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How does an organisation currently formalising its capital budgeting processes work to achieve the intentions of the reform?

Insights from a Swedish company in the food processing industry

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Abstract

This thesis reports on an ongoing formalisation of processes related to capital budgeting in a Swedish company operating in the food processing industry. We have performed a qualitative single case study based on interviews and documentation, to understand how an organisation works to achieve the intentions of formalising capital budgeting processes. The theoretical part of the study builds on the concepts of enabling versus coercive formalisation (Adler and Borys, 1996; Wouters and Wilderom, 2008). Our findings identify characteristics of the studied formalisation process which could contribute to making the new capital budgeting process an enabling formalisation. However, while employees were found to be optimistic about the new procedures, it was acknowledged that it was too early to evaluate the consequences of the formalisation initiative.

Keywords: Capital budgeting, Product development, Ongoing formalisation of processes, Enabling formalisation, Coercive formalisation.

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1. Introduction

> We have a mission from the board of directors to keep a certain degree of product innovation. Without innovation, we would not be a future market leading company.
>
> - Senior manager at FoodCo

The quote is taken from an interview conducted within this study and stresses the importance for firms to constantly respond to a competitive environment. Consequently, it is crucial to allocate resources to various projects effectively and efficiently to succeed over time. For instance, Klammer (1991) states that the long-term profitability of a firm is dependent on the investments that are undertaken. Not only do investments provide assets and resources to generate economic value, but they are also the means for operationalising a strategy that the firm believes in. However, it is important to note that investments as such do not guarantee improved results. Success is rather dependent of how efficiently and effectively capital resources are used (Lumijärvi, 1991).

In this thesis, we examine a formalisation of product development processes. More specifically, we focus on how a formalisation of processes can be implemented to cope with capital budgeting. The main theoretical motivation for the chosen research focus is derived from two studies that have investigated organisations undergoing changes in how they work with performance measurement systems (hereafter referred to as 'PMS') (Townley et al., 2003; Wouters and Wilderom, 2008). Wouters and Wilderom (2008) examines the formalisation of PMS in a logistics department by using and further developing the concept of *enabling versus coercive formalisation* which was originally created by Adler and Borys (1996). The authors analyse how the department ensured that the PMS became enabling and thereby useful to the employees and not only serving as a control device for management. They find that a formalisation building on *previous experience*, *experimentation* and *professionalism*, is likely to be perceived as enabling. In their longitudinal study of a public organisation implementing formalised PMS, Townley et al. (2003) find that managers are at first positive to the fact that change occurs, as the current governing system is deemed poor. However, when interviewed at a later point in time, the same managers ventilated their dissatisfaction with how the PMS had worked out in practice. Our thesis builds upon these studies and the idea that formalisation can take an enabling or coercive nature.

To investigate the research topic, a single case study has been conducted on a Swedish company operating in the food processing industry. The company makes different types of investments including company acquisitions, maintenance of existing machinery, as well as development of new products. This study focuses on product development since it is performed on a regular basis and considered a cornerstone in operations. Consequently, significant resources are reserved for it and product development and capital budgeting activities are therefore closely interconnected. Empirical data was gathered through interviews and studies of the document embodying the formalisation. The analysis was then conducted with the framework regarding formalisation as either being *enabling* or *coercive*.

Most of the previous studies regarding formalisations have been conducted longitudinally by investigating effects over time, with the motivation that implementing major changes seldom happens over a night. Moreover, a quite popular phenomenon to study has been the implementation of performance measurement systems. However, few studies have been conducted on organisations that are in the transition of formalising its capital budgeting processes. It is in the light of this gap in previous literature, we wish to contribute with our study by examining the following research question:

How does an organisation currently formalising its capital budgeting processes work to achieve the intentions of the reform?

The initiative to formalise processes in a growing, decentralized organisation was in line with findings in previous research. We find that all interviewees were optimistic about the changes, but emphasised that it is too early to evaluate the new processes in depth. The study discusses the importance of investigating the ongoing formalisation to probe the basis for this optimism. The empirical data suggests that six out of seven requisites for enabling formalisation are fulfilled in the studied case company. We conclude by arguing that the obvious need for formalisation followed by an implementation of enabling processes, create a foundation for solving previous shortcomings in capital budgeting processes going forward.

The remainder of the thesis is organised as follows. The next section focuses on previous literature on capital budgeting and organisational processes. This part also introduces the theoretical framework applied to this study for analysing the data gathered. Thereafter, the chosen research method is covered and motivated. The fourth section describes the studied

company and all empirical findings. Our findings are then analysed through the lens of the theoretical framework. Lastly, the results are presented and conclusions drawn in relation to previous research.

2. Theory and previous research

In this section, relevant research and theory used in this study will be presented. Firstly, previous research regarding capital budgeting and organisational processes are discussed. Thereafter, the relevance of institutional theory as well as the theoretical framework of enabling versus coercive formalisation are presented and explained in further detail.

2.1 Previous research on capital budgeting and formalisation

Capital budgeting is an area within accounting that has caught attention from various researchers for a long time. Historically, research on the topic has concentrated on two different theoretical perspectives (Berry, 1984). First, there is the perspective that capital investments aim at maximising profits, which has led to much focus on the usage of different financial techniques and their role in capital budgeting decisions (e.g. Arnold and Hatzopoulos, 2000; Klammer, 1973; Petry, 1975). The second perspective regards capital investments as a set of social processes and has also been researched (e.g. Berry, 1984; Bower, 1970; Cannon, 1967; Lumijärvi, 1991). For example, Cannon (1967) found that the normative, practical tools[1] developed for capital budgeting decision-making, were merely part of a wider context of organisational structure. Application of such tools is not a complete or self-sufficient device, but only one part of a social and organisational process in a complex business environment.

One way of placing tools in a context of organisational processes, is to develop capital budgeting manuals. Numerous large organisations use such manuals to organise their capital budgeting activities, and the way they are being used has been investigated by several researchers (e.g. Istvan, 1961; Segelod, 1997; Tell, 1978). These manuals are likely to be

[1] Practical tools regard financial techniques, e.g. NPV and DCF calculations, IRR, payback.

more important in larger firms with decentralised organisations and arguments for adopting manuals include: (1) the implementation of guidelines ensures that investment proposals contain relevant information to decision-making bodies; (2) tools are created for strategic planning and control; (3) financial planning becomes better organised; (4) a common language is developed within the group with regards to investments (Segelod, 1995).

Furthermore, Segelod (1997) finds that manuals work as tools for standardisation and those groups not using them differ more in their capital budgeting processes. Investment manuals help establishing common practices regarding capital budgeting. Additionally, they contribute to set rules for how to communicate and discuss capital budgeting issues.

As shown by Segelod (1995, 1997), capital budgeting manuals are primarily used by large organisations. Small organisations however, do not use manuals to the same extent and generally organise their capital budgeting processes differently. Ekanem (2005) argues that inaccurate conclusions have been drawn about capital budgeting processes of *small* organisations, because they have many times been based on observations of *large* organisations. He presents three arguments why practices of large organisations cannot always be assumed to apply to small ones: (1) capital budgeting routines of large firms are not conclusive or indisputable, instead, they are controversial and continuously changing; (2) larger companies do not always strictly follow these standards and they are not protected from serious failure in capital budgeting practices; (3) large companies do not operate under the same conditions as small firms and their respective economic environments are often different.

Having concluded that small and large organisations differ in their characteristics, differences with regards to capital budgeting practices have been investigated by several researchers (e.g. Alkaraan and Northcott, 2006; Chittenden and Derregia, 2013; Ekanem (2005); Jarvis et al., 1996). For example, Ekanem (2005) found that small organisations use 'bootstrapping' techniques in their capital budgeting activities instead of more formal systems - where bootstrapping includes decision-making based on previous experiences and informal routines. Anthony et al. (2014:6) confirm this view and argue that smaller organisations consist of fewer people and communication channels, which causes decision-making and organisational structure to be more informal than in larger organisations. Furthermore, research has found that when organisations grow, the capital budgeting systems become more formalised (Perren

and Grant, 2000). Size and age of organisations are therefore key variables for the level of formalisation of systems (Pugh et al., 1969).

