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Dynamics of Creating a New Role for Business Controllers

Timo Hyvönen, Janne Järvinen and Jukka Pellinen

Abstract

This paper explores management accountants' role change in a multinational corporation. The theoretical framework of this interpretative study draws on institutional entrepreneurship that highlights the importance of agency and enables the theorization of institutional changes. According to our findings, projects on new cost accounting techniques and modern information technology (ERP) serve as critical momenta in the early stages of institutional entrepreneurship that drive changes in institutionalized professional roles. The aspiring controller must creatively combine multiple resources and interests in order to attract other actors for collective action. This paper contributes to accounting literature by explaining what resources were needed, how those resources were gained, and how they were used to drive an organization-wide change in the controllers' role. As organizational institutions are normally stable over long periods of time and difficult to change, this study gives empirical evidence on the mechanisms and requirements any one accountant or group of accountants within an organization can utilize to change a controller's institutionalized role.

Keywords: *role of management accountants, controller, institutional entrepreneurship, accounting profession, ERP*

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Prologue

“The project ended, and I got promoted. I became the division’s chief of finance, sort of ... vice president, we still have the senior [VP]... [...]... Now I have the feeling that I have given this firm’s cost accounting all that I have to give. From now on, I will concentrate more on business.” (John, ex ‘bean counter’, now a business partner, 9 November 2004)

1. Introduction

Management accountants’ job descriptions, roles, and role changes have been commonly researched topics in management accounting research since the 1980s (see e.g., Hopper, 1980; Sathé, 1983)¹. Many earlier studies are static in nature and serve the purpose of giving a cross-sectional view of controllers’ roles at one point in time. Since the 2000s, more dynamic studies have been presented, including processual case studies analyzing the change in controllers’ roles over time (Burns and Baldvinsdottir, 2005; Järvenpää, 2007; Jack and Kholeif, 2008). Both groups of research, static and dynamic, include research settings that focus either on new technologies (e.g., ABC/M, BSC, EVA, ICT, and ERP)² or on human aspects that drive the changes in work roles.

Regarding the technological aspect, Friedman and Lyne’s (1997) study is a well-known example of a study that focuses on the role of technologies and it presents scenarios of what might happen to management accountants’ roles if ABC/M techniques are adopted. They argue there is increased potential if opportunities provided by new accounting innovations are seized. Another body of technology-oriented literature deals with modern

ICT and its impact on the management accounting function and management accountants. For instance, Granlund and Malmi (2002) found that ERP systems have influenced both management control and the management accountants’ roles, but at the time their study was conducted, the changes remained moderate. Scapens and Jazayeri (2003) reported that although the introduction of ERP systems had not caused fundamental changes in the nature of the management accounting information used, there were changes in the role of management accountants towards a wider, more forward-looking role. However, a case study by Caglio (2003) examined how the adoption of a new ERP system challenges the definition of the expertise and accountants’ roles within organizations, leading to new, hybrid positions, i.e., “accounting people can become the proactive creators of their future within organizations by profiting from ERP systems” (Caglio, 2003, p. 146). In a similar fashion, Newman and Westrup (2005, p. 269) found that senior accountants in particular saw ERP systems “as a positive development enabling them to be more focused on financial management and less on bookkeeping aspects.” They also observed that some organizations groups other than accountants (such as ICT and senior management) had taken control of ERPs and accountants’ roles had consequently been marginalized. Finally, Hyvönen et al. (2006) found that management accountants’ cost accounting knowledge combined with the opportunities provided by ERP systems could create a new expert system, the acceptance of which was based on trust and blind commitment, which eventually contributed to the increasing importance and power of the management accounting function at the headquarters level.

Regarding the human aspects, management accountants’ organizational role can vary from a strategic information provider closely involved in making business decisions to accounting information system maintenance and a routine reporting-centered role distant from business management (Granlund and Lukka, 1998; Lambert and Sponem, 2012; Graham et al., 2012). The business partner and the ‘bean counter’ are

¹ A survey by Graham et al. (2012) evidenced that the average financial controller is able to spend very little of his/her work time (12%) in adding value as part of the management team. They found information systems in use, lack of expertise in the accounting personnel, and operative managers’ lack of demand for better financial information to be the main barriers to a role change from controller to business partner type.

² Activity-Based Costing (ABC), Activity-Based Management (ABM), Balanced Scorecard (BSC), Economic Value Added (EVA), Information and Communication Technology (ITC), and Enterprise Resource Planning (ERP).

stereotypes from the opposing ends of the role spectrum (Friedman and Lyne, 1997; Vaivio and Kokko, 2006). The business-oriented role of management accountants may change over time, yet empirical evidence of fundamental changes in organizational roles is still relatively scarce (Jack and Kholeif, 2008; Newman and Westrup, 2005; Burns and Baldvinsdottir, 2005; Järvenpää, 2007; Windeck, Weber & Strauss, 2013).

Burns and Baldvinsdottir (2005) studied the development of the new process and teamwork oriented role of management accounting in a single organization. They found that ICT change is not a prerequisite for management accountants' role change, but rather the management accountants must themselves be ready to question their traditional roles. Finally, in his longitudinal case study, Järvenpää (2007) illustrated how human resources policy was used successfully as a catalyst for management accountants' role change. He concluded that one aspect of such HRM practices is that management accountants are assigned to development projects where they can potentially develop the skills required for increasing business orientation, and, when successful, to advance in their careers by creating heroic stories of success (Järvenpää, 2007, p.129). Baxter and Chua's (2008) case study focused on the work processes, style, and habits incorporated in the position of a Chief Financial Officer (CFO). Their findings highlight the importance of the trustworthiness gained in previous positions and having a strong business orientation when aspiring to participate at a management level. The strengthening of the role of accounting in the business management, however, seemed to be strongly dependent on the resistance of other professions or expectations of top management.

