Managerial use of accounting information
- A study on how managers use business reports at NCC

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Abstract

There is a need to learn more about how managers use accounting information. This thesis investigates how managers make use of business reports; as they are one of the ways managers receive information. Previous research was found to broadly correspond to four important aspects affecting how managers make use of business reports; aggregation, timeliness, flexibility and dimensions. A case study was conducted at NCC Construction. The main findings from this study are that managers have the possibility to view information in the reports at their desired level of specificity and they are not concerned about the issue of timeliness. Furthermore they are satisfied with flexibility in reports, but wish for more capabilities and do not desire non-financial information in reports. Therefore the four aspects are found to no longer be a hindrance to managers in their use of business reports as much as could be expected from previous studies. Technological developments and business practices are found to have changed managerial work. Reporting has become faster and is more accurately reflecting the real world operations, making business reports more useful to managers.

Key words: Business report; management accounting; managerial work; aggregation; timeliness; flexibility; dimensions
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1. Introduction

A company invests in a management information system, desiring to support managers in performing their jobs, spending months, even years planning and implementing the system. Consultants come and go. With a lot of attention being spent on making the system work in tune with previous legacy systems, as well as on other technical aspects. Yet after all the time and effort spent, only a small portion of the information produced by the system may actually end up being used by managers in their work. This is worth closer examination, since accounting information is held to be an important source of information for managers in their work (Jönsson, 1998). Managers receiving the right information, on time, is an important factor for business success. With the large amounts of accounting information available to businesses using modern technology, the challenge is to filter out useful information and present it in a manner that makes it useful for managers (Simon, 1998; Lindvall 2010).

How do we determine which information is of use for managers? According to Jönsson (1998) and Hall (2010) more needs to be done to fill out the lack of research that examines “how and why managers use accounting information”. Jönsson (1998) argues managers “work with words” and therefore communication is of great importance in management, both for managers when directing attention to important issues as well as for use in problem solving. As Jönsson (1998) concludes, management accounting information is not used by managers directly in some sort of decision making model, but rather used in communication, for example as “an indicator that something is wrong”. This issue is important to investigate, in order to supply managers with the right information. Thus we arrive at the question how the managers perceive and make use of the accounting information they receive.

The two most important ways managers receive information is through business reports\(^1\) and interpersonal communication (Tengblad, 2002). Business reports are often produced by a management information system, which forms part of the company’s management control system. Boland (1993) describes how managers create context from their own situation and use that to interpret accounting information. This is of particular importance when receiving business reports as he describes how “management

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\(^1\) Business reports, referring to reports generated for internal use. Often through the use of some form of management information system.
accounting reports mean what readers of them make them mean”. Hence, we found it interesting to delve deeper into how managers use business reports and we developed the following research question:

“How do managers make use of business reports?”

In addition to this, we also intend to investigate how managers desire business reports to be and what would make them use business reports more. Learning more about how managers actually use and what they desire from business reports may contribute valuable insights for researchers. To do this, this thesis will study a group of managers at the large Nordic construction company NCC, managers who work in a context not unlike that which is found in many other large companies.
2. Literature review

Producing business reports used to require a lot of manual work, and still do. However, they are increasingly produced by use of computer systems. Systems used are often referred to as management information systems, which form part of a company’s management control system (Higgins, 1972).

2.1 Management control systems

The expressions management control systems, management accounting, management accounting systems and organisational controls are interchangeable (Chenhall, 2003). Management control systems are intended to provide information for managers to use in their work. They are also meant to assist organisations in developing and promoting desired behaviour (Otley, 1999).

It is suitable to briefly describe developments in management control research. How researchers gradually came to focus more on why better understanding of how managers work in general is needed and how they make use of accounting information in particular.

The term management control is commonly associated with Robert N. Anthony’s influential work Planning and control systems: a framework for analysis. Anthony described management control as a means for managers to influence other members of an organisation in order to assure the organisations objectives are realised (Anthony, 1988; Simons, 1995). Written in the 1960s his work was considered by some later researchers to be influenced by the “command-and-control” thinking of that era, referring to formal organizational control (Simons, 1995). Later researchers were advocating a broader perspective of how management control could be exercised, for example social and cultural control (Strauß and Zecher, 2013).