Further research has investigated how organisations are affected when processes change and become more formalised (e.g. Jordan and Messner, 2012; Townley et al. (2003)). Townley et al. (2003) studied how a public organisation responds to a formalisation of performance measurement systems. They found that members of the organisation initially embraced the formalisation with positive attitudes, but eventually became more negative when the formalisation was perceived as too bureaucratic and did not contribute to better discussions as it was hoped to do.

Adler and Borys (1996) developed a theory regarding formalisation and argued it could either become coercive or enabling in its character. They claim that a system being formalised can either provide help to the organisation and its participants to carry out their work tasks better than before, or it could become a control mechanism used by management to force employees into a desired behaviour. Further, they claim that *characteristics* of the system as well as the process of *design* and *implementation* will determine whether the system becomes either enabling or coercive.

Wouters and Wilderom (2008) develop this concept further and studied the development of formalised performance measurement systems (PMS) in the logistics department of a Dutch brewing company. They argue that *design* and *implementation* is a combined activity which is best described as *development*. They find that a formalised PMS system developed with consideration for *previous experience* of the organisation, allows for *experimentation* with the use of new measures, and is implemented in an organisation where employees have a *professional attitude* - is more likely to become enabling and thereby help the organisation to achieve its goals. It is also noted that enabling PMS are often developed over time:

> A PMS is more likely to be seen as a constructive, enabling type of formalisation, rather than a negative, coercive form of control, if it is developed incrementally such that the members of the organisation can gain actual experience with using performance measures, reflect on this, and draw conclusions to develop the system further. (Wouters and Wilderom, 2008:509)

The quote stresses the importance of the ongoing implementation. Formalisation is an iterative process where design and implementation of the system occur simultaneously and develops the system further. It does not happen over a night (Wouters and Wilderom, 2008).

2.1.1 Summary of previous research

Conclusively, capital budgeting processes have been investigated by several researchers and a distinction has been made between large and small organisations. Large organisations tend to organise its capital budgeting more formally, for example with the use of manuals, whereas small organisations are usually more informal. Furthermore, research has shown how systems being formalised may either become enabling or coercive. For example, Wouters and Wilderom (2008) used the concept to investigate formalisation of PMS. Less research has however been made on ongoing formalisation of processes in relation to capital budgeting. Therefore, the purpose of this study is to complement the above presented research by investigating how an organisation manages its formalisation of capital budgeting activities to achieve the intentions of the reform.

2.2 Theoretical perspective

Actions and behaviours may differ between organisations, although they might seem similar from an external perspective (Anthony et al., 2014:17). Institutional theory suggests that institutions govern actions and behaviour of entire organisations and individuals within them. Institutions are symbolic and behavioural systems containing normative rules together with regulatory mechanisms that define meaning and affect behaviour and action routines. In the early application of institutional theory, much emphasis was put on technical aspects of the environments. Eventually, more attention was directed to the importance of social and cultural context, and in particular to social knowledge and rule systems (Scott, 1995). New interpretations and sub-theories of institutional theory have emerged over the years. For example, organisational structures and processes serve as routinised “performance programs” and recipes to follow when attempting to solve problems (Scott, 1995:22)

2.2.3 Enabling and coercive formalisation

A process of formalisation means implementing and enforcing regulative and more structured processes within organisations (Anthony et al., 2014:4-7). Organisations often justify these reforms with arguments that the social order will be better, more reasonable and better

planned (Townley et al., 2003). Furthermore, there is an ongoing desire to create order out of organisational messiness by initiating and enforcing administrative systems. (Hasselbladh and Kallinikos, 2000).

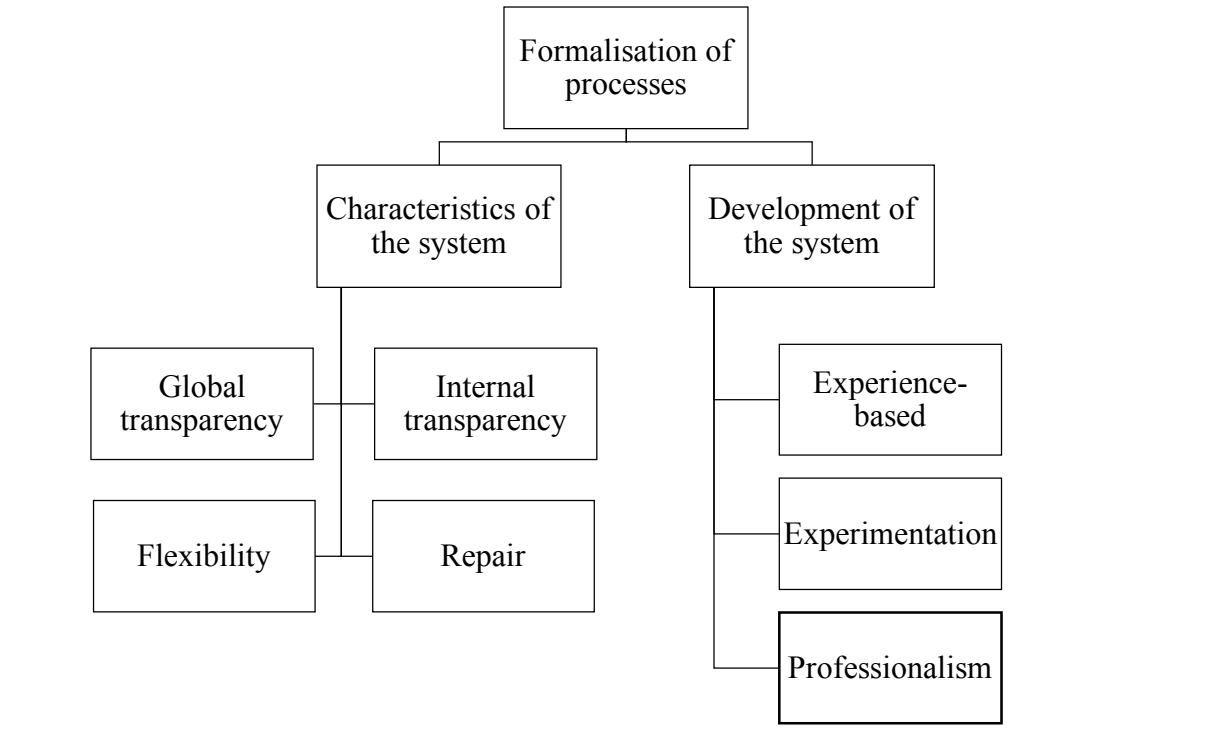
As presented earlier, a framework originally developed by Adler and Borys (1996) says that systems being formalised may take two forms, either as *enabling* or *coercive*. An *enabling* formalised system helps members of the organisation in their work and facilitate accomplishment of work tasks. A *coercive* system, on the other hand, works as a control device used by senior management to force participants to work in a certain manner without facilitating or improving work. They claim that an enabling formalisation mobilises rather than replaces employees' intelligence and provide necessities for organisations to perform.

According to Adler and Borys (1996), a formalisation is built on three pillars; *characteristics*, *design* and *implementation* of the system. Characteristics describe the actual functionality of the system and how it works. Design refers to the process when characteristics are being shaped. Implementation concerns launching of the formalised system in the organisation. Out of these pillars, Adler and Borys (1996) focus mostly on the characteristics of the system and argue that four characteristics will have heavy impact on whether formalisation becomes enabling or coercive. Concretely, *internal transparency*, *global transparency*, *flexibility* and *repair* are brought forward by the author as key characteristics which will increase the enabling nature of the formalisation.

Wouters and Wilderom (2008) build on the framework of Adler and Borys (1996). They recognise and agree with the characteristics presented by Adler and Borys (1996), but put more emphasis on the second and third pillars, namely *design* and *implementation*. However, the authors argue that design and implementation act in symbiosis in an iterative process. Therefore, instead of keeping these pillars separated, they combine them into what they refer to as *development of formalisation*. In that sense, the modified framework developed by Wouters and Wilderom (2008) puts greater emphasis on the ongoing formalisation. The authors find that the formalisation is more likely to be enabling if it: (1) is based on *previous experience* within the organisation; (2) allows for *experimentation*; (3) includes a *professional* attitude among employees.

Figure 1 summarises the conceptual framework applied to this study which is a combination of the framework of Adler and Borys (1996) and that of Wouters and Wilderom (2008). It will be used for further analysis of the data gathered in this study. As presented, it includes both *characteristics* and *development* of the system. All related components and requisites are further outlined, below.