Regarding controllers' role change, Byrne and Pierce (2007) give a comprehensive picture of the antecedents, characteristics, and consequences associated with management accountants' roles. Their results suggest that management and management accountants themselves play a critical part in the determination of their roles. In fact, Byrne and Pierce (2007) call for research concern-

ing management accountants' early careers in order to clarify the concepts relating to the role change. In a recent study, Lambert and Sponem (2012) found that the controllers' active role was not a universal one; it was dependent on the roles of general management especially at the middle level. A study by Strauss (2013) urges adding managers' points of views in attempting to understand why managers perform management accounting tasks although management accountants are acting as business partners. The results show firstly, how managers develop an understanding and acceptance of management accounting, its practices, and the role of business partner. Secondly, the case shows why managers perform management accounting practices themselves.

In the light of what we have learned so far, we see there is a need to know more about the dynamics of the role changes in organizations. However, research is lacking in longitudinal accounts of how these change come about. We feel that the dynamics of change and the active role accountants play may not have received enough attention in the studies conducted to date. In this study, we will focus on the emergent nature and interplay of different aspects contributing to accounting role changes. In order to learn more about such dynamics we will analyze management accountants' role change at the individual level by following an aspiring accountant and his struggle to change to the role of the business controller by participating in an ERP-related performance management project. Our broad interest lies in how a change in the controller's role was achieved in our case organization, and we will illustrate how a single controller acquired the necessary capabilities for mobilizing controller role change within the organization. Our research question is how can a single controller develop his business partnership skills to advance his career and eventually become a catalyst for an organization-wide role change for business controllers?

The paper is organized as follows. In the next section, we will describe the method and methodology of the study. The third section presents the data of the study in a chronological order, and

is followed by an analysis and conceptualization of the different aspects of change in the fourth section. Then in the fifth section, we discuss our findings and the paper ends with our conclusions.

2. Research method and methodology

The opportunity to study a controller's role change came in autumn 2002 when the present authors were involved in another, more extensive research project (an ERP-linked ABC project). At that time, we came across an entrepreneurial controller and his promotion from management accountant to a managerial position. Since any professional role, be it that of a bean counter or a business partner, is partially constructed by interacting with colleagues, we have included interviews with the controller's colleagues in the data.

We regard such professional roles as institutionalized patterns that shape both cognition and action (Barley and Tolbert, 1997; Burns and Scapens, 2000). One key aspect of institutions is their inherent stability, which is also exhibited in the institutionalized nature of controller's roles (Granlund, 2001). However, such emphasis on stability by institutional theorists requires elaboration in cases where a profound change in institutionalized structures can be observed. In fact, recent developments in institutional theory have focused on change and the agency that enables it. Regarding this aspect of institutional theory, Eisenstadt's (1980) and Hardy and Maguire's (2008) concept of *institutional entrepreneurship*, centering on an internal agency (see also DiMaggio, 1988) informs our study. The concept entails the role of actors in creating institutional change and focuses on the manner in which interested organizational actors work to change their institutional contexts. Thus, the concept of institutional isomorphism is broadened to include intelligent, situated institutional action (Lounsbury, 2008).

Institutional entrepreneurs are individuals who work purposively to create new institutions and maintain, transform, or disrupt existing ones.

They are individuals with sufficient resources to drive those changes in order to realize the interests that they value highly. As entrepreneurs, they aspire and are willing to take risks in order to realize their interests. The concept focuses attention on "the manner in which interested actors work to influence their institutional contexts through such strategies as technical and market leadership, lobbying for regulatory change and discursive action" (Lawrence and Suddaby, 2006, p. 215).

Thus, a controller's role change can be approached from the viewpoint of the organization's agency (Burns and Baldvinsdottir, 2005). Naturally, change in professional roles is not dependent on an individual agency only, but institutional arrangements created by the agency have the capacity to continue the existence of change afterwards. Thus, in order for institutional change to take place, the change in the controller's role must exhibit stability even if individual controllers leave the organization and are replaced by new individuals. The change will begin as a result of the actions of a single individual, but in order for change to become institutionalized, it requires interaction with other actors, i.e., the formation of a collective agency (Aldrich, 2012; Hyvönen et al., 2012).

This study illustrates the beginning stages of collective agency formation by concentrating on one individual, hereafter called *John*, and his career development. This focused analysis has methodological grounds (Eisenstadt, 1980; DiMaggio, 1988; Thomas and Davies, 2005; Lawrence and Suddaby, 2006; Baxter and Chua, 2008; Hardy and Maguire, 2008; Lounsbury, 2008), as it helps us to perceive the richness and dynamics of controller role change more clearly than if we studied this issue at an organizational level. John, while not necessarily an ideal type, may be representative of an increasingly common employee, and there are most certainly others like him working in today's industrial conglomerates.