Simons (1995) acknowledges the importance “traditional means of control” may play in some cases, but he proposes another theory as a way to meet the challenge of competitive markets that require flexibility and employee initiative. He was not the only researcher who expressed a need for broadening the perspectives of management control research. Historically it was not unusual to view planning and control as inseparable parts of management practice. The reasoning being that effective control was dependent
on the outcome of the planning process, through for example a budget. (Bhattacharyya, 1971) The rationale behind formal planning systems in part, and management control systems in general were later questioned by researchers. Critics pointed out that even though business control practices had seen great changes over the years, management accounting and control had not responded to these changes in organisations and their environment. Management accounting research was by some researchers thus viewed as too detached from practice (Kaplan, 1984; Otley, 2001). There was a perceived need for revaluation of the empirical foundations of management control (Nixon and Burns, 2005).

This was part of a broader challenge to theories on management accounting and control. Previously many researchers had felt they had fully developed their theories and their only challenge was one of convincing practitioners to use them, a belief never seeming to be realised in practice. (Scapens, 2006) It turned out management accounting and control in practice was complex and unpredictable, as opposed to theories put forward by researchers in the field. (Ahrens and Chapman, 2007; Scapens, 2006) The use of management control systems was seen by some parts of the research community as actually going against good management practice, thereby making matters worse than if they were not used at all. (Otley, 2001)

Today, there exist a plethora of different approaches to management control, and there are different streams of thought regarding how to design and implement management control systems as well as what techniques to employ, as a whole or concerning parts. Examples of some of the most commonly discussed techniques used are activity based costing, lean manufacturing (Kulesza et al., 2011), and the balanced scorecard (Kaplan, 1998; Berry et al., 2009). Researchers have increasingly focused on how developments in practices have impacted the type of management control system employed, reflecting how businesses have changed from mainly dealing with just products to focus more and more on services. Also, the boundaries of organisations are viewed as not as clear as before by many researchers, requiring different forms of management control. (Strauß and Zecher, 2013)

This review of the literature on management control systems serves to illustrate how changes have occurred in the field since its inception. Changes reflecting new findings
in management research as well as changing control practices in business, practices that have adapted to individual, economic, social as well as technological developments in society at large (Berry et al., 2009). Regardless of which, in order to explain how managers make use of accounting information in general, and of business reports in particular, it is necessary to understand how previous research on managerial work expect them to act. When proceeding with the collection and analysis of empirical evidence, it is also important to take into account whether changing business practices and technology may impact findings from previous studies.

2.2 Managers’ primary information sources
Some of the most influential studies on how managers work were performed by Carlsson (1951), Mintzberg (1973), and Kotter (1982). They gathered their data through observations of managers at work as well as through interviews with the managers in question (Jönsson, 1998). For the purposes of this study it is suitable to review theirs as well as other research pertaining to how managers work with accounting information, and more specifically with business reports. After a thorough literature search it was found to be somewhat challenging finding later studies describing managers use of business reports. Therefore older studies were extensively used as basis for prior expectations of managers’ use of business reports. Their findings were used in the study while keeping in mind the way managers work may have changed due to changing business practices and technological advances.

As first mentioned in the introduction, the two most important ways managers receive information are through business reports and interpersonal communication (Tengblad, 2002). The importance of interpersonal relations and verbal communications for managers are evidenced in several of the studies reviewed. (Kotter, 1982, p.127; Mintzberg, 1973, p.149; Kurke and Aldrich, 1983; Jönsson, 1998; Hall, 2010) While acknowledging the importance of verbal communications in managerial work, focus was on the other important form of information the manager receives; managers’ use of business reports. Their use by managers is less studied and yet something of great importance for businesses.

McKinnon and Bruns (1992, p.159) argue that in an ideal world every manager should be able to design their own reports, to personally decide what they look like and chose
what they contain. All information should be gathered in databases and the managers could then pick all the information they need, whenever they need it. Modern information technology offers many kinds of solutions to realise these opportunities for businesses. However, in practice this has proven harder to realise than first envisioned (Granlund, 2011). For businesses, IT-systems used for example to produce reports represent a large capital investment (Schiller, 1990; Asakiewicz, 2011). Having spent a lot of resources on developing management control systems, organisations are not likely to allow or have opportunity to offer much freedom in redesigning these to individual managers. This leaves managers stuck in whatever solution is offered by the system in place. This problem is not easily solved, as different types of managers demand different types of reports and the situation often changes. Therefore it is hard for the accounting and information system departments to serve the different managers needs. (McKinnon and Bruns, 1992, p.159) In addition, many managers have problems with how to handle technology (Granlund, 2011).