Figure 1. *Conceptual framework applied to the study*



2.2.3.1 Characteristics of the system

The characteristics signifying an enabling formalisation - *internal and global transparency*, *flexibility* and *repair* - are outlined, below.

Internal transparency

If the formalisation is characterised by internal transparency, users have good understanding of the internal function of the formalised system. Also, they will know why it is in place and be familiar with potential changes of the system, i.e. its status. Further, internal transparency will ensure that employees have all information and tools needed to carry out work tasks in an

efficient and effective way. Internal transparency will also make users understand the underlying reasons why the formalisation has taken place and why certain control mechanisms are being used at all. In the long run, the presence of internal transparency will help the formalisation become more enabling. In a coercive formalised system however, the formalisation often takes shape as a list of flat duties, developed to help supervisors rather than employees. In addition, coercive procedures are more inclined to punish employees for potential deviations, rather than guiding their efforts (Adler and Borys, 1996).

Global transparency

Enabling systems involve global transparency, meaning that users are aware of how their respective work processes are part of a broader system and what the main purposes of their work tasks are. Control mechanisms are in place to help users see how their respective tasks fit into the whole. In a coercive formalised system on the other hand, there is asymmetry with regards to understanding of how the system works. Users will then have little understanding of how their work fits into the organisation, which points to a low degree of global transparency (Adler and Borys, 1996).

Flexibility

If users can make decisions on their own after information has been provided through the structured formalised processes, the system is regarded as flexible. Flexible systems encourage users to adjust interface and add functionality to fit their specific demand in performing their respective tasks. However, in a coercive formalised system, all procedure manuals define in detail the specific sequence of steps to be followed in the product-development process and forces employees to ask for superiors' approval before circumventing any steps unnecessary for the specific project at hand (Adler and Borys, 1996).

Repair

Enabling systems allow for repair, meaning that users can mend, change and improve work processes themselves, instead of having to receive approval from senior management at all times. If work would break down for some reason, employees should be able to, and feel the urge to solve problems themselves the best they can - even if it means deviating from original work procedures. In a coercive system on the other hand, all such deviations would be regarded as suspect behaviour by management and would not be tolerated (Adler and Borys, 1996).

2.2.3.2 Development of the system

In the original framework of Adler and Borys (1996), 'development of the system' is a two-stage process involving designing as well as the implementation of a formalised system. As argued by Wouters and Wilderom (2008) however, the design and implementation of a formalised system is an iterative process where versions of systems are constructed, implemented and then reconfigured continuously. It is therefore more appropriate to speak of a system 'development' and it includes both design and implementation in an iterative fashion. Furthermore, when developing and formalising work processes, they are more likely to become enabling if it is based on *experience*, *experimentation* and *professionalism*. The meaning of these features will now be further explained.

Experience-based development process

When changing work processes, organisations should use and take advantage of local knowledge within the organisation. Local knowledge may be defined as "mundane, yet expert understanding of and practical reasoning about local conditions derived from lived experiences" (Yanow, 2004; p.12). Followingly, if the development of formalisation involves identification, appreciation, documentation, evaluation and consolidation of local knowledge and experience, the formalised system has better chances of becoming enabling (Wouters and Wilderom, 2008).

On the contrary, if formalisation is mandated entirely on the will of management and does not utilise the knowing of employees, it is more likely to become coercive. By implementing formalisation in such a top-down manner, there is a danger of neglecting local knowledge, experience and expertise available among employees (Wouters and Wilderom, 2008).

Experimentation

When developing formalised systems, organisations should set aside time for testing and refininement, for example with regards to conceptualisation, definition, required data, IT tools, and presentation. It should be conducted in cooperation with all concerned employees to arrive at a system that is reliable and understandable within the local contexts. Conclusively, a development of formalisation should include experimentation with new practices to increase the enabling nature (Wouters and Wilderom, 2008).

Professionalism

If there is a professional attitude from employees towards the formalisation transition, it is more likely there will be satisfaction with the improvement efforts being implemented and the formalisation will become more enabling. Formalised work processes would then be regarded as stimulating, positive, challenging and helpful since employees are more inclined to improve their work practices and understand the benefits of formalising. To conclude, processes undergoing changes will become more enabling if participants of the organisation have a professional approach to the formalisation (Wouters and Wilderom, 2008).

* * *

Going forward, we build on the concept of enabling versus coercive formalisation to analyse an ongoing formalisation of capital budgeting processes in a company where previous processes have been characterised as ad-hoc. The study has been designed to gather empirical data related to the research question at hand.

3. Method

In the following section, the research method used in this study is outlined. In 3.1, the research design is presented with further details and motivations behind its appropriateness. Thereafter in 3.2, the approach for collecting data is explained, including the techniques for gathering information as well as the relevance of respective sources. Lastly, 3.3 explains how the data analysis has been conducted.

3.1 Research design

A qualitative case study methodology was chosen for this study to provide an in-depth understanding of the subject. By conducting a case study, it is possible to understand the nature of accounting related issues in practice regarding techniques, procedures and systems used and also how they are used (Ryan et al., 2002; 143). Ryan et al. (2002) also argue that case studies can be used to provide descriptions of accounting practice, explore application of

new procedures, and explain determinants of existing practice. As aforementioned, the aim of this study is to investigate the ongoing formalisation of capital budgeting practices in an organisation. Therefore, the nature of the research question fits well to the chosen method according to the arguments of Ryan et al. (2002).

Aiming to develop an understanding with great depth, a single case study was chosen and conducted. It is argued that the ultimate goal of a single case study is to provide a rich description of the social scene and to describe the context in which events occur. Thereby, it aims to reveal deep structures of social behaviour and the emphasis is to highlight a construct by showing operation in an ongoing social context (Dyer and Wilkins, 1991). Therefore, a single case study also corresponds well to the research question of this study, as it concerns behaviour and actions in a changing organisational structure.

Furthermore, this study was approached abductively, meaning that ideas and theories of previous research are reviewed and discussed in relation to our new observations. Using a theoretical framework concerning formalisation facilitates analysis and understanding of the empirical findings. Patterns found in this study have been compared to available theories as prescribed by Ryan et al. (2002:157).

The search for a suitable research object started in February 2017. To gather relevant data for the purpose of the study, the decision about what company to investigate was based on three conditions: (1) the company had to make capital investments on a regular basis; (2) the company had to be of considerable size with several organisational levels, thus making it more likely to have a need for routines and processes surrounding investments; (3) the company had to be in a transition phase, meaning there is an ongoing change of company policies on capital budgeting. After determining the decision criteria, the process of finding a proper research site was initiated. By screening the Nasdaq Stockholm Stock Exchange for mid-sized/large companies, candidates likely to fulfil the first two criteria were selected for further monitoring. They were then contacted via telephone and e-mail. We introduced our enquiry about conducting a study on transitioning capital budgeting, and asked for permission. Soon, FoodCo (original company name disguised) turned out to be a suitable company for our study and accepted to participate.

FoodCo is currently listed on the Stockholm Stock Exchange with the annual turnover of 5-7 billion SEK. The headquarter is located in Sweden, but through subsidiaries the firm is present in most Nordic countries. The group has experienced two changes of ownership in a short period of time and while the group is young, subsidiaries have a history of up to 80 years. Furthermore, FoodCo operates in the food processing industry and sells its products mainly to the retailing industry and to restaurants, under own brands as well as under major retail companies' private-label brands. The industry is characterised by low margins and retailers dictating conditions. For instance, retailers have specified trade windows when product launching is allowed. Product launching outside of trade windows is possible, but uncommon and associated with certain risks. During recent years, FoodCo has experienced vast growth which is primarily derived from acquisitions of related businesses in other Nordic countries and through successful product development. Historically, the growth of industry has been quite low and stable around 1% per year. However, the demand for the products which FoodCo manufactures has increased lately.

3.2 Data collection

The sources of information and data were: (1) interviews with persons involved in product development and investment decision-making; (2) a document called PaperTrail (original name disguised), concerning formalisation of processes within product development. The primary source of information was interviews as we sought to understand how the participants of FoodCo experienced and managed the formalisation. Talking to managers and employees involved with these issues was therefore considered crucial in our data collection. Everyone interviewed was in one way or another involved in the product development processes at FoodCo and affected by the on-going formalisation.