The data for this case study was collected from a single project in a single business enterprise (an NYSE listed company, here called *Paper Group*). Our data collection process started by interview-

ing personnel from the division headquarters (called *Alpha Division*). There, we interviewed two business controllers, a division controller (John) and a management accountant responsible for the implementation of ERP-linked profitability management system (PMS). After the second interview at division headquarters, we were provided with the internal material on the PMS project and were also granted access to the production site (called *Northern Mill*), which is not only the pilot unit of the PMS project, but also the biggest integrated fine paper mill in the world. The first round of interview data was gathered soon after the PMS project was introduced and the modeling phase in the pilot unit was carried out between September and December 2002 at the division headquarters and at Northern Mill. The second round of interviews was carried out in reverse order after the PMS system had been implemented in the pilot unit in November 2003. The third interviews were carried out one year after the whole PMS project had ended, namely at the division headquarters on November 2004 and at Northern Mill on January 2005, and the final follow-up interviews in 2011 at the division headquarters and in 2012 at Northern Mill and at the division headquarters. We conducted 17 interviews and the length of the recorded and transcribed interview data from the interviews is about 29 hours (see Appendix 1). In addition, we held several off-the-record discussions during the research period. In most of the interviews, at least two researchers were present.

Analyzing the data proceeded so that after each round of interviews, each member of our research team analyzed the data separately and formed his/her own narrative. After this, the research team convened, compared findings, and amalgamated individual findings to form a shared interpretation. In addition to a general narrative, the research team sought to understand the dimensions that have influenced John's professional role as a management accountant.

3. Entrepreneurial controller, accounting information system projects, and changing organizational roles

John graduated from a Finnish university in 1997 with a master's degree in Accounting. According to him, his master's thesis was on the development of an activity-based costing system for a medium-sized machine works. After that, his first job was a paper mill cost accountant. Factory accounting tasks seemed to involve mainly routine tasks that had little to do with developing business. Likewise, the role of accounting in the management team was limited, as traditionally paper mills are organizations run and managed by engineers. He explains his role as follows:

Well, I basically worked in the controlling department, the attitude towards us was that we were...a cost center. If you consider the role of basic accounting tasks at the paper mills and at the corporate level, for that matter, their role is not very important. They were regarded as people responsible for inputting data (John, 4 November 2002).

However, in this task he had the opportunity to participate in ABC projects, in which detailed models of paper production processes were developed. At this time, he also became familiar with ABC software tools, the knowledge of which later became decisive in his career advancement.

In 1999, John was appointed to the position of division controller in the Alpha Division. At the time, the divisional controller's tasks involved the consolidation of factory financial statements and various ad hoc reports requested by the controllers. The fragmented nature of legacy information systems made such reporting quite cumbersome. In addition, the reporting was focused on past developments, while the division's steering role concentrated on factories as profit centers. Virtually all decisions concerning sales and productions were made at the factory level.

At the division headquarters, John's main task was to support the business controllers in three business areas by providing them with profitability calculations. At the time, the division had begun implementing an ERP system. The Division CFO assigned John the task of analyzing the usefulness of the SAP R/3 system³ for developing the division's activity-based costing.

Well, my boss directed me to suss out the possibilities for activity-based costing in R/3...with the aim of fast reporting and possibilities for rollout. I found no possibilities in the R/3 system (John, 26 September 2002).

Based on this statement, the division decided to implement activity-based costing using a separate software package. This was justified by the division's need for quick implementation and the advantages of having a system that was not dependent on ERP (since this allowed ABC to be implemented quickly in mergers and acquisitions – a situation deemed likely in the future).

By the year 2002, the PMS project had started. The CFO had managed to include the PMS project in the much more expensive ERP project, which provided the project with more resources than would have been allocated if the implementation had been a stand-alone project. Thus, the PMS system was defined as a part of the division's ICT infrastructure. Goals included profitability calculations and increased transparency of cost structure. The division's business controllers were profoundly committed to the project, as they felt that the existing management accounting systems were inadequate for their needs, requiring ad hoc results for the likes of customer profitability. As John explains,

And our sales management said 'yes'. This was what they had been waiting for. The customer issues, really...for one production site, it is difficult to say anything about the customer...for Alpha or the Paper Group, their size might be too small (John, 26 September, 2002).

The project team acquired more management accounting expertise and selected the OROS system by ABC Technologies as their tool. The interviewees seemed particularly impressed by the options for linking OROS with SAP R/3, which may have contributed significantly to the decision to adopt OROS. After the software solution was agreed on, the project group selected a consulting company to assist in system design and implementation. The design of the cost and profitability system started out with a pilot project at Northern Mill, which was chosen because of its size and importance in the division, as well as the location, range of products, and the fact that the local chief of accounting volunteered for the job.

In January 2003, after several setbacks, the project group finally managed to transfer Northern Mill's information to the OROS system and presented the results to the division's top management team. According to the interviewees, the results were received so favorably that the management team had been positively surprised. Now the division management began to see the potential of the PMS system for their globalization strategy. The project received new funding, which allowed the CFO and John to start replicating the model at other production sites.

We presented the results to the other divisions, and we received more expectations from them. In practice, this means that we didn't have to beg for more resources if we happened to need them. We got more resources, and this was no longer an accounting project and no longer an IT project. This is now one of the main strategic activities (John, 4 November 2002).

³ SAP is an acronym for Systemanalyste und Programmentwicklung. SAP R/1 solution was launched in 1973, and SAP R/2 in 1979. With the change from R/2 to R/3 in 1992, SAP followed the trend from mainframe computing to client-server architectures. The development of SAP's internet strategy with mySAP.com redesigned concepts of business processes and real-time moves to the Web and beyond: cloud computing, mobile, and in-memory computing open up new horizons for real-time data access anywhere (see <http://global.sap.com/corporate-en/our-company/history/index.epx>).

