

As such, the doctor was able to mobilize positive attention to the PPI solution in his professional network which seemed to have made it easier for the firm to commercialize and diffuse the PPI solution to multiple hospitals within the Danish health care system.

Case 2 especially illustrates how PPI firms maneuver between public sector logics embedded in actors related to the **political** level and the **management** level within the health care system. As for the public sector logics, the most dominating logics are especially related to the political level as politicians had a central impact on the buying decision in this case.

	Private sector		***Public sector***	
Characteristic	**Market**	**Corporation**	**State**	**Profession**
Basis of strategy	Increase profit	Increase firm size and diversification	Efficient use of tax money	Increase personal reputation and quality of craft
Logic of exchange	Immediate best bargain	Personal career advancement	Political power influencing management decisions	Personal career advancement

Note: The logics which seems to dominate during the PPI project are highlighted with orange

Within the political level the state logic seems to be concerned with a basis of strategy, where the politicians focus on making effective use of tax money by increasing the use of telemedical solutions. Also, within the state logic case 2 illustrates that political power (and its related influence on law changes) may be a dominating logic. It seemed central for the firm to interact with politicians, especially because they functioned as influencers on key decisions and thus made an impact on the hospitals' decision to buy the product they had developed in the PPI project with the firm. Because of the law change, the hospital gained higher incitement to buy the product as the law change meant that the hospital could receive financial rates for COPD patients receiving telemedical treatment in their home instead of being hospitalized.

The dominating logic related to the firm is concerned with a logic of exchange by creating the best bargain in order to be able to sell the product to the hospital they have collaborated with. The firm states:

W*e only engage in a project when we see some real possibilities.* Also, the firm states: *When we are in the end of a project period and two lines have to be set, then there is one thing that dominates above all, and that is economy.*

Influenced by a market logic of exchange, the firm realized during the innovation process that it seemed necessary to interact with politicians as it came to understand that the national politicians possessed a central influential role in relation to the hospitals' decision to buy the new product. These politicians had the power to change the incitement structure to introduce the new telemedical product via a law change. The firm was not alone in lobbying for a law change. Also, patient associations among others tried to influence politicians. As such, the logic of exchange is to be understood widely viewing the exchange of e.g. products or services not only from the single firms' standpoint but as something which takes place during interaction processes with different stakeholders such as politicians as illustrated in case 2.

After the project period in case 2, where the firm developed the telemedical solution, the firm also interacted with public actors in the management level at other Danish hospitals. However, none of the hospitals did agree to buy the new product in spite of the documentation of the products' several benefits provided by the firm. The firm experienced that the different hospitals was influenced by what the firm characterized as a 'not invented here' logic which means that the hospitals prefer to invent new solutions by their own in order to show they are being innovative themselves. This seemed to constrain diffusion and commercialization of the product to other hospitals within the health care system. As such, the firms' interaction with decision making managers at other hospitals did not lead to successful commercialization as it did for the firm in case 1, where a highly well-recognized doctor was able to mobilize positive attention to the PPI solution through his network within the health care system.

Case 3 illustrate a dominating focus on the purchasing level. The firm seemed to compromise its own logic about making an innovative bed from a long termed perspective with that of the purchasers' shorter term perspective in the municipalities.

	Private sector		***Public sector***	
Characteristic	**Market**	**Corporation**	**State**	**Profession**
Logic of exchange	Immediate best bargain	Personal career advancement	Political power focused on keeping short term budgets	Personal career advancement

Note: The logics which seems to dominate during the PPI project are highlighted with orange

The firm has learned that it has to take into account not to develop a too expensive bed, as public purchasers seem to comply with a logic about buying at a low cost reflecting efficient use of tax money carried through by an overall state logic on a society level. The firm expresses that it experienced one purchaser saying:

I don't know about these beds, but I can see that you are more expensive than the cheapest competitor, so we have to choose the cheapest.