After receiving approval to carry out our study at FoodCo, we were appointed a contact person with the task to help us book meetings with interviewees. In total, we conducted ten interviews with ten different persons (see *Table 1*).

Table 1. *Interviews held for the study and roles of interviewees*

Interviewee	*Role*	*Number of interviews*	*Date*
Interviewee 1	Senior manager	1	2017-03-17
Interviewee 2	Junior manager	1	2017-03-22
Interviewee 3	Senior manager	1	2017-03-24
Interviewee 4	Senior manager	1	2017-03-28
Interviewee 5*	Project leader	1	2017-04-20
Interviewee 6	Junior manager	1	2017-04-21
Interviewee 7	Project leader	1	2017-04-27
Interviewee 8	Junior manager	1	2017-05-03
Interviewee 9	Senior manager	1	2017-05-05
Interviewee 10	Junior manager	1	2017-05-05

** Supplement questions asked via e-mail*

It became evident when we met, that interviewees had not been informed in advance about what topic our study concerned. Therefore, we started each interview by broadly describing that we were interested in how capital budgeting worked in practice. Intentionally, we avoided revealing too much about our research question as we believed it would make the interviewees more open-minded and not distort their answers. The interviews were then performed in a semi-structured way. It means we had prepared an interview guide with questions to assure that we covered specific areas, while at the same time being flexible to new issues and ideas raised during the interviews. Follow-up questions were asked when we considered a topic to be of particular interest or when we felt that we did not grasp what the interviewee was talking about. During the third interview, PaperTrail was brought up to discussion for the first time which made us adjust the interview guide for further interviews (see *Appendix: The Interview Guides*).

FoodCo as well as participants were guaranteed anonymity. Moreover, we signed a non-disclosure agreement prior to the first interview, which we informed all interviewees about. The purpose was to protect their integrity and make them more comfortable, as the new document we accessed is considered to contain sensitive information. Length of interviews varied between 25 and 60 minutes with an average of about 45 minutes. Five interviews were conducted at FoodCo's headquarter and the remaining five were telephone interviews. In

three cases, telephone interviews were preferred by the interviewees. Regarding the other two, the interviewees were based in the production facilities a couple hours away from Stockholm. Due to difficulties in scheduling meetings with them on the same day, it was therefore deemed more convenient to talk over telephone rather than having face-to-face meetings. By gaining much knowledge about the conditions of FoodCo during the first interviews, we were well prepared when eventually conducting interviews over the telephone. Therefore, the use of telephone interviews was not considered a problem, even though meetings are generally preferred.

Except for the interviews, we gained access to an internal document named PaperTrail which covers descriptions about the product development processes. It should be noted here, that product launching is also considered a part of product development processes within the frames of PaperTrail. The underlying reason why product development in FoodCo is of interest for this study, is that there is a strong interconnection between product development and allocation of resources. One project leader explained: "There is often a clear connection. If you are about to develop a new thing, it may require investments into machinery too" (Interviewee 5). Even though product development does not necessarily equal capital investments seen from an accounting perspective, FoodCo regards it as part of the capital budgeting activities as it requires significant allocation of resources. In practice, development and innovation of new products will often be followed by investments in machinery, equipment and marketing efforts.

3.3 Data analysis

Interviews were audio recorded in all cases except one where detailed notes were taken, and they were transcribed within a few days. Transcribed material and gathered documentation were reviewed and data relevant for the study was identified with the use of the theoretical framework. After transcribing the interviews, data were categorised using a predefined coding method to identify relevant information for the purpose of our study. Coding is a convenient approach to establish a connection between theory and data, which facilitates a more organised analysis (Bansal and Corely, 2011). We started by conducting a broad initial screening of all transcripts to exclude data considered irrelevant. Thereafter, we categorised data in the order in which we intended to present the empirics. Moreover, sorting quotes and

information in this manner made it easier to find patterns in the responses provided by interviewees and identify critical issues.

Interviews were conducted in Swedish since it was the native language of all interviewees. Therefore, quotes that were eventually selected to be included in the study had to be translated into English. Due to linguistic challenges, translations can potentially alter meaning and accentuation of quotes. To prevent this from happening, we compiled tables with the Swedish quotes and their respective translations for each interviewee. The tables were then sent to those concerned for approval. There were no objections to present the quoted in the study, although slight modifications were made in three cases which, however, did not change the essence of the original quotes.

4. Empirics

The empirical section of the study will be outlined as follows. Firstly, a further introduction to the study company, FoodCo, will be presented including brief information about industry, investments, and product development. Thereafter in 4.1, the earlier processes of product development in FoodCo will be explained along with the discontent with previous ways of organising activities. In 4.2, the proposed formalisation to solve the previous difficulties will be presented. Lastly in 4.3, the reception and current use of the formalisation will be covered.

FoodCo operates in the food processing industry and sells its products to retailers, wholesalers, and restaurants under own brands or customer private labels. The food processing industry is highly competitive and its margins are low. It requires continuous updates of product offerings and responsiveness towards dynamic industry conditions and trends. In its operations, FoodCo is engaged in different activities which require dedication of resources, for example in acquisition of companies, maintenance and enhancements of existing machinery, as well as development of new products. The latter is a significant part of FoodCo's core business and demands much attention and resources. New products can be launched during two to four trade windows per year depending on product category and

FoodCo aims at releasing new products when possible. This is considered important and was emphasised by a senior manager:

> We have a mission from the board of directors to keep a certain degree of product innovation. Without innovation, we would not be a future market leading company. I cannot see a trade window during recent years where we have not launched anything new. (Interviewee 4)

Last year, total investments (excluding acquisitions) amounted to approximately MSEK 200 (FoodCo's annual report 2015). According to another senior manager, FoodCo makes 90-95% of its investments into machinery. Arguments for machinery investments is either to increase capacity, maintenance of existing machines or adapt production facilities to a new product under development. Thus, the heavy focus on product development often include investments. However, due to time-consuming changes in ownership, the development of processes and routines for guiding product development has been put on hold.

4.1 Reasons for making changes

Product development is part of everyday in FoodCo and processes surrounding it are currently being reorganised. It was noted that employees were unsatisfied with how product development procedures had previously been designed. A project leader explained how employees ventilated their concerns and how management realised things were not in order: "It was acknowledged in an employee survey that there was a frustration, a negative stress. People did not feel well, there was no order. I cannot say if everyone felt the same way, but that was the background." (Interviewee 5).

The earlier change in ownership had taken a lot of time and energy from FoodCo. Organising the work flow and processes surrounding product development and its investments had been of subordinated priority. All interviewees agree that there was an overall lack of structure in the stages of product development and capital budgeting. Some of the people involved in the processes were more informed and trained in how to handle their respective work tasks, others were less aware. Employees had different conceptions on how product development was to be carried out. The aforementioned project leader explained further:

> There was quite a lot of stress since you had no clear [structure]. Off course, the ones responsible knew how to do but there was little agreement about certain issues. You may compare it to when you go skiing - you have to put on your ski boots before you put on your skis. It is the same thing here. You must have a method, we must define a method for how to work in order to make this function. (Interviewee 5)

A significant part of what was done wrong according to interviewees was that communication was messy, unclear and often inefficient. There was a mixture of communication channels used for passing on information and taking decisions. Sometimes ideas and information were transferred between co-workers over the work desk, at other times formal meetings were held. The purpose of these meetings was to create order, but interviewees expressed that they did not contribute much to a better work process.