The replication/rollout phase also employed a significant amount of outside consultancy in order to implement the new system at all the division's production locations. The other production locations had been instructed to begin collecting information in December 2002, and the first of the second-stage projects was completed in just two months. By June 2003, all the division's eleven production locations had implemented the new system. By then, John's challenges began to change from modeling and organizing the collection of information to utilizing the results.

Cost and profitability information from the entire division was processed in a report generator software solution (Cognos PowerPlay), which allowed the information to be reported in more than 30 dimensions. John decided that the report generator could not serve the needs of division management as it stood, but he had to continue to work on the most important reports. The business controllers supported this view as they were quite satisfied with the opportunities provided the PMS system.

After the project had ended in October 2003, many significant events affected John's career. His superior, the CFO, transferred to another division, and John was promoted to vice-president CFO in 2004. In addition, as one business controller left on maternity leave, John was given the responsibility for one business area. Since he was well-informed on profitability improvement issues, the division's top management expected him to contribute to division-level business process development. Thus, from the beginning of 2004, he had an organization of his own, which involved analyzing profitability across the division. In 2007, an organization change abolished divisions and introduced business areas (BA), and the Alpha Division was merged with another division, thus creating a new larger business area. This opened up a new business area in need of a CFO, and John was appointed the role. One of his first actions in his new role was to implement the PMS system in the new business area. This time, the rollout lasted for only six months. In addition, John realized that the system was not fully utilized for decision-making.

At this stage, scenario management features were added to the PMS system.

Our ideas were more mature now, and I thought that one thing is missing here, and it is the future. [...] We extended the PMS analyses to the future. We called it the scenario management system (John, 18 October 2012).

Lastly, in 2010, a CRM project was launched that integrated sales controllers with the PMS system. The new sales controlling function was responsible for capacity utilization issues that previously had been the domain of factory managers.

Two years ago in 2010, we initiated this STAN project (Steering of Sales and Negotiations), the idea of which was to manage our customer relationships [...] What has changed, from a controller viewpoint is that we have sales and operation controllers, which means that they are part of the sales team, they manage sales. They set the sales targets. This is not an end unto itself, but as an example, our sales controllers are the most influential people in the decision to stop a paper machine, and our capacity utilization is not that high these days (John, 18 October 2012).

In order for such a role change to be possible, a new IT system had to be constructed in order to combine business and accounting knowledge. Separated spheres of knowledge and a will to a change were not enough.

At that time (at the beginning of 2000s), the role of reporting was to help projects. So our internal mission was that we have changed our role when people come asking us what to do. [...] You could never achieve that by reporting alone, but when the STAN came, the whole process became integrated. Sales management, sales planning, production planning, they

have become accounting driven, and we controllers have a big role in that (John, 18 October 2012).

As new business areas were formed, the reporting structures changed. Mill-level accountants' jobs seemed to focus on data inputting and assurance while the business area controllers took care of the rest. Interviewed factory level accountants were not even aware of all the tools used at the business area level.

We at the mill know nothing about these (business intelligence and scenario analyses). Probably these are something that is done at the headquarters (Mill controller, 20 June 2012).

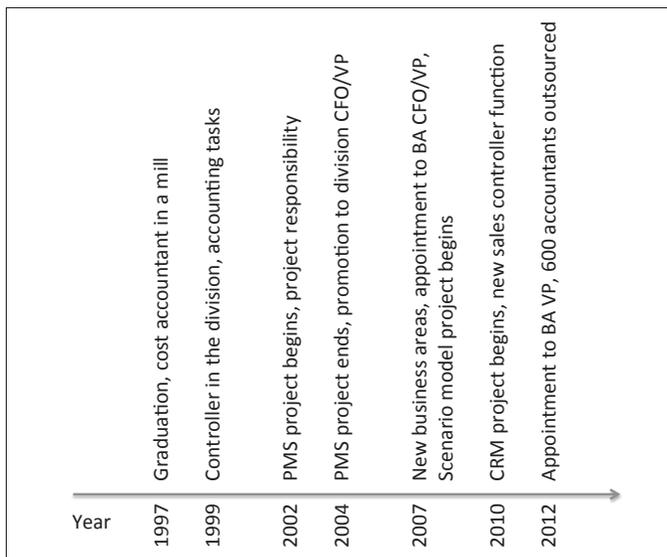
John's team now included 24 controllers who were responsible for the management accounts of 17 mills. In addition, each factory had a single mill controller, who reported to an assigned controller in John's organization. For instance, the largest factory, Northern Mill, employed one controller and two other accountants, when only a few years

earlier there had been 20 accountants. In 2012, all paper-based business areas were merged, resulting in only four business areas, three of which use the PMS system regularly. John and his long-time superior became the top duo of this new organization that represents the core areas of Paper Group.

When the controlling function was renewed, parts of the other accounting functions were almost simultaneously outsourced. In a single step, 600 accountants, mainly at the mill level, were moved to an external shared service center. In terms of career development, being a mill-level accountant turned out to be a dead-end job, while the controllers responsible for executing the outsourcing were either promoted or were able to find heavyweight jobs in other companies.

We used to spend all our time in producing information and keeping the systems up. And now we have moved from PMS to scenario management, but it is all automated. So this has helped us to achieve this change, enabled us to do different things instead of maintaining systems (John, 18 October 2012).

FIGURE 1, Key events in a timeline.