2.3 Managers’ use of business reports
Johnson and Kaplan (1991, p.1) argue management accounting information today, is “too late, too aggregated, and too distorted” to be relevant for managers. Their writings inspired the division of the findings in the literature review of managers use of business reports into four parts; aggregation, timeliness, dimensions and flexibility.

2.3.1 Aggregation
How do managers use business reports? One aspect found to be frequently discussed in studies is that of accounting information in business reports often being too aggregated and simplified, and therefore of little use to managers. Reports should be specific and contain actionable information. Aggregated accounting information in reports lack details craved by managers to identify problems and deviations.

Johnson and Kaplan (1991, p.4) argue “older, simplified, aggregate procedures” should not be used, as more relevant and timely ways of working is feasible due to advances in information technology. Management accounting systems should be devised to be more accurate and specific. Studies on managerial work support Johnson and Kaplan’s (1991, p.4) claims regarding managers and their need for information that is specific, accurate and actionable. Carlsson (1951, p.89) found managers expressing complaints about the increase of number of reports as time passes, containing too much information requiring
sifting by the manager. Managers express desire to receive only reports on deviations from the normal. Mintzberg (1973, p.149) relates how managers search for trigger information, which also is current. He claims this is in conflict with formal information systems as these systems produce mostly historical information in aggregated form. Likewise, Van der Weken and Wouters (2002) say aggregation and allocation of costs make it harder for managers to see details that are important to them. According to McKinnon and Bruns (1992, p.132) useful reports should be directly related to the managerial tasks of the managers receiving them.

In absence of actionable information managers often make decisions based on their intuition, which they have difficulty to account for when pressed for their underlying reasoning. (Kotter, 1982, p.64) To accommodate this, McKinnon and Bruns (1992, p.132) suggest that reports should focus on a simple presentation of a limited piece of data. If there is too much analysis the important facts may be unclear and undesirable by managers. Likewise, Hall (2010) mentions difficulties for managers understanding complex accounting information when they have a limited amount of time to process it.

Reports should be adaptable enough to serve a particular manager needs and match the responsibilities of that manager. Managers might be interested in information about other areas, but most useful reports are those serving a specific manager. (McKinnon and Bruns, 1992, p.132) This is supported by Teittinen et al. (2012) who found systems supporting senior management with necessary information, in the form of basic financial accounting reports, information that allows comparison between different business units. However, managers of the business units found the reports generated by the same system to be lacking detail and useful information. In addition, as the complexity of the accounting information presented for example in a business report increases, managers may feel less confident in their understanding of that information and are less likely to use it or pass it on to others. (Hall, 2010)

2.3.2 Timeliness
Another important factor is the timeliness of reports. In order for the reports to be useful to managers, they have to be available on a timely basis (McKinnon and Bruns, 1992, p.132). This is a problem for managers as evidenced by Preston’s (1986) study where managers found the information to be untimely, lacking in detail and in occasion even inaccurate. The untimeliness was considered to be a limitation, as in most cases the
managers already knew the information through other means when they received the official documented information. In relation to this problem, Mintzberg’s (1973, p.47) study suggests it is more important for managers to receive information fast and efficiently than to receive it formally.

Other studies produce similar findings regarding the importance of timeliness. Van der Veeken and Wouters (2002) discuss the need for managers to receive current information to do their job. Managers express the need to be up to date with operations and to be aware of changes and unexpected events, this in order to be able to take action as fast as possible. Other sources are faster providing the right information. Kivinen and Lammintakanen (2012) found lack of confidence in the timeliness of information in reports produced by the information management system. This led managers to view the information in the reports to be less useful.

2.3.3 Flexibility

Timeliness is an aspect related to the issue of flexibility. For business reports to be timely, they also have to be more flexible, for example by allowing managers to request a report instead of waiting for a report to arrive according to a schedule. Furthermore, flexibility concerns the managers’ freedom to change the presentation of and choice of information contained in reports rather than just how current the information is. Either by offering a choice of reports targeted to different groups in an organisation or by allowing recipients choice of what information to partake. McKinnon and Bruns (1992, p.159) argue that in an ideal world every manager should be able to design their own reports, to personally decide what they look like and chose what they contain. This is exemplified in Kivinen and Lammintakanen study (2012) regarding managers’ desire for closer cooperation and discussion with the IT-department and financial administration in order to facilitate better use of systems used to generate reports. Kotter (1982, p.140) argue formal planning and performance and appraisal systems should be flexible tools in order to serve managers best.