> The meetings were four hours long and covered everything from 'what screw should we use for the new door' to 'what new project should be launched'. It was high and low. Operative issues were mixed with strategic ones. (Interviewee 5)

Interviews revealed there were poor linkages between the various stages of product development. For example, between the units coming up with ideas and designing new products, and the units who would eventually produce the new products. In order for an idea to be successful, not only must the new product be promising, it must also be possible to produce. Sometimes, new products were launched before it was ensured that FoodCo was able to produce it, as noted by a senior manager:

> You had not considered whether it was possible to produce or not. New tools and machinery were perhaps needed which also took many hours to put together, and then it appeared we were only going to produce a small series. This lead to an efficiency loss in production. We would have a nice product that the market loved, but the production of it was insane. (Interviewee 3)

Earlier product development seemed to be more informal. A word that often came up during interviews when discussing previous activities was 'ad-hoc'. One project leader involved in production facility planning explained how there was "a lot more shooting from the hip

earlier". He mentioned the lack of time to plan or investigate potential updates and expansions of the machinery before new projects were eventually launched:

> All of us [project leaders] experienced that we needed more time to conduct pilot projects. We needed to specify what the project actually was, what the goal of the project was, what parts were included and which co-workers that were to be involved... It happened that the project leader of the new project did not specify that there was a need for a new weighing machine, but eventually it turned out that we did need one. Then we had to start a new project on the side to include the weighing machine into the production. (Interviewee 7)

Furthermore, a senior manager explained that one of the key factors to examine when determining whether to develop new products or not, is the financials. If the figures are strong, so is the product business case. Earlier however, there was an inconsistency in how investment calculations were conducted. Employees at different stages had different methods of making their computations. Decision-making regarding which projects to pursue was thereby made more difficult.

> When working with financial models earlier there was a lack of structure. It was hard to follow along. There were messy Excel sheets, no structure… Everything was not completely calculated. Often product managers ended up with calculators in their hands trying to compute margins, contributions etc. It was easy to lose track. (Interviewee 6)

Furthermore, interviewees described difficulties with conducting evaluations and following up on projects where new products had been launched. How products performed in relation to predictions and calculations was not investigated often enough. Also, it was discovered during interviews, that follow-up on investments in machinery and equipment was problematic at times. A senior manager elaborated:

> We were weak when it came to portfolio management - that is, continuously evaluating our portfolio of investments that are out there and maybe cancel some initiatives prematurely. We had more of a 'fire-and-forget mentality' meaning that we launched projects and let them run for a year or two. Then new cases came forward and we launched them too." (Interviewee 1)

To summarise, interviews revealed that communication surrounding product development at FoodCo was difficult and sometimes experienced as insufficient. There seemed to be lack of understanding between those involved in early stages of product development and those involved later in the process. Projects were carried out rather differently from time to time creating inconsistencies and insecurities regarding work routines. It thereby became more difficult to make correct decisions. All interviewees who worked at FoodCo by this time agreed that something had be done to create order and improve the product development processes. They also claim that there was no, or little, disagreement with the outspoken need for change within the organisation at all. Furthermore, it was stressed by several interviewees that the ad hoc processes had caused mistakes being made. These mistakes were considered costly and thus important to find a way to avoid in the future. Both management and employees agreed that there was a need for formalisation.

4.2 Introduction of PaperTrail

In the autumn of 2015, a project leader was assigned to reorganise the product development process. After setting up a task force consisting of senior and junior managers working with product development, the formalisation process was initiated. At first, a few members of the task force were rather sceptical to the amount of time that had to be spent on developing new procedures, but they then reached an understanding on how to cooperate. About a year later, PaperTrail was presented as a suggestion for how to work with product development going forward. The complete timeline of PaperTrail is presented in Figure 2.

Figure 2. *PaperTrail timeline*

Autumn 2015		Autumn 2016	Spring 2017	Autumn 2017
Recognition of need to formalise processes through employee survey	Design and development	Education and launch of PaperTrail	First projects go through PaperTrail	First evaluations estimated to be made

PaperTrail is a framework and a set of guidelines designed to help and facilitate the product development. It defines stages that need to be passed, all the way from an initial idea of a new

product to product launching and evaluation. Between stages, there are four different decision gates (see *Figure 3*).

Figure 3. *The four decision gates of PaperTrail*

Decision 1	Decision 2	Decision 3	Decision 4
Start product development of new idea?	Product characteristics and requirements?	Product launch strategy?	Keep or discontinue product?

The organisation consists of various working groups and departments who are involved in different stages of PaperTrail. They are now supposed to get an overview of the entire process with the help of the framework and detailed instructions. Furthermore, there are various attachments included in the framework, for example a standardised financial calculation model in Excel. The initial version of PaperTrail was designed by the task force with help from employees. How this was made in practice was explained by a project leader:

> We set up workshops with the most concerned employees and co-workers to discuss how they viewed things. It is a fact that the solution lies with them because they own the problem so to speak, it is often like that. (Interviewee 5)

All interviewees involved in product development, and not part of the PaperTrail task force, were invited to share their opinions about how they believed processes should be designed. One project leader working with production facilities explained:

> All of us who work as project leaders have participated in the same course where we have built up a system that everyone feels satisfied with. In this course, we have all been invited to express what we think is good and what we think is bad. There were four course meetings during two days, then we had a wrap-up day. I think it was a nice course. (Interviewee 7).

One junior manager working in the food service department described how ideas and wishes from colleagues were considered in the development of the aforementioned Excel model:

> Within my department, we partly work with municipalities and we have to make bids for contracts, which does not exist when selling to retailers. … In the Excel model, we now have a section where we can use terms like 'bid for contracts'. That is how we get it into the PaperTrail framework. (Interviewee 8)

The standardised Excel model for financial and business calculations has been developed and incorporated within the PaperTrail framework. The purpose of the model is to ensure that employees make correct calculations, harmonise and increase the speed of calculations as well as create a tool that generates accessible business case reports. It includes details and sections that are to be filled out by various departments.

> At first sight, one might think 'oh what an extensive Excel model'. However, after having worked with it, users think it is easy to use. Cells, where you are to insert data, are marked with a separate colour and the rest is calculated automatically. We also have available drop lists which facilitates standardised inputs. (Interviewee 6)

Several interviewees pointed out that the implementation of PaperTrail is an ongoing process and in its infancy. It is still not fully adopted. There seems to be no determined deadline on when it must be completely done.

> One key factor for success I believe, is that when we work with these changes, no one has said 'it must be ready by then' - rather it has to be well done. There must be quality, it may take three more months but it has to be good. (Interviewee 5)

Furthermore, interviewees seem to agree that adjustments must be made continuously and that one cannot assume the first version of PaperTrail will be the final version. It is a dynamic process that does not necessarily have an end, as one junior manager noted.

> We have now started to work according to the new process. There are some fine tunings and optimisations remaining and we make corrections as we go forward. We have set the frames for decision-making and we have started to have project meetings within these frames. (Interviewee 9)

When formalising processes, managers express the importance to make all employees understand the underlying reasons as to why changes are being made. To be able to do so, one must find means of convincing them that there is a need for change. A project leader explained: "It is called implementing, but I call it 'preaching'. You have to preach internally about these issues and make people understand that things are not working properly, right? You have to sell it as a method for making life easier" (Interviewee 5).

4.3 Reception and use of PaperTrail

The need for formalisation of processes connected to product development and launching has been recognised by both management and employees. Consequently, the recent launch of PaperTrail has been received with an overwhelmingly positive attitude by the organisation. Interviewees claim they have already experienced progress, but also stress that it is too early to evaluate PaperTrail properly. "[The process] is absolutely better now. But again, it is still very new" (Interviewee 9). As the process of creating a new product starts several months before the launch, no product has gone through the new processes from start to finish. However, there are products currently in the pipeline and one of the most significant perceived changes with PaperTrail is how business cases are organised.

> There are clearer business cases that you calculate in an early stage. Thereafter you have the business case with you through the whole process and then we can always see 'are we following the business case or are there any parameters that have changed during the time of the project?' (Interviewee 9).

Although emphasised as the perhaps greatest improvement, product managers were at first anxious about the formalisation of the business cases.

> [Users] were a bit insecure at first encounter with the heavy Excel-file. But when they started using it they think it is easy and organised to work through the various stages of the business case. It is also for the direction group to get an overview of the business cases and to make well informed, commercial decisions, and where everything follows the same steps and has a harmonised layout. (Interviewee 6)

To have standardised processes and avoid earlier ad hoc methods was one of the main purposes of developing PaperTrail. Although a more bureaucratic framework, it was perceived as facilitating for work and not constraining employees in their professions.

> It is an advantage that there is a manual for how you are going to do it. Before, we got along by crisscrossing and everyone did things in their own way, which perhaps worked out well sometimes. But it is nicer now when we have a standardised routine for how we are going to do it. (Interviewee 8)

Moreover, routines and guidelines have helped making transfer phases in the process smoother and also increased employees sense of how their work fits into the whole. Although managers stress the importance of following the steps in PaperTrail, they also see it as guidelines making it easier for employees rather than as strict rules:

> You have to sell it as a method that makes life easier. 'You know how you turn on the computer, you know how Word works - but what you then decide to do in Word is up to you'. It is the same with PaperTrail - you know how the process works, but how it turns out is up to the person working with it. (Interviewee 5)

Although most things with the formalisation is considered positive, management has been concerned with one aspect. The anxiety is that more bureaucratic process will slow down the organisation's ability to respond to rapid changes in the environment. The company must for instance be able to respond to competitor movements and specific requests from important customers without having to worry about following recommended time frames in PaperTrail. The solution has been to add a fast-track, where the process is accelerated and tightened.

Efforts had been made to set the fundamental cornerstones in PaperTrail. However, it was recognized that there was still room for improvements and modifications were expected to occur. One of the interviewees commented: "I believe in constant change and improvement. It will be discovered that we perhaps should do it in this way or that way." (Interviewee 5). However, the same person also stressed the importance of people adopting the process and carefully following each step.

Much time has been put into this project and prior to launching PaperTrail, all involved in product development and launching processes were educated. It was considered important to have everyone aboard, since the whole company is more or less involved in the capital budgeting process, at least in various steps.

5. Analysis

In this section, we compare the empirical findings with previous research and analyse them using the conceptual framework applied to this study. Firstly, the decision to formalise processes in FoodCo is analysed. Secondly, the PaperTrail initiative is examined further with the framework of enabling and coercive formalisation. Thirdly, the implications of the formalisation for capital budgeting are discussed.

5.1 Justified need for changes according to previous research

There was no or little resistance to the idea that FoodCo needed to reorganise its processes. Managers and employees at all levels agreed that the overall structure of the product development was insufficient. A recurring and significant theme in the critique on previous processes, is that communicating and transferring information between units involved in product development was difficult at times. Consequently, mistakes were made and even though it was tolerated, it was considered problematic when the same mistakes were made repeatedly. Furthermore, given the high number of people involved in product development and several units and departments contributing, there are many potential communication channels. PaperTrail was invented partly to improve and streamline communication which was well sought-after by all interviewees. This agrees with the arguments of Anthony et al. (2014:18) who claim that organisations with many communication channels have a need for, and should implement more formalised systems. The decision to formalise processes is also reasonable considering the findings of Pugh et al. (1969) who found that size and age are key variables for the level of formalisation.

When PaperTrail was eventually launched, it was received with optimism throughout the organisation. Townley et al. (2003) also found that managers were initially positive to changes in how their organisation was governed. However, a few years after the implementation, the same managers were disappointed in how the changes had taken shape. In the organisation studied by Townley et al. (2003), the positive attitude shown by managers and employees in the beginning was a result from making changes and going away from a system that they did not care for. In the case of FoodCo, all interviewees have positive attitudes towards the formalisation of processes, but are simultaneously stressing the fact that it is too early to evaluate any outcomes of PaperTrail. Therefore, the PaperTrail initiative in FoodCo show similar initial tendencies to those found by Townley et al. (2003).

5.2 Examining PaperTrail using the conceptual framework

Whether it will be regarded with the same optimism and enthusiasm going forward, is dependent on the characteristics and development of the formalisation. Therefore, the empirical findings will henceforth be analysed with the framework of enabling and coercive formalisation (Wouters and Wilderom, 2008).

5.2.1 Characteristics of PaperTrail

Internal transparency

First and foremost, the empirics show that interviewees understand the underlying reasons why PaperTrail was created. There seems to be an overall agreement and comprehension that previous ways of organising processes made product development difficult. No one expressed any doubts about whether it was necessary to develop PaperTrail or not. Furthermore, several examples are found in the empirics suggesting that PaperTrail has provided employees with tools helping them to perform their respective work tasks better. Product managers being assisted by the Excel models, project leaders in facility planning being able to make better pilot projects, decision-makers having standardised material - it all points to PaperTrail facilitating work. In summary, employees' understanding for why PaperTrail was created together with formalised processes facilitating individual work tasks, suggest there is a significant degree of *internal transparency*.

Global transparency

One of the general goals of PaperTrail, was to increase employees' overview and understanding for how product development was organised from idea to launching. It seems this goal is on its way to be achieved. Interviewees give examples of how PaperTrail has increased their comprehension of the process from a broader perspective. Communication has been enhanced between units which creates a more widespread knowledge on how employees' respective work fits into the organisation and how their work affects others. Concretely, business cases created early in the process follow along through the entire product development process, which helps passing on communication and to connect units to each other. The standardisation for how to create such business cases, as well as other material and work, creates a harmonisation of work which in turn facilitates understanding for what other units are doing. These are examples that contribute to a higher overall understanding and a better image of how the process functions. These characteristics indicate that the formalisation being implemented includes *global transparency*.

Flexibility

How work is to be conducted within the various stages of product development is determined by PaperTrail. Interviewees still indicate that they are given a degree of freedom for how and what they do within those boundaries. Apparently, no project within product development is exactly like another which makes it necessary for employees to have abilities to adapt their work depending on which project is at hand. Moreover, managers encourage their subordinates to work in the manner they see fit in different situations. To exemplify how this is carried out in practice, employees and departments are allowed to speed things up in situations where conditions demand higher pace. These situations may include customers demanding faster responses, or the size of the project at hand may be small and uncomplicated enough to pass stages more quickly without risking quality of the project. The presence of such possibilities indicates there is a *flexibility* in the formalisation being implemented in FoodCo.

Repair

Managers and employees within product development seem to have the mandate to make adjustments as they perform their tasks within certain boundaries of PaperTrail. They share a common view that flaws of the formalisation will eventually be detected. One interviewee specifically mentioned how the implemented process is constantly being fine-tuned to

gradually improve what is not working. Management also signals to its subordinates that things will not be perfect from the beginning, but that the system will need adjustments and optimisation. However, employees themselves are not encouraged to deviate from currently established routines. If they would detect any errors, they are instructed to report to respective superiors and potential alterations will be made by management. These findings suggest that the formalisation lacks the ingredient of *repair*.

5.2.2 Development of PaperTrail in FoodCo

Experience-based

In the on-going implementation of PaperTrail, employees play an important part and affect the design of the system. Those responsible for developing PaperTrail have continuously gathered managers and subordinates to discuss and listen to opinions regarding product development in FoodCo. Employees were also given the possibility to affect the design of PaperTrail during meetings and education events, and make propositions about parts that they were concerned with. The project leader working with production facility planning presented one example on how the executives of PaperTrail listened to him and his colleagues. They wished for being able to participate earlier in the product development process so they could make better pilot projects, which executives have listened to. Another example is that specific concepts used by the food service department were included in the new extensive Excel model. By listening to employees and discussing the implementation of a new formalised system, FoodCo is more likely to adopt and recover knowledge that employees possess and thoughts they have on how to perfect the processes. Employees have also developed skills that are likely to be useful when designing and implementing the new system. PaperTrail seems to have been developed by participants from all parts of FoodCo who in one way or another is affected by the product development. It is not just a framework designed behind closed doors by senior managers, but a framework shaped by the will of managers at all levels and their respective subordinates. Conclusively, the above discussion points to development being *experience-based*.

Experimentation

We have found that the formalised system being implemented in the product development of FoodCo is characterised by flexibility which means employees concerned by PaperTrail can adjust their way of working with product development to projects at hand. PaperTrail has been developed by presenting an extensive initial version consisting of fundamental

cornerstones and guidelines on how processes should function. The cornerstones are considered stable and determined, but details and guidelines on specific tasks in PaperTrail are more open for discussion and potential alterations. No one interviewed within this study has claimed that the initial version of PaperTrail will be the final one. Managers and employees agree that there is no set deadline on when PaperTrail must be completely done. Senior managers, junior managers and employees all agree that adjustments are being made continuously. Results of the formalisation will appear after hand, both specific results related to how various processes are working out, as well as more high-profile results indicating how the entire product development is functioning. In either case, results will be evaluated and alteration will be made accordingly. Conclusively, PaperTrail is developed with elements of *experimentation*.

Professionalism

PaperTrail has been received with positivity and enthusiasm. The need for changing processes was emphasised by interviewees with different roles in the organisation. Although managers have noted minor signs of complaining from some individuals, for example when product managers had their first encounter with the Excel model, most employees have come to peace with the new formalised procedures. Managers have 'sold' the new procedures to employees by emphasising that they are being installed to facilitate work. Those selling arguments seem to have gained acceptance among employees and they agree with the idea that formalised processes will help them in their respective work. Even though some procedures will perhaps be more time-consuming or demand some sacrifice of personal comfort, work is believed to be improved. This *professional* attitude towards changes is important in the development of PaperTrail, as it will determine if concerned employees will follow the new procedures or not. A professional attitude will most probably increase the chance of that happening.

5.2.3 PaperTrail - an enabling formalisation of processes

To summarise, after conducting the analysis above, we find that the formalisation is likely to be enabling in its nature. Three out of the four characteristics, *internal transparency*, *global transparency* and *flexibility*, are found when investigating the design of PaperTrail. *Repair* on the other hand, is not as apparent. Regarding the development of PaperTrail, all three requisites are fulfilled for making the formalisation enabling. Evidence suggest that development is *experience-based* and includes *experimentation* as well as *professionalism*. It can therefore be concluded that six out of seven factors contribute to an enabling

formalisation of processes in FoodCo. Moreover, managers stress the importance of an iterative implementation process, by emphasising that PaperTrail is likely to be under constant change and improvements.

5.3 Implications of an enabling formalisation on capital budgeting

The analysis has so far established that the initiative to formalise product development processes was justified. It has also shown that the ongoing formalisation of product development in FoodCo is likely to become enabling given the characteristics and development of processes. As for the capital budgeting aspects of the formalisation, it has been established that the product development in FoodCo is interconnected with capital budgeting in the sense that it entails allocation of resources. Another concrete aspect supporting that argument, is that product development often leads to investments in new machinery and equipment needed for production. Therefore, the processes of product development are in fact also processes of capital budgeting.

Furthermore, in the light of the discussion above, PaperTrail is a set of guidelines on how to work with product development and accompanying decision-making, which makes it similar to a capital budgeting manual as described by Segelod (1995). This manual obviously has great importance in an organisation like FoodCo with its decentralised organisation and various departments. This reasoning is also in line with the findings of Segelod (1995) who argue that such organisations have greater need for manuals.

Arguments why organisations might consider adopting capital budgeting manuals, are the same arguments used by FoodCo. Firstly, FoodCo has stressed the urgent need for business cases containing all relevant information needed for complete decision-making. When creating business cases, employees in FoodCo now have guidelines and instructions, which due to the enabling nature of PaperTrail, is likely to ensure that everything relevant for decision-making is captured.

Secondly, better strategic and financial planning is another motive to implement capital budgeting manuals, and an argument used by FoodCo when implementing PaperTrail. Managers expressed that there had been difficulties in the follow-up of launched projects which is expected to be improved when PaperTrail is being implemented. Better follow-up

will lead to more responsiveness and proactive planning of resource allocation. For example, FoodCo could more easily identify projects that do not perform, pull the plug from that project and move its resources into another profitable one. That is an important benefit from better financial planning which also makes capital budgeting more efficient.

Lastly, PaperTrail and its enabling nature has resulted in a standardisation of how information is compiled. The standardisation creates possibilities to interpret and understand information that is presented. Thereby, obstacles regarding communication are overrun, which corresponds to the argument that common languages can be developed by using capital budgeting manuals (Segelod, 1997).

To summarise, PaperTrail is similar to a capital budgeting manual. The arguments why organisations should adopt such manuals are the same arguments used by management in FoodCo when deciding to develop PaperTrail. The enabling nature of the on-going formalisation will make better use of the manual which in turn is likely to decrease misunderstandings and mistakes that were common in previous processes. Thereby, FoodCo has great potential to achieve the intentions of the implementation of formalised product development processes.

Even though the formalisation has the characteristics for being enabling, and is being developed in a manner that points to an enabling nature, no factual results of the changes have yet been presented. The uncertainty from not knowing exactly how PaperTrail will proceed is inevitable, and it will take time before the outcomes of the new processes are visible to FoodCo and its stakeholders.

6. Conclusion

This section begins by summarising the primary findings of the study. Thereafter, there is a discussion about what conclusions can be drawn from the findings and the generalisability, reliability and validity of the study results. In the end, suggestions for future research on the topic are presented.

6.1 Findings from studying the formalisation in FoodCo

Product development has been challenging in FoodCo because of the deficiencies in previous organisation of activities and procedures. The decision to formalise product development meant formalising capital budgeting since the activities are tightly linked to each other. Furthermore, we conclude that formalising product development processes was a rational decision. Our findings support previous research claiming that large and growing organisations with informal routines will eventually make mistakes and experience inefficiency in operations. For such organisations, it therefore makes sense to reorganise processes through formalisation.

PaperTrail was developed to master the difficulties in product development and was received with great enthusiasm and optimism at all levels of FoodCo. A factor contributing to such widespread support is that earlier problems were identified and observed at all levels, both by managers and subordinates. We find that the positive attitude is strongly empowered by high beliefs that the formalised procedures will help overcome previous problems. We have observed that representatives of FoodCo often expressed their satisfaction with PaperTrail by contrasting it to the previous situation which they did not care for, and by emphasising how important it was to make changes. Thereby, the overwhelming optimism partly comes from FoodCo simply making changes and leaving a state of dissatisfaction.

Furthermore, there is a degree of uncertainty about the outcomes of the ongoing formalisation. No clear results of PaperTrail have yet been presented because no project has undergone the entire process and more importantly, no project has done it and been evaluated. Whether the intentions of formalising capital budgeting processes will be achieved, will therefore be completely settled when projects have undergone the new procedures and clear results have been presented.

However, our study shows that the characteristics and the development of the new procedures strongly point to an enabling formalisation. We find that the fulfilment of six out of seven critical requisites increases the plausibility of FoodCo having a successful formalisation. It thereby points to the direction that FoodCo is likely to achieve the intentions of the formalisation reform. This suggests that the positive attitude towards the merits of PaperTrail may persist.

6.2 Generalisability, reliability and validity

When conducting a single case study, discussions may arise regarding the generalisability of results because of the small sample size, as it is difficult to make a statistical generalisation. The fact that our findings are set in a specific empirical context adds to the difficulties in making such generalisations. However, case studies can contribute to generating hypotheses which later can be tested by future research with larger sample collections (Ryan et al., 2002:148-149).

As we have applied the theory of enabling and coercive formalisation to a new context, one could expect certain refinements or modifications to occur. This is usually how a theory becomes generalised (Ryan et al., 2002:149). When conducting this study using this framework, we found that even though one requisite, *repair*, was not fulfilled - the formalisation is still likely to become enabling. Therefore, excluding *repair* could be a potential modification in the process of generalising the theory of *enabling versus coercive formalisation*. However, we acknowledge the limitations of our study as it has not been carried out longitudinally and we can therefore not fully exclude the possibility that the formalisation investigated eventually ends up being coercive.

In quantitative research, it is important to ensure the reliability of the study, which often requires an independent and neutral observer. This reliability check is, however, less relevant when conducting qualitative case studies as they are interpretive in their nature. A more suitable approach is to discuss the procedural reliability. That means establishing the use of appropriate and reliable research methods and procedures (Ryan et al., 2002:155). Our study has been designed to address a chosen research question and gathered material has been transcribed and coded in a systematic way. We believe that the chosen procedure has contributed to strengthen the reliability of our findings and made it simple to follow what we have done.

Using interviews as the main source of data may also be questioned about whether it is a reliable technique or not. It may be argued that there is a risk of having distorted answers from interviewees, or that interpretations of what they say are selectively perceived and biased. However, the validity of our study has been strengthened by using data triangulation. That is, we have collected data regarding capital budgeting processes in FoodCo from

multiple sources, namely interviews and scrutinising of documentation. Further, we have actively assessed the validity of our own conceptions by feeding our interpretations from previous interviews to subjects of the study. This technique facilitates confirmations of our interpretations. Furthermore, as we are two authors who have conducted this study, it has been possible to reach agreed interpretations of gathered data. If there had been only one author, the risk of having interpretations biased to that author's personal character and frame of reference would have been higher. Another way of mitigating risks of receiving distorted data was by interviewing representatives from different departments and with different roles and responsibilities. These methods help decreasing risks of getting distorted answers and followingly contribute to the validity of the findings from our study.

6.3 Suggestions for future research

Firstly, as earlier discussed, the findings regarding capital budgeting of this study are dependent on the empirical context in which the formalisation of processes is being implemented. Followingly, future research could investigate ongoing processes of formalisation in relation to capital budgeting in other settings, for example in a public-sector organisation.

Secondly, as suggested above, our study makes it possible to formulate new hypotheses regarding enabling versus coercive formalisation. This possibility is not necessarily limited to capital budgeting, but could most certainly be stretched to other domain areas as well. As discussed, the framework used in this study could be further developed by applying it to different research topics. It is therefore possible, that the understanding for formalisation of processes could be extended by investigating new areas of research with the use of the theoretical framework of enabling versus coercive formalisation.

7. References

Adler, P.S. & Borys, B. 1996, "Two types of bureaucracy: Enabling and coercive", *Administrative Science Quarterly,* vol. 41, no. 1, pp. 61-89.

Alkaraan, F. & Northcott, D. 2006, "Strategic capital investment decision-making: A role for emergent analysis tools?. A study of practice in large UK manufacturing companies", *British Accounting Review,* vol. 38, no. 2, pp. 149-173.

Anthony, R., Govindarajan, V., Hartmann, F.G.H., Kraus, K. & Nilsson, G. 2014, *Management Control Systems: European Edition,* 13th edn, McGraw-Hill Education, Berkshire.

Arnold, G.C. & Hatzopoulos, P.D. 2000, "The theory-practice gap in capital budgeting: Evidence from the United Kingdom", *Journal of Business Finance and Accounting,* vol. 27, no. 5-6, pp. 603-626.

Bansal, P.(. & Corley, K. 2011, *The Coming of Age for Qualitative Research: Embracing the Diversity of Qualitative Methods*, Academy of Management.

Berry, A.J. 1984, "The Control of Capital Investment", *Journal of Management Studies,* vol. 21, no. 1, pp. 61-81.

Bower, J.L. 1970, *Managing the resource allocation process : a study of corporate planning and investment,* Division of Research, Graduate School of Business Administration, Harvard University, Boston.

Cannon, C.M. 1967, "Profitability Calculations and Business Practice: An Inquiry Into Academic and Business Stereotypes", *The Journal of Industrial Economics,* vol. 15, no. 3, pp. 189-199.

Chittenden, F. & Derregia, M. 2015, "Uncertainty, irreversibility and the use of 'rules of thumb' in capital budgeting", *British Accounting Review,* vol. 47, no. 3, pp. 225-236.

Dyer, W.G. & Wilkins, A.L. 1991, "Better Stories, Not Better Constructs, to Generate Better Theory: A Rejoinder to Eisenhardt", *The Academy of Management Review,* vol. 16, no. 3, pp. 613-619.

Ekanem, I. 2005, "'Bootstrapping': The investment decision-making process in small firms", *British Accounting Review,* vol. 37, no. 3, pp. 299-318.

Hasselbladh, H. & Kallinikos, J. 2000, "The project of rationalization: A critique and reappraisal of neo-institutionalism in organization studies", *Organization Studies,* vol. 21, no. 4, pp. 697-720.

Istvan, D.F. 1961, *Capital-expenditure decisions; how they are made in large corporations,* Bureau of Business Research, Graduate School of Business, Indiana University, Bloomington?].

Jarvis, R., Kitching, J., Curran, J. & Lightfoot, G. 1996, *The Financial Management of Small Firms: An Alternative Perspective*, Certified Accountants Educational Trust, ACCA Research Report no. 49.

Jordan, S. & Messner, M. 2012, "Enabling control and the problem of incomplete performance indicators", *Accounting, Organizations and Society,* vol. 37, no. 8, pp. 544-564.

Klammer, T. 1973, "The Association of Capital Budgeting Techniques with Firm Performance", *The Accounting Review,* , no. April, pp. 353-364.

Klammer, T., Koch, B. & Wilner, N. 1991, "Capital Budgeting Practices - A Survey of Corporate Use", *Journal of Management Accounting Research,* vol. 3, no. Fall, pp. 113-130.

Lumijärvi, O.P. 1991, "Selling of capital investments to top management", *Management Accounting Research,* vol. 2, pp. 171-188.

Perren, L. & Grant, P. 2000, "The evolution of management accounting routines in small businesses: A social construction perspective", *Management Accounting Research,* vol. 11, no. 4, pp. 391-411.

Petry, G.H. 1975, "Effective use of capital budgeting tools", *Business horizons,* vol. 18, no. 5, pp. 57-65.

Pugh, D.S., Hickson, D.J., Hinings, C.R. & Turner, C. 1968, "Dimensions of Organisation Structure", *Administrative Science Quarterly,* vol. 13, no. 1, pp. 65-105.

Ryan, B., Scapens, R.W. & Theobald, M. 2002, *Research Method and Methodology in Finance and Accounting,* 2nd edn, Cengage Learning EMEA, Hampshire.

Scott, W.R. 1995, *Institutions and Organizations,* SAGE Publications.

Segelod, E. 1995, *The capital budgeting manual*, Working paper edn, Uppsala: Department of Business Studies, Uppsala.

Segelod, E. 1997, "The content and role of the investment manual - A research note", *Management Accounting Research,* vol. 8, no. 2, pp. 221-231.

Tell, B. 1978, *Investeringskalkylering i praktiken,* Studentlitteratur, Lund.

Townley, B., Cooper, D.J. & Oakes, L. 2003, "Performance Measures and the Rationalization of Organizations", *Organization Studies,* vol. 24, no. 7, pp. 1045-1071.

Wouters, M. & Wilderom, C. 2008, "Developing performance-measurement systems as enabling formalization: A longitudinal field study of a logistics department", *Accounting, Organizations and Society,* vol. 33, no. 4-5, pp. 488-516.

Yanow, D. 2004, "Translating Local Knowledge at Organizational Peripheries", *British Journal of Management,* vol. 15, no. SPEC ISS.

8. Appendix

8.1 Interview guide: *Version 1*

Introductory

- Role in FoodCo.
- Overall description of FoodCo's operations.

FoodCo and capital budgeting

- What types of investments and resource demanding project
- Importance of investments
- Needs for making investments, identification
- Investment decision-making, different methods for different types of projects
    - Which stages of decision-making is interviewee involved in
- Typical capital budgeting process, paint picture of overall structure
    - Groups, departments, committees, people
    - Tree structure
- Walkthrough: idea to realisation
    - Handover between units

Investment alternatives

- Gathering of alternatives
    - How, tools, people
    - Important factors
- Sorting of alternatives

Financial tools used in capital budgeting

- Which financial tools are being used
    - Weaknesses and strengths
    - Frequency of utilisation
    - Different tools in different projects – product development vs. machinery
- Weight put on financial tools

- General requirements or rules regarding project proposals

Non-financial tools used in capital budgeting

- Non-financial parameters
    - Technological, strategic etc.
- Innovation killer: effects of not undertaking projects
    - Business as usual assumption

Discussion forums

- Common setting of discussions [talk freely]
    - Formal meetings
    - Informal meetings
    - Guidelines
- Selling of projects to superiors
    - Frequency
    - Arguments used
    - Importance for projects chance of moving forward
- Emotional investment in project

Decision-making

- People involved, relative power
- Distribution of accepted vs declined projects
    - Reasons for approval
    - Reasons for rejections
- Formal decision-making vs actual decision-making
- Disagreements – how to handle

8.2 Interview guide: *Version 2*

Introductory

- Role in FoodCo.
- Overall description of FoodCo's operations.

FoodCo and capital budgeting

- What types of investments and resource demanding project
- Importance of investments
- Difference between small, medium, large investments in accordance with PaperTrail, explanation

Latest project (product development)

- Kind of investment
- When
- Walkthrough: idea to realisation

Project before PaperTrail (product development)

- Kind of investment
- When
- Walkthrough: idea to realisation

Differences between old and new organisation

- Free talk about differences
- Decision-making
- Informal vs. formal
- Freedom vs strictness

Implementation

- Possibility to affect
- Education
- Adjustments

- Receptions, attitudes, beliefs, hopes
- Difficulties, obstacles, solutions
- Overall pros and cons

Other

- Anything lost from before
- Agree with decision to change processes
- Fulfilment of goals for PaperTrail