Competition in the paper industry became more intense during the 2000s and overcapacity started to become a major problem for the case company. Factories were closed down and production shifted to sites that were geographically close to the customer. By 2010, the profitability analyses had expanded into a profitability management system based on activity-based costing principles with many-dimensional cost objects. Moreover, the emphasis had shifted to analyzing the future with scenario analyses. The earlier factory-focused (sub)optimization had changed into business-area-wide optimization where sales controllers, a new controller role, made decisions concerning the utilization of paper mills. The controllers are now located in business area's headquarters, and business controllers have assumed mostly business partner roles.

4. Aspects of entrepreneurial agency

This section will analyze how the critical resources needed for controller role changes are acquired and utilized. First, we will show how the institutional entrepreneur acquired such resources at an individual level. Then, we will illustrate how institutional entrepreneurship was constructed as a collective agency. Preconditions for the institutional change were the renewal of IT systems and the creation of a demand for new cost accounting information.

4.1. Gaining critical (knowledge) resources

In the mid-1990s, the number of accountants in Finland competent in activity-based costing was quite low (Lukka and Granlund, 1996; Malmi, 1999; Hyvönen and Vuorinen, 2004). At the time, modern cost accounting practices were regarded as specialist knowledge, the demand for which was increasing. An ABC-related master's thesis was enough to set John apart from other fresh graduates looking for a job in the paper mill's controlling functions. His knowledge expanded as he took on new projects related to ABC.

John's ability to learn and take an interest in creating management accounting related knowledge and skills becomes evident if we compare him with Northern Mill's chief of accounting (the mill controller). The mill controller had allowed 'outsiders', both the production engineers and external consultants, to work on ABC models without management accountants actively taking part in them (cf. the third scenario by Friedman and Lyne, 1997). Because of this, the mill controller did not feel very familiar with ABC tools, and did not create information that others would have found useful in activity-based costing projects.

Here we have really done this ABC three times for the sheeting plant alone. We had a consultant do it once, and then this student did it again, and then we had a guy from Helsinki do it once more; I think that it never got done (Mill controller, 11 November 2002).

Unlike the mill controller, John undertook the new projects and did things on his own. He did encounter many problems, but solving these was to help him when building substantial knowledge concerning both ABC and the related ICT. Before starting the PMS project, John had five years of work experience in applying activity-based techniques in the papermaking industry, and he had become well versed in cost accounting, information technology, production processes, business, and the organization's culture. Knowledge of the production processes was especially useful in selecting the pilot project and modeling Northern Mill's processes.

In this case, the critical competences were an understanding of the industry logic, knowledge of the organization, and the experience of developing cost accounting and information systems. Such critical competences come from active participation in different development projects; they cannot be acquired through study alone.

4.2. Orchestrating the technology, the economy, and the demand aspects of the project

In retrospect, the PMS project was decisive for John in that he was able to utilize the critical competences he had acquired to date, and he was also able to develop new skills. The software solution was selected on the basis of John's specialist opinion, as he had intimate knowledge of cost accounting and the related software technology. He also managed to sell and legitimate the project inside the Alpha Division. However, John did not overestimate his skills, but instead actively sought ICT and ABC experts who could join the project team as either members or consultants.

Even though the design and implementation of the PMS required a considerable amount of ICT expertise, the situation changed after the new information system was operational and began to produce large quantities of data. This is evident in the following quotes:

Business controller #1: "It has been our starting point; that we now have all the information stored electronically. We have a hundred times more information than what we need. We have hundreds of information systems. This company is full of all sorts of databases, like any other firm. We have gone through the IT hype, in a way, the IT technocrats have taken over the firm. But at the same time, we have forgotten about utilizing the data."

Business controller #2: "Everywhere, implementation projects have been a lot more cumbersome than anyone could have thought, and we have invested money and effort in them."

Business controller #1: "And we have dreamed that this would bring us more information."

Business controller #2: "Well, it does increase the amount of information, but there is a limit to how one can make use of all that."

(Group interview, 26 November 2003)

Notably, John was able to present himself as an accountant who had expertise in information systems. In contrast, ICT professionals were regarded as slightly difficult individuals, not only during the project but also more generally. They competed with accountants in producing data. ICT professionals were experts in programming and maintaining the mill's basic ICT infrastructure, but their way of thinking was very technologically oriented. The ICT people only cared whether the system was outputting some data needed for production. Therefore, it seems that their ability for and interest in competing in the business management arena was very limited and confined to their own function.

Business controller #2: "We tried to motivate the IT people, we told them how important this was, and how they played a key role, but I don't think we did a very good job at that."

Business controller #1: "IT is often an invisible empire at the production plant. They have succeeded in mystifying IT, so no one else dares to touch it."

(Group interview, 26 November 2003)

In the utilization phase of the PMS project, it became crucial to possess information about the business processes. New challenges included utilizing the profitability data in the creation of more profitable business transactions, and in the redesign of the business processes. Prior to the PMS project, John had had an opportunity to study these by doing ad hoc profitability calculations with the division's two business controllers.

Earlier, it had been virtually impossible to obtain reliable, comparable, and up-to-date cost information from the individual production locations. The controlling function at the division level was now able to use the new information system to direct attention to the problems that needed it, and they were able to create new control structures too. Great new potential for discovering problems from the PMS and evincing better economic arguments for making choices meant the controllers

became key players in making business decisions. In the action phase of the strategy process, the reporting choices of the PMS for different organizational designs as well as the increased options to check that actions in the mills aligned with the chosen strategy gave the controllers new power.