Concerning flexibility some contradictory studies regarding how managers view routine reports as opposed to ad hoc reports were found. The need to adapt reporting to managers’ needs is frequently discussed in the literature (Tengblad, 2002). According to Carlson (1951, p.89) the time a manager can spend on undisturbed reading is really limited and with this in mind it is relevant to question if all the reports really are
necessary. This connects to Mintzberg’s (1973, p.39-40) findings concerning routine reports often receiving only brief attention from managers. They do little with routine information, preferring information that is of immediate use and specific current issues (Mintzberg, 1973, p.34). The routine reports are therefore often ignored. This implies reports should be adapted to the intended recipients and generalised reports should be avoided. In short, managers desire reports to be flexible if asked to use them. However, other studies found regular reports to be of some value to managers. The reason was found to be the additional costs of creating more flexible reports for both the manager and the company. Taking this into account, regular reports has the greatest marginal value to managers, requiring less effort to produce after implementation of a regular reporting system than ad hoc and specific reports (Vlahos et al., 2003). While satisfied with information management systems and the reports generated in general, managers are reluctant to make use of systems where reports are complicated to generate or take long time to load. (Kivinen and Lammintakanen, 2012)

2.3.4 Dimensions
One aspect on managers’ use of business reports specifically, and accounting information in general, is the dimensional aspect. According to the literature managers express the need for internal reporting to be more multi-dimensional. For example, in the 1990’s the concept of balanced scorecard emerged as an answer to the demands of more than purely financial information, such as customer satisfaction, employee satisfaction and process cycle times (Kaplan, 1998). Accounting information is not managers only source of information, and sometimes managers find other sources of information to better support them in their work. According to Van der Veeken and Wouters (2002) managers closer to operations will use accounting information in relation to its ability to answer basic questions the manager need answered. Accounting information is not the only type of information the manager can turn to in order to get these answers. For example the manager may instead chose to rely on observations and non-financial figures.

Managers will go to great lengths to access information they need. Mintzberg (1973, p.67) describes the manager as seeking information to facilitate understanding about the organisation’s environment and what is happening inside it. If it is not found, then managers may circumvent formal information systems that do not give them the information they need, by constructing their own monitoring systems to provide needed
information. For example through external contacts, membership of trade organisations, informal contacts with subordinates outside established lines of communication. (Mintzberg, 1973, p.149) This does not mean managers do not use business reports; rather they do not always present all information managers wish to find in reports. On the issue of managers’ use of and attitude towards reports Kivinen and Lammintakanen (2012) found managers to be pleased with basic reports generated by an information management system. However, managers desire more multifaceted information in addition to existing basic reports. Information that is more refined and detailed, and which takes into account their specific information needs.

2.4 Technological developments
The literature included in the literature review may strike some readers as too old or dated. This is no accident or oversight, as more recent studies relating to managers use of business reports was hard to find. The risk inherent in including mostly older sources is overlooking changes due to rapid technological developments. In recent decades developments in information technology (IT) has introduced new capabilities in reporting available for managers to use. IT has also changed the way companies' structure and manage themselves (Nolan, 2000, p.217). Managers can make use of computers to run large hierarchical businesses in an efficient way by using them to process massive amounts of data (Ibid, 2000, p.220). During the past two decades there has been a rapid growth of businesses adapting business intelligence (BI) technology. This serve managers with more choices in how information is presented and what information they can find in reports. BI technology makes it possible for managers to search for different types of data within the whole company. It has also reduced the time between when data is acquired and when analysis of it is possible. Furthermore BI technology allows managers to drill down into specific accounting information in reports, since companies’ gather and present data to managers at a finer granularity. (Chaudhuri et al., 2011) However, not all companies seem to use all the capabilities of their business intelligence software to its full potential (Granlund, 2011).
2.5 Expectations on how managers use business reports

The literature review leads to the following expectations on managers use of business reports.

Studies were found arguing business reports are most likely to be used by managers if they provide specific and actionable information. Managers use business reports to find deviations from the normal, or trigger information that directly pertains to their work tasks. Similar findings were expected to be found in this study. There is no reason to suspect managers require anything else than business reports to be specific and relevant to their work tasks if they are to be used. However, business reports might have changed to allow managers access to more information relevant to their specific situation, due to changing management practices and technological developments (Berry et al., 2009). For example by use of BI technology allowing managers to drill down into accounting information in reports (Chaudhuri et al., 2011).

