

## MANAGEMENT ACCOUNTING CHANGE IN HOSPITAL DISTRICTS

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## **Abstract**

Prominent rise of the costs in the healthcare sector has evoked a need to find ways to produce services more effectively and at lower costs. In many countries pricing and cost control in the public health care sector have started to change towards international practises. One solution to pricing and cost control has been the Diagnosis Related Grouping (DRG) system that has today been adopted in several hospital districts also in Finland. Consequently, Finland offers a good context for this field study, which explores how the phenomenon of DRG emerged, using elements of actor network theory to explicate the process of accounting change. This study explains why the DRG became the way to reach the goals set for an accounting model for hospitals. The results support arguments that accounting change emerges because experts in the actor network can create the need for change. New needs are crated by changing the representations of the targets of the managerial accounting system. This also means that the reasoning for an adoption of the new method changes during the spread of the system.

Keywords: accounting change, pricing and cost control, DRG, representation

## **1 Introduction**

This study explores the management accounting change in a Medical Health Care. The change in health care sector (Lapsley 1998; Lapsley 1999) and the role of accounting in the change (Doolin 1999; Jacobs 1998; Goddard 1997; Abernethy 1996; Broadbent 1992; Bourn and Ezzamel 1986) have attracted attention and also the effects of these changes have been researched (Chua and Preston 1994; Lapsley 1999). One solution for pricing has been to put forth the adoption of diagnosis-related groups (DRG) system for hospital invoicing, cost accounting and budgeting. DRG is a system to classify medical care diagnosis into

groups for commercialisation and pricing services of specialised medical care. Based on Fetter and Freeman (1986), Borden (1988), Chua and Degelin (1989) and Rea and Cooper (1989) it seems that the implementation of DRGs is proceeding differently in the U.S, Australia and the UK. The mechanisms of successful implementation of DRG-based prospective pricing and case-mix accounting have been studied using Finnish data (Lehtonen 2007). Consequently DRG's implementation has been studied but there is, however, little research directed towards the understanding of the reasons how the new accounting system changes emerged.

In addition to being viewed as an accounting system, the DRG can also be viewed as an information system. Concerning the relationship between information systems and management accounting change, Quattrone and Hopper (2001) have explored what change is and what the concept of change means. They investigated if the change is related to the process or if it is possible to conceptualize change independently from the process. Quattrone and Hopper (2001) understood change as a process drawing on the notion of institution but epistemologically it was difficult to reconcile the change as process. Building upon the research finding of Quattrone and Hopper (2001) about the concept of drift Andon et al. (in press) presented the concept of relational drift. Relational drifting means that change is not viewed as a linear process, where the targets are first set

and then reached. The drift arises during the whole process. Chua (1995) conducted ethnographic research to find out who are involved and why and how they become interested in new accounting systems. Her results indicated that the need for DRG-based accounting information in hospitals was fabricated by expert-generated inscriptions.

This study investigates the accounting change in hospital districts and how the new accounting system (DRG) emerges in the process. Moreover, this study explores how needs of the new accounting systems are created and especially how these needs are represented.

This field study contributes to the current literature in two main respects. First, it focuses on the interplay between experts, actor network, computerized software and visual elements in the process of accounting change. Second, it extends the current accounting micro-sociological literature (Chua, 1995) by investigating the role of representations of new pricing and cost control system and the changes of these representations.

The rest of the paper is organized as follows. Section 2 outlines the theoretical framework and research design is covered in section 3. The Drg based system and change in the process are introduced and analyzed in Section 4. Discussion and concluding remarks constitute the last section.

## **2 Conceptual and Theoretical Guidelines**

Actor-network theory (ANT) has been used in accounting research by e.g. Robson (1991, 1992), Preston et al. (1992), Chua, (1995), Quattrone et al. (2006) and Andon et al. (2006). The theory utilized in this study because it enables the exploration of the accounting change in the process of “fabrication” (Latour, 1987; Chua, 1995; Andon et al., 2006). The process explored is the adoption of diagnosis-based system of commercialisation and pricing grouping in hospital districts. In the process different elements, ideas and decisions concerning material processes are stabilised within a network (Latour, 1999). The DRG system is currently being adopted in many hospitals districts in Finland. Matter and artefacts for their part determine social relations in these adoption processes.