It is reasonable to believe that in the future, John and the business controllers will be better able to choose which topics are discussed, and in what way they should be discussed.

Our problem was that [...] we built in fact a cube, which allows for access from each and every report to all others. So, if we give this kind of tool to the division manager, and if he were interested, he could look at the products from many different angles, each customer by products purchased, and then the same by each country by customers, and after that, he will be lost in the data, and half a day has passed and he has not grasped the big picture” (John, 9 November 2004).

The top management did not seem to understand the possibilities the new information system could offer for management purposes. For this reason, the controller had to be active in providing new types of financial analyses. Such action proved to be of great importance in the construction of a new controller role.

In the early stages of the project, the biggest problems in system usage seemed to be related to using Excel spreadsheets to transfer accounting data from one system to another. Such a process was prone to errors. Today, data transfer problems have largely been resolved, and the IT department technically operates the system.

During the PMS project, John was actively looking for outside ICT or ABC experts who could help in the design of the system. He also tried to get the in-house IT experts to participate but with little success. Even later, routine IT support seemed to dominate the tasks of IT personnel. John also looked for opportunities to create demand for ad-

vanced calculations and a new, active, and participating business controller role. In the first stage, other business controllers became involved. Later on, John actively introduced new management reports and the divisional management became interested and was persuaded to finance the PMS project. At this stage, a collective agency of interested parties emerged to form itself around the new controller’s role.

4.3. Seeking partnership with operative managers

One key result of the PMS project was that interaction between controllers and managers increased significantly. The status of the PMS changed during its implementation. It started out as a financial ICT project, which, according to division management, was only a part of the ICT infrastructure development project. A ‘good tactical eye’ was needed together with knowledge of the organization and business processes to redefine the ICT project as a ‘strategic project’.

Business controller #1: “That’s what we ended up with, that we are in fact building a strategic tool.”

Business controller #2: “Problems were much more operational at that time, but we adopted more aspirant targets when we realized how far we could get. That’s the way it went.” (Group interview, 26 November 2003)

At first, in the division controller function the attitude towards the mill’s previous ABC analysis was very unappreciative. John has a very clear conception of the reasons why the mill’s ABC remains a one-off practice. Later on, he revealed some results of the PMS, which clearly indicated that there was little evidence of the impact of production batch size on profitability, which seemed to be the main result of the mill’s own ABC analysis. Thus, John questioned the reliability and relevance of the information for the division level decision making yielded by the previous ABC analysis.

The sheeting plant ABC model, that's what they called it [...] That is [...] a problem of a big company[...] that we don't know what is going on at the production sites. But, I think it was a good example of [...] what it means when [accounting] starts from the production locations. It was terribly cumbersome, caused a lot of work, and you could not implement it in any other location. And, I think, it is sort of a shame that these projects are going on in the production location and they don't consult us (John, 4 November 2002).

When the PMS project ended and John was promoted Vice President CFO and business controller in division management, the role of business controller was still new and in the process of becoming established.

Her [business controller #2] and I are regarded very much as controller-types, you know, but we are business controllers. And often they [middle managers] are complaining that we are dealing with issues that are none of our business, such as sales, but everything here is our business. They don't get that, we both have controller backgrounds. I mean we are meddling with things, and this project involves a lot of that. That is, the change of roles in our organization, whether we are talking about factory management or whatever (Business controller #1, 26 November 2003).

Ten years after initial PMS implementation, business controllers work in teams with sales and production specialists. At the same time, controlling function takes place more and more at the business area level.

In my mind, a genuine business controller could become a manager in that business area any time. It doesn't mean that you need to do that, but only at the stage you

have the ability to become a manager, you are a genuine controller. [...] Maybe this has been just a random chance, but my boss has been away for a while, so I have been temporarily in his place, as a business area manager (John, 18 October 2012).

The new controller role is founded on the idea that the controller understands business management sufficiently to be able to become a manager him/herself. The traditional role largely involved producing reports as a back office function, but not necessarily sharing views with business managers about the business itself. How did such change come about? The PMS project started as an accounting project, but, as interaction with the business managers deepened, it gradually became a strategic project that in turn became a platform for wider change in managing the paper business.

4.4. Entrepreneurship

Lastly, we will comment on the institutional entrepreneurship that led to changes in the controllers' role in our case company. Our data shows that competition and co-operation in an organization are clearly linked to different professions and functions. Allegiances tend to form among people with an accounting background while the most fraught working relationships were with either ICT professionals or engineers.

Familiarity with and knowledge of the organization were also important when organizing the project management. John and his allies identified all the actors likely to be obstructive to the project and he tried to keep them out of the project.

It has been our strength in this project that we have had no steering group. That would have meant that there would have been an IT-guy, and there would have been a sales manager or two, who would have messed everything up. So, we would have had to build the commitment to this project through the steering group (John, 26 November 2003).

In practice, John enjoyed a considerable degree of freedom in developing and implementing the PMS system. He also had the courage to use his delegated authority and took decisions autonomously. For instance, when the project faced delays in 2003 due to ICT problems at the pilot mill, John pressured the project manager to resign and hired external consultants to continue the project. This resulted in a rather significant budget overdraft. John reacted by confronting top management and giving them a PowerPoint presentation based on speculative numbers that would suggest important and interesting results should the project's extra funding be approved. John got his funding, but later commented that if the extra funding had been denied, his only viable option at that stage would have been to resign. After this, the CFO found the necessary resources and the business controllers placed great hopes on the PMS.