Previous research was found to have similarities regarding the importance of receiving business reports in time. Managers are more likely to use business reports if they receive them while they still are relevant. Business reports must be timely, as otherwise it is likely managers will seek information through other sources. Managers’ definition of timely may change due to technological developments and changing business practices, from weeks to days, from days to hours. Software capabilities have developed and become faster (Chaudhuri et al., 2011). Thus, it is reasonable to assume managers’ expectations on timeliness of accounting information in reports will change accordingly.

There are some opposing views regarding flexibility in reports. Earlier studies have found managers to prefer flexible business reports, which are of immediate use in managers’ work. Other researchers have in later studies pointed out that regular reports are used and valued by managers, mostly because the additional costs and time required producing flexible reports. However, the need still seems to exist among manager for more flexibility in what reports contain; prompting closer cooperation between financial administration and IT-department. Therefore flexibility is expected to be a current issue for managers regarding business reports. There is reason to believe there exists a trade-off between flexibility and additional costs, limiting what can be done. This is interesting considering researchers once believed when technology matured it would
solve this problem once and for all (Kaplan and Johnson, 1991, p.5). These hopes may not have been realised and this is something this study intend to investigate further.

Managers desire multiple dimensions in reporting rather than just being presented with accounting information. Managers may gather information through observations and non-financial figures if it is not to be found in business reports they receive. Most important is the ability of business reports to answer basic questions the managers pose. Therefore, business reports should take into account managers specific information needs, not only the accounting information. Today there are greater possibilities to gather different kind of information from a whole company, due to the developments in BI technology (Chaudhuri et al., 2011). Managers are expected to have experience from attempts to address this problem in business reports, attempts, which may not have matched expectations, due to technical complexity or inadequate resources (Granlund, 2011).

Following the discussion above this study can be viewed as both relevant and necessary, since previous research were not focused on business reports in particular. Considering the time and resources invested in producing business reports, it is important to get a deeper understanding about how they are used by managers. Especially since the influence on managerial work from changing business practices and technological development seems to be a shared belief among many researchers (Kaplan and Johnson, 1991, p.5; Berry et al., 2009; McKinnon and Bruns, 1992, p. 159). The literature review shows that there have been developments in IT concerning reporting corresponding to these beliefs (Nolan, 2000; Chaudhuri et al., 2011). It seems likely this would change managers’ use of and perceptions of business reports.
3. Method

We set out following the call by Jönsson (1998) and Hall (2010) arguing more need to be done to fill out the lack of research on “how and why managers use accounting information” (Jönsson, 1998). More specifically we chose to study how managers use business reports. To do this we chose a descriptive approach when deciding how to conduct our study. It was important to have a clear picture of the research area before starting the data collection (Saunders, 2012, p. 171). Therefore a literature review was conducted to act as a basis for how data was gathered and to allow us to analyse the empirical findings. Four aspects affecting how managers use business reports were identified. These aspects were aggregation, timeliness, flexibility and dimensions. The findings in our literature review are based mainly on established researchers’ previous studies of individual managers, this to ensure sufficient theoretical framework, which is argued to be good in order to make generalisations (Yin, 2012, p.18). By reviewing previous research on the same level of analysis as later performed in this study, issues with research assigning similar sounding names to different phenomena were avoided, aligning theory with the evidence and later analysis (Luft and Shields, 2003). The study aimed to capture how managers use business reports in a context where all managers use the same system and processes. This is best done with a case study, as it is hard to separate the phenomena from its context (Yin, 2006, p.31). Furthermore, it was also suitable to view the issues influencing managers’ use of business reports as individual-level variables, which vary among different managers in the same unit (Luft and Shields, 2003). As opposed to studying managers working in different contexts, where the comparison might be distorted by differences, for example in different company management control systems. Having decided upon this, the next task was to find the right company to study.

3.1 Finding the right company

Our search for a suitable case study object was influenced by the requirement of adequate size, meaning it had to big enough to have a large number of managers employed. Organisational sophistication was another requirement; we were looking for a company with formalised organisation and communication. It should also have a management information system for reporting to managers in place. Through contacts we were granted access to a contact person at NCC Construction Sweden.
NCC Construction Sweden is a part of NCC Group, which is a large construction and property development company in the Nordic region. NCC Construction Sweden builds everything from schools, hospitals, housing to industries and infrastructure. NCC Construction Sweden has about 7500 employees and had a turnover of 25 billion SEK (NCC’s intranet). Thus fulfilling our first requirement of a study object of adequate size. NCC Construction is organized into five different business units, which are divided into profit centers, see figure 1. This gave us opportunity to study the use of reports by managers in a formal, complex organisation.

Our contact person was working in the business unit Anläggning