According to Latour (2000) there are two co-existing realities: the reality of natural sciences and the reality of social relations. Both the realities are equally real, both can be observed. However, it is often difficult to distinguish whether people’s actions are the consequence of social or economic regularities, or the one of regularities connected with natural sciences.

According to Latour (1999), the origins of the subject-object and nature-culture division must be examined from the point of view of a third element, the process, in which facts are stabilised and boundaries are drawn between nature and culture. According to the theory, the social aspect does not involve human-to-human interaction only, but should also be seen as a network in which matter and artefacts for their part determine the nature of social relations. Non-human objects build up meanings and practises on which the forms of social interaction are intertwined. Social interaction cannot exist without the involvement of the non-human aspect – matters and artefacts. It can be considered that the topic of the present paper is connected with the new systems “fabrication” - more precisely of a new system of operation – and not so much of a new technology.

According to the actor-network theory, it is no fruitful to consider constructions as given elements, but measures should rather be taken to investigate how and where they are formed. The theory can be considered “material constructivism”, which also recognises the role of technology, methods as well as the role of material conditions and factors in knowledge formation. The point of departure in material constructivism is that the objects of scientific knowledge are the result of exercised actions and do not exist beforehand only to be revealed and properly described.

### **3 Research Design**

The present study explores and interprets the management accounting changes in public health care and how the change emerges in the process. Especially interesting is the way the new accounting systems are created and represented. The operating environment of municipal health care, in which a DRG grouping system has been adopted, is regarded as researching area. Finland provides a fruitful context for the research because the multiplicity and complexity of the invoicing principles have been characteristic to the hospital districts. Allocation of costs between the member municipalities, problems with the predictability and management of costs have led to the need for a change in invoicing. Solution for that the diagnosis-related grouping system for commercialisation and pricing has been adopted in several hospital districts in Finland. In order to get a wide and comprehensive picture of the new phenomenon this study utilizes the field method. This multi-organization field study will give deeper understanding of the phenomenon and it may be seen as a research process aiming to define reasons to why the new pricing and cost accounting systems are adopted.

The primary data for the paper is collected through interviews with 13 people, interviewed one at a time. All interviews were tape-recorded and transcribed. People who have been mobilizing the Drg system in Finland

were interviewed. Interviewees people responsible for the planning in hospital profit centres and adoption of pricing and cost accounting, doctors who are involved in DRG and responsible for the management control as well as experts and specialists of DRG were also interviewed (details of interviews are in Appendix). The data also include observation notes on the national meeting of DRG, the project group meeting of NordDrg and the formal meeting for organized briefing the personnel of a hospital district to use of NordDrg. Supporting data include archival data, clippings from newspapers and other material given by the interviewees, e.g. a historical journal of the first DRG meeting in Finland in 1987. Supporting data sources were used to form a comprehensive understanding of the research area.

The first two interviews were made as open interviews to gain an understanding of the research area and to define the context. These interviews were used to define the themes of the research. On later semi-structured interviews themes were initially defined but the structure and final content took form in the course of every interview. Therefore the interviewees had the opportunity to bring out important issues from their own point of view (Shank, 2002). The structure of the semi-structure interviews covered basic information about interviewees background and their responsibilities for the planning and adoption of pricing and cost

accounting. Further the people who had been involved with mobilizing the Drg in Finland were interviewed in-depth later on.

The research topic was continuously modified according to the new data. The data were also reviewed and a preliminary analysis was done before every new interview (Atkinson and Shaffir, 1998). Readings and interpretations were constructed all the time. Actors and actions were analyzed to find the important issues for this research. After that data were categorized according to the contexts where the purpose of Drg system was addressed to highlight how it had been represented and how the targets of representation changed. This categorization revealed changes in the representation during the process.

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