And I took a big risk when I knew that this could be the end of my career [...] I think my career became what it is because I dared to take that risk. And then I had the will to make use of all this in real business, not just back office. And because the pay-back of this project was clear and good, it was my ladder up, so to speak. Or I don't believe that the original PMS project was a ladder up in itself, but it made things possible" (John, 18 October 2012).

Furthermore, John's career was connected to his superior's career. Since 2004, John has been the division's, and later the business area's vice CEO. At times he was the acting CEO, working as a member of the top management team.

We have been in this business together, and my boss has gotten more important posts, and I have moved with him (John, 18 October 2012).

Success is measured in terms of economic value added, of which John had to convince the mana-

gers. However, success is unlikely without taking risks. Failure in the PMS project might have ended John's spectacular career.

Well, the project budget [...] was exceeded tenfold. That was really a tough spot, but I made it. Our project had anyway more increased benefits than marginal costs (John, 18 October 2012).

Evidently, reducing uncertainty in financial numbers was an achievement that was held in high regard. For instance, the sales management situation had been very problematic. Therefore, it was easy to mobilize them as supporters of PMS. From a sales organization and control perspective, the new profitability information led to the creation of the new sales controlling professionals.

This [PMS] is one of those things I have been talking about for as long as I can remember[...] it is a horrible thought in the sense that [...] more than a million tons [...] it is a little less than a billion Euros that I should be taking care of. And I don't know whether a particular deal is profitable or not (Sales manager, 27 November 2002).

In order to achieve change, critically important things include the ability to recognize other people's interests and the ability to motivate them. During the PMS project in Northern Mill, the most important ally in getting any new reports done was the mill's cost accountant. He was experienced in working out different ad hoc calculations for sales and production management. He was also familiar with the mill's information systems and he was aware of the previous sheeting plant's ABC analysis. Finally, he was aware of the attitudes towards the monthly reporting system at the mill and he was able to realize the value of the opportunity the PMS project offered to improve the current situation.

Now this PMS is the first project that I had a feeling would also benefit the mill. Here at the mill we have had great expectations that we will get some benefits out of this. [Reporting requirements] are coming from there [the division level] (Cost accountant, 12 November 2002).

The mill controller's tasks were of the bean counter type, as his idea of the financial information needed in business management seemed to be quite limited and he did not show any interest in activity-based costing or PMS. However, he did play a very important role as an ally to John by promising Northern Mill as the pilot unit where the PMS system could be tested. It became obvious to us that the way Northern Mill's controller saw his work was the norm among mill controllers. Therefore, according to business controllers, one of the future challenges will be the issue of how to change the mill controllers' attitudes towards a more business-minded orientation.

But then we should be talking about how to motivate our people to analyze, and to think about profitability issues, rather than just to record transactions and comment on them afterwards. This is our biggest challenge (Business controller #1, 26 November 2003).

Our findings suggest that, in this case, the key aspects of institutional entrepreneurship were the enabling relationship with a top management superior, activeness in proposing solutions, willingness to take risks, and the ability to create networks of interested parties with identifiable needs and goals. There had to be a vision of future that could be argued for with financial benefits. In networking, the actors had to be able to recognize various competing agendas and be able to exclude some parties, such as IT. As for those in the network, for the controllers the interaction focused on cost accounting system design while for managers the role was to make use of the new profitability information.

5. Discussion

At this stage, we have interpreted the controller's role as an organizational and profession-related institutional arrangement that is characterized by stability. We have also witnessed a somewhat radical change in this institutional arrangement, which we interpret as institutional entrepreneurship. The idea of institutional entrepreneurship as bringing agency in the focus of institutional analysis can explain why inherently stable institutional arrangements such as professional roles change. We contribute to the understanding of what such active change requires from the individual controller and from the wider group of controllers.

At the individual level, we have identified the areas where management accountants must excel in order to overcome the barriers of role change: command of both emerging management accounting techniques (Friedman and Lyne, 1997) and ICT (Granlund and Malmi, 2002; Scapens and Jazayeri, 2003; Caglio, 2003; Newman and Westrup, 2005); interest in developing business (Granlund and Lukka, 1998); and social networking (Vaivio and Kokko, 2006). At the individual level, the formation of institutional entrepreneurship requires the acquisition of relevant, timely, and partially organization-specific competences. The focal point in our case was the PMS project, which brought together such competences and involved personal risk-taking.

Being successful in managing such a project meant both career advancement and the creation of collective controller networks that enabled a wider and more profound change in the controller's role. The project also increased the interaction between controllers and the top management and instigated trust, which undoubtedly enabled a more active role (see Baxter and Chua, 2008). In fact, top management support was found to enable the formation of institutional entrepreneurship. John's career path closely followed his superior's, who handed over responsibility of the project to John; that proved critical to his level of success. Importantly, we have interpreted institutional entrepreneurship as collective action and, thus, impossible without such interactions.

At the collective level, institutional entrepreneurship entails the ability to engage with other resourceful actors, make allies, and make use of different resources. One aspect of the controller's work in creating such interactions that is critical to institutional entrepreneurship formation seemed to be an understanding of other organizational actors' motivations. This often requires some work history in the organization, which allows one interpret information, a sort of personal multiplier (see Vaivio and Kokko, 2006). For instance, the papermaking industry has traditionally been the domain of engineers, whose management issues have revolved around the technical properties of paper machines and capacity utilization. As the financial situation of paper conglomerates declined during our study period, the financial issues may have gained in importance.