Also, as the purchasers seemed to comply with a logic about buying at a low cost reflecting efficient use of tax money, one may argue that elements of a market logic also seem to prevail within the public sector as purchasers focus on cost efficiency. However, this focus may be short termed due to considerations about keeping annual budgets which in the end is decided by managers who are subject to political control. As municipalities are politically controlled through democratic elections every fourth year, long termed investments may be difficult before an election because of potentially embedded insecurity related to purchasing new innovative products which may be more expensive. As such, documentation of the potential cost-efficiency an innovative solution may generate in the long run may not be taken into account by purchasers. One may also argue, that there is a loose coupling taking place when politicians state that they support introduction of innovative welfare solutions in the public sector but do not aim to make administrative personnel as managers and purchasers act on it.

Case 4 illustrates a PPI firm having a dominating focus on the users throughout the project period. As such, the main focus is on interacting with health professionals at the profession level in order to develop a mobile person lifter which fits the needs of health professionals and improves their work environment. Two dimensions of institutional logics embedded in public and private actors seem to dominate during the firms' commercialization activities related to the PPI project.

	Private sector		***Public sector***	
Characteristic	**Market**	**Corporation**	**State**	**Profession**
Sources of legitimacy	Share price	Firm's market position	Democratic participation	Personal expertise
Logic of exchange	Immediate best bargain	Personal career advancement	Hospitals focused on keeping short term budgets	Personal career advancement

Note: The logics which seems to dominate during the PPI project are highlighted with orange

Throughout the project period the firm maintains its focus on the profession level. In developing the product the firm centers on user-driven innovation and mainly interacts with health professionals and patients which are the forthcoming users of the mobile person lifter. The most dominant logic which seems to guide the firm throughout the project period is related to the corporation logic concerned with developing a beneficial market position by developing a unique product which thoroughly fits user-needs.

As such, the firm seeks to distinguish itself from others in the market. However, similar to case 2, the firm in this PPI project had difficulties in commercializing the product to hospitals in Denmark after the end of the project period, where the firm solely had been operating at the profession level. The most dominating public sector logic experienced by the firm, as it attempted to sell the product to Danish hospitals, was a logic concerned with keeping fairly short term budgets at the hospitals. A logic concerned with short term budget may constrain the opportunity for the firm to commercialize its innovative solution. This may result in a limited focus on implementation and commercialization of new health care innovations at Danish hospitals which the firm expresses that it experience:

What goes wrong in the process, this is clear, is that the Danish health care system does not follow up on implementation and commercialization, when an innovation has been developed.

However, after receiving public funds aimed at testing the product at several hospitals, the firm did succeed in selling the product to 3 of the hospitals which had tested the product. However, afterwards the firms' commercialization activities were focused on exporting the product which it, similar to the firm in case 2, succeeded in doing.

4.2. Three approaches for maneuvering between institutional logics

In the following the four cases will be discussed as to how they handled the manifestation of institutional logics embedded in individual public sector actors during their efforts to commercialize the welfare solutions developed through PPI projects. Overall, the four cases illustrate three different approaches private firm actors take. The cases emphasize the need to focus on multiple public sector stakeholders as active actors in a co-development innovation and commercialization process through firms' engagement in PPI projects. This focus widens the understanding of multiple different logics which needs to be taken into account during firms' commercialization. This seems to be in line with the fact that it is important for firms to develop and manage relationships with external partners in the value producing system (Wilkinson & Young, 2002).

Even though it seems possible to combine competing logics and potentially trigger an activation of alternative logics through interaction between actors within the public and private sector, some firms seem to choose to avoid prevailing public sector logics. Case 2 seem to illustrate a situation where the firm, after the PPI project period, ended up choosing an approach which simply *avoids* maneuvering between public sector logics. The firm is making efforts to sell its product in the Danish health care market, however, eventually it chooses to avoid maneuvering between hospital managers at multiple Danish hospitals and instead it focuses on exporting the product to succeed in commercialization. Also, case 4 illustrates a situation where the firm eventually chooses to avoid maneuvering between public sector logics and instead focus on export. As such, public sector logics embedded in actors within the health care system have influenced the shaping of the firms' attention as it decided to focus on export.

Top down approach

Case 2 mainly takes a top down approach as the firm interacts with logics embedded in public actors at the political level and the management level in relation to the firms' commercialization activities. The top down approach is characterized by dominating interaction with public managers and politicians. Also, case 3 take this top down approach. The firm in case 3 has become more focused on the purchasing level throughout their PPI experience. The shift in the firms' focus happened because it experienced the existence of prevailing logics within the purchasing level related to public purchasers' main attention on purchasing products at a low cost. Thus, adopting public purchasers' demands by balancing innovative product features with low price came to dominate the firms' focus as it wanted to commercialize in the Danish health care market.

Bottom up

Case 4 is characterized by merely using a bottom up approach where the firm focuses on involving the health professional users and patients in the innovation process in order to get a favorable market position by developing a product which differentiates itself. As such, the firm does not seem to maneuver between logics at different levels. Case 1 is also characterized by using a bottom up approach which is seen in the high use of interaction with a well-reputed doctor and professor holding the profession logic. However, what also characterizes case 1 is that the firm does not interact with actors from a bottom up approach all the time. It also uses a mixed approach including interaction with actors in the management level.

Mixed approach

Case 1 illustrates a mix of a bottom up and a top down approach. It seems like the firm is maneuvering between different logics embedded in public actors within the health care system. Such a maneuvering strategy, deployed by the firm, enhances firms' ability to select an appropriate message that fits a specific logic, when the firm interacts with different audiences containing logics different from theirs (O'Neil & Ucbasaran, 2011). As different public actors influencing a purchase decision are scattered across different levels within the health care system, the firm seem to reflect upon which central public actors to interact with. Thus, the firm seems to maneuver between different logics embedded in public actors within the health care system in order to promote commercialization by influencing purchase decisions. They do this continuously over time while shifting their dominant focus from one level to another and interacting with different actors within each level.

The firm in case 1 interacted to a high degree with a doctor who functioned as a gatekeeper to the hospital where the PPI solution was developed and tested and who was very well-reputed within the Danish health care system. As such, the doctors' professional status may have influenced the decision making process in the management level, both at the hospital where the blood transportation system was first implemented, and at other hospitals throughout the health care system. Within the health care system medical quality seems to be an important factor to pay attention to as peoples' lives are often at stake. Thus, the doctors' high professional status seemed very central for case 1 in order to gain support when they interacted with hospital managers and other health care employees. Consequently, the firm used a mixed approach by balancing between bottom up interaction (health profession) and top down interaction (management) continuously over time both during the PPI project period and afterwards.

5. Discussion of the findings

What characterizes firms trying to interact with logics embedded in public actors through PPI is that they do not let prevailing institutional logics limit their efforts in commercializing new welfare solutions successfully. Instead, they try to change the rules of the game, so to speak. Some firms especially do this by seeking to play a non–zero-sum game when they interact with public actors, in order to understand and provide value for different public actors influencing the purchase decision at different levels within the health care system.

Our preliminary findings show that private firms, who succeed in commercializing innovative PPI solutions in one way or another, do this by interacting with public actors that are carriers of different logics operating at multiple levels in the health care system. The firms did this by adopting three different kinds of interaction approaches: interaction through a top-down approach, interaction through a bottom-up approach and interaction through a mix of the two approaches making it possible to maneuver between different logics. Furthermore, we find that both public and private sector logics co-exist in PPI, opposed to a single overall logic that prevails over others.

Top down interaction approach: Case 2 and 3 illustrate a domination of a top down approach, especially after the PPI project has finished. In case 2 the firm aimed to commercialize to other Danish hospitals. The case illustrate that firms may not always succeed in commercializing innovative solutions in spite of a political focus and interaction with hospital managers. Further interaction with public actors possessing a health profession logic and containing high profession status seems to be necessary in order to convince hospital managers to purchase innovative tested solutions. As for case 3, the firm seemed to adapt to a logic embedded in public purchasers by adjusting their product so it suited the demand for low price at the expensive of innovative features. The firm seemed to be very aware of its choice and as such seemed to emphasize cost reduction in its operations at the expense of innovation to suit their buyer. Such adaptations made to suit certain buyers may make it difficult to meet requirements of others (Ford et al., 1998, p. 75). The top-down approach seems to be present in all cases. However, their dominance varies. The top-down approach indicate that it is particularly necessary to interact with logics embedded in public managers, as they have the authority to influence if a new welfare innovation can be bought. As such, they are able to influence purchasers. Actors within the management level seem to hold a logic concerned with an overall price-efficiency which is concerned with an aim not to exceed the official budget conceivably reflecting effective use of tax-money. The public sector logic which refers to legal bureaucracy seems to be dominant and is focusing on playing by the rules and e.g. keeping the budget. Also, a political logic concerned with making effective use of tax money dominates, and this may be reflected in the logic in the management level.

Bottom up interaction approach: In case 4 a bottom up approach is taken. Taking this approach provided the firm with extensive knowledge about user-needs during a process based on user-driven innovation. Though the firm eventually succeeded in commercializing the product and has increased its focus on export opportunities, case 4 seems to illustrate that a bottom up approach which is not complemented by a top down approach may have its weakness. This is revealed in case 4 in relation to the firms' commercialization as it maintained a long-term and uninterrupted focus on the profession level. As such, the firm did not complement its interaction with actors in the management level during the PPI project which seems to be necessary because purchase decisions within the health care system is mainly related to hospital managers being the primary decision makers who control budgets across departments. However, if commercialization is not the primary focus of a firm engaged in PPI a pure bottom up approach may be related to product development activities where learning about the user needs of health professionals within the health care system may be important. As illustrated in case 4, merely taking a bottom up approach may not be sufficient when firms aim to promote commercialization of innovative solutions developed through PPI.

Thus, interaction with health professionals within the health care system (e.g. focusing on quality or to understand work practices and user needs) is not enough if firms are to influence the primary decision makers of a purchase, which is especially related to the management level. Case 1 also take a bottom up approach but only partly as the approach is combined with a top-down approach. The case illustrate, that a bottom up approach may be used to gain access and possibility to interact with public actors in the management level.

Combining the top down and bottom up interaction approach: Case 1 seem to succeed in combining a bottom up and top down approach as the firm first interact with a key actor within the profession level (bottom up) and then with actors within the management level (top down). It seems important continuously to interact with actors within both of these levels. As such, the firm managed to establish dialogue and win acceptance from actors on the profession level prior to approaching the actors in the management level. The doctor engaged in the PPI project played a central role because the hospital managers seemed dependent on accepting his medical knowledge about the products' efficiency, which they, as formal decision makers, seemed to rely on.

6. Conclusion and managerial implications

Firms may benefit from gaining awareness both of different levels in the public sector and different public sector logics when they aim to commercialize PPI solutions.
To succeed in commercializing firms may interact with public actors operating at various levels in the public sector using a top-down, bottom-up or mixed approach. Through a top-down approach firms handle institutional logics through political and managerial actors by developing legitimacy and accept from above. On the other hand firms may through a bottom up approach handle institutional logics through actors of different professions by generating a need e.g. for higher quality or improved work processes from below. A mixed approach reveals that firms handle institutional logics by combining interaction with actors across different levels in the public sector, thereby mixing the top-down and bottom-up approaches. The firms can maneuver between logics and modify them or integrate them, while some firms end up avoiding them in their efforts to commercialize PPI solutions within the Danish public health care system and instead focus on other (international) markets.

As a central implication the article aims at increasing firms' understanding of the power of institutional logics embedded in the public context when private firms seek to successfully commercialize innovative solutions developed through PPI. It may enable firms' maneuvering between different logics embedded in public actors within the health care system, e.g. in order to select an appropriate message that fits a specific logic when aiming to commercialize. As such, firms may enable themselves to consciously align their own logics with different stakeholders' logics in order to shape their messages so they fit to different stakeholders' logics. However, it seems central to keep in mind that these logics may be context dependent and are always in a process of change, some logics more than others. Therefore, what makes sense to different stakeholders may change over time. Thus, it may be necessary for firms to pursue an understanding of stakeholders' logics as they continuously interact with them over time. As such, firms can actively engage in a process of both reflecting upon their own and their stakeholders' logics, and they can engage in actual action bringing their own and their stakeholders' logics into play with each other.

7. References

Aberbach, J.D., Putnam, R. and Rockman, B.A. (1981). Bureaucrats and Politicians in Western Democracies. Harvard University Press.

Anderson, J.C., Håkansson, H., Johanson, J. (1994). Dyadic business relationships within a business network context. The Journal of Marketing, pp. 1-15.

Anderson, T.S., Michael, E.K., Peirce, J.J. (2010). Innovative Approaches for Managing Public-Private Academic Partnerships in Big Science and Engineering. Public Organization Review, 12 (1), pp 1-22.

Aarikka-Stenroos, L., & Sandberg, B. (2012). From new-product development to commercialization through networks. Journal of Business Research, 65 (2), pp. 198-206.

Aarikka-Stenroos, L., Sandberg, B., & Lehtimäki, T. (2014). Networks for the commercialization of innovations: A review of how divergent network actors contribute. Industrial Marketing Management, 43(3), pp. 365-381

Barley, S. R., & Tolbert, P. S. (1997). Institutionalization and structuration: Studying the links between action and institution. Organization Studies, 18(1), pp. 93-117.

Barley, S. R. (2008). Coalface institutionalism. In R. Greenwood, C. Oliver, K. Sahlin, & R. Suddaby (Eds.), The Sage handbook of organizational institutionalism (pp. 491-518). Thousand Oaks, CA: SAGE.

Brogaard, L. & Petersen, O.H. (2014). Overview of public private innovation partnerships in welfare. Copenhagen: KORA.

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

Dunn, M. B., & Jones, C. (2010). Institutional logics and institutional pluralism: The contestation of care and science logics in medical education, 1967-2005. Administrative Science Quarterly, 55, pp. 114-149.

Ford, C. (1996). A Theory of Individual Creative Action in Multiple Social Domains. The Academy of Management Review , 21 (4), pp. 1112-1142.

Ford, D., Gadde, L.E., Håkansson, H.; Snehota, I., Waluszewski, A. (2010). Analysing Business Interaction. The IMP Journal, 4 (1), pp. 82-104.

Ford, D., Gadde, L.E., Håkansson, H., Lundgren, A., Snehota, I., Turnbull, P., Wilson, D. (1998). Managing Business Relationships. John Wiley & Sons 1998.

Friedland, R. & Alford, R.R. (1991). Bringing society back in: Symbols, practices, and institutional contradictions. In Powel, W.W. & DiMaggio, P.J. (Eds.) The new institutionalism in organizational analysis: pp. 232-263. Chicago: University of Chicago Press.

Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E. R., & Lounsbury, M. (2011). Institutional complexity and organizational responses. Academy of Management Annals, 5, pp. 317-371.

Hinings, B. (2012). Connections Between Institutional Logics and Organizational Culture. Journal of Management Inquiry, 21 (1), pp. 98-101.

Håkansson, H., Snehota, I. (1989). No business is an island: The network concept of business strategy. Scandinavian Journal of Management vol. 5, pp. 187–200.

Jolly, V. K. (1997). Commercializing New Technologies. Getting form Mind to Market. Harvard Business School Press, Boston, MA., USA.

Klijn, E.H. & Teisman, G.R. (2003). Institutional and Strategic Barriers to Public–Private Partnership: An Analysis of Dutch Cases. Public money and Management, 23 (3), pp. 137-146.

Marquis, C. & Lounsbury, M. (2007). Vive la résistance: competing logics and the consolidation of U.S. community banking. Academy of Management Journal, 50 (4), pp. 799–820.

Lounsbury, M. & Crumley, E. T. (2007). New Practice Creation: An Institutional Perspective on Innovation. Organization Studies, 28 (7), pp. 993-1012.

Lawrence, T. B., Suddaby, R., and Leca, B. Institutional work: Actors and agency in institutional studies of organizations. Cambridge, UK: Cambridge University Press, 2009.

O'Neil, I and Ucbasaran, D. (2011). Building legitimacy in the face of competing institutional logics: evidence from sustainability-driven entrepreneurs, *Frontiers of Entrepreneurship*, 31 (19), article 4.

Öberg, C. & Shih, T.T. (2014). Divergent and convergent logic of firms: Barriers and enablers for development and commercialization of innovations. Industrial Marketing Management 43 (3), pp. 419-428

Perkmann, M., Salter, A., & Tartari, V. (2011). Reaching Across Institutional Logics: Arbitrage Vs. Contamination. Paper presented at the DRUID conference 2011.

Scott, W. Richard (ed.). Institutional change and healthcare organizations: From professional dominance to managed care. University of Chicago Press, 2000.

Saz-Carranza, A., Longo, F. (2012). Managing Competing Institutional Logics in Public–Private Joint Ventures. Public Management Review, 14 (3), pp. 331-357.

Talke, K., & Hultink, J. E. (2010). Managing Diffusion Barriers When Launching New Products. Journal of Product Innovation Management, 27 (4), pp. 537-553.

Teofilovic, N. (2002). The Reality of Innovation in Government. The Innovation Journal, 7 (3).

Thornton, P. & Ocasio, W. (2008). Institutional Logics. The SAGE Handbook of Organizational Institutionalism edited by Royston Greenwood, Christine Oliver, Kerstin Sahlin-Andersson, Roy Suddaby.

Thornton, P, Ocasio, W., Lounsbury, M. (2012). The Institutional Logics Perspective: A New Approach to Culture, Structure and Process. Oxford University Press, USA.

Thornton, P. & Ocasio, W. (1999). Institutional Logics and the Historical Contingency of Power in Organizations: Executive Succession in the Higher Education Publishing Industry, 1958-1990. American Journal of Sociology, 105 (3), pp. 801-843.

Vargo S. L., and Lusch., R (2008). From goods to service (s): Divergences and convergences of logics. Industrial Marketing Management 37 (3), pp. 254-259.

Walter, A., Ritter, T., Gemünden, H.G. (2001). Value Creation in Buyer– Seller Relationships Theoretical Considerations and Empirical Results from a Supplier's Perspective. Industrial Marketing Management 30, pp. 365–377.

Weber, M. (1922). Bureaucracy. In Mark Dickerson, Thomas Flanagan and Neil Nevitte (Eds), 1995. Government and Politics. Toronto: Nelson Canada.

Weihe, Guri; Højlund, Steven; Theresa Bouwhof Holljen, Eline, Helby Petersen, Ole; Vrangbæk, Karsten; Ladenburg, Jaocb (2011). Strategic use of public-private cooperation in the Nordic region. TemaNord 2011, p. 510, Nordic Council of Ministers, Copenhagen 2011.

Appendix 1

Firms	Business area	Respondents
Medisat	Manufacturer of healthcare products with special focus on telemedical solutions.	Head of department
LINAK	Designing and manufacturing electric linear actuator solutions.	Key account manager, medline & careline
Judex	Manufacturer of software and hardware products for the healthcare sector.	Managing director
Falck	Provides services withing 4 areas of business: Assistance, Rescue, Healthcare and Training.	Regional manager
Borringia	Manufacturing of healthcare products.	Managing director
TIMEDICO/Tempus 600	One business area based on the product Tempus600 – a transport pipe invention for the internal transport of blood samples in hospitals.	Sales manager
K.R. Hospital Equipment	Manufacturer of beds, side tables and related products for hospitals and nursing homes.	Managing director
Guldmann	Manufacturer of products and services within two main areas: beds and lifting equipment and a product range which includes ramps, lifting platforms and small lifts.	Regional manager
Tunstall Healthcare	Manufacturer of healthcare products with special focus on telemedical solutions.	Biomedical Engineer
Pressalit Care	Manufacturer of toilet seats and related products for installation in the homes of physically disabled people - formerly just bathrooms but now also kitchens.	Business Development Director
Servodan	Manufacturer of intelligent lighting control equipment.	R&D Manager
Viewcare	Developer of platforms for telemedical solutions.	Managing director
Pallas Informatik	Developer of software solutions to the health care sector, transport sector and agricultural sector.	Managing director
Nobak	Developer of intelligent hygiene solutions with special focus on intelligent soap dispensers for bathrooms.	Managing director
Zibo	Consultancy within the areas of developing madrasses and pillows for beds and related products with a focus on sense stimulation.	Managing director
Philips	Manufacturer of intelligent lighting control equipment.	Stakeholder Relations Manager