Järvenpää (2007) has illustrated accountants' role change in a multinational conglomerate. One of his findings was that all accountants work on development projects at some stage of their careers. However, Järvenpää did not explicate his findings. Our study illustrates the importance of a successful development project as a means of role change. Being able to 'ride the crest of the wave' of new technology and to take full advantage of it made it possible to bypass many normal limits of role change. The importance of successful projects seems to be at least partly explained by creating opportunities for social networking, as the project legitimates or even compels the creation of contacts with production location and marketing managers, ICT professionals, and senior management. Notably, external consultants, rather than bean counter mill accountants, were required to make the PMS project pilot study a success. The division controller expressed the desire to familiarize himself with new accounting methods, software, and the business as a whole. He also stressed loyalty to management, and this was rewarded in the way senior management gave him a free hand in managing the project and it enhance the social network required for its advancement.

6. Concluding remarks

The purpose of the paper was to explore how the management accounting development project enabled a single controller to develop his business partnership skills, to advance his career, and eventually led to a role change of controllers within the entire organization. Prior studies (e.g. Byrne and Pierce, 2007; Järvenpää, 2007) that have noted the importance of controller role change have identified a few issues that are essential for the role to change. Very little was found in the literature, however, on the dynamics of such changes. The longitudinal case evidence from the period of over ten years enabled us to examine the slow changes in the organizational role of management accountants by particularly highlighting the dynamic nature of such processes. Informed by the concept of institutional entrepreneurship (Eisenstadt, 1980; DiMaggio, 1988; Hardy and Maguire, 2008; Lounsbury, 2008) we suggest that the analysis of a single case like this, while not generalizable or perhaps even representative, is nevertheless capable of illustrating the competences that are required for changing institutionalized arrangements. In particular, we have focused on the early stages of institutional entrepreneurship, where a single controller, connected with new ICT and accounting technologies, was able to form a network that instigated the change in controller roles, where a collective agency would eventually emerge (Aldrich, 2012; Hyvönen et al., 2012) capable of institutional entrepreneurship. Thus we have added to the literature on how controller's roles change over time (Burns and Baldvinsdóttir, 2005; Järvenpää, 2007).

A significant new role was the sales controller, which plays a vital role in managing factories and allocating their capacity utilization (this was formerly a task for factory management). Interestingly, as sales controllers emerged as new business partners combining accounting and managerial roles, the traditional mill controllers' job descriptions became even more focused on financial reporting and data. In our case, most controllers with traditional bean counter roles (Friedman and

Lyne, 1997; Vaivio and Kokko, 2006) had already been outsourced, and the business partner role was related to centralizing management accounting to the business area level. Thus, we illustrate how the discrete roles of management accountants are also related to outsourcing and automation (Lambert and Sponem, 2012). Although the current study is based on a single case, the findings suggests that there is a great need for the business integrated controller role for a few while the roles related to accounting routines seem to be a diminishing one for the many.

We have also answered Byrne and Pierce's (2007) call to investigate the early careers of management accountants, and found the participation in successful development projects to be decisive in increasing business orientation. They found the roles of management accountants to be highly institutionalized and resistant to change in large companies. However, top management involvement has a large influence on roles (Hopper, 1980; Sathé, 1982; Strauss, 2013). Our case illustrates how the role of the superior, in this case the business area manager, was critical for the development of

John's career and his climb towards business partnership. In contrast to Byrne and Pierce (2007), who did not perceive that new accounting methods would influence roles significantly, our case also illustrates how decisive these can be in the right circumstances. Can management accountants really afford not to bring new management accounting tools out of the back office? Previous studies have focused on the critical role of ABC and ERP for controllers' role change (e.g. Friedman and Lyne, 1997; Granlund and Malmi, 2002; Caglio, 2003). One of the more significant findings to emerge from this study is that there seem to be all the time new (technological) innovations in and around management accounting. The possibilities for the aspiring management accountants of the day may be in business intelligence, predictive analytics and forecasting. We also believe that the complex relationships between management accountants' institutionalized roles and the organization of management accounting would be an interesting subject for further study at both organizational and individual levels of analysis.

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Appendix 1. The interviews.

Group interviews:

VP business controller #1 VP business controller #2 John, Division controller Project manager	Group headquarters	13 September 2002	2 h
VP business controller #1 VP business controller #2 John, Division controller	Group headquarters	26 November 2003	1 h 30 min
Mill controller Sales manager	Production site	20 June 2012	1 h 30 min

One-person interviews:

John, Division controller	Group headquarters	26 September 2002	2 h
John, Division controller	Group headquarters	4 November 2002	2 h
Mill controller	Production site	11 November 2002	1 h 30 min
Cost accountant	Production site	12 November 2002	2 h
Sales manager	Production site	27 November 2002	2 h
Production manager	Production site	4 December 2002	2 h
Production manager	Production site	4 November 2003	1 h 30 min
Mill controller	Production site	14 November 2003	2 h
Cost accountant	Production site	17 November 2003	1 h 30 min
John, CFO/Business controller	Group headquarters	9 November 2004	2 h
Mill controller	Production site	24 January 2005	2 h
Business controller	Group headquarters	23 May 2011	1 h 30 min
Sales support manager	Group headquarters	21 September 2011	1 h 30 min
John, CFO	Group headquarters	18 October 2012	1 h
Total			29 h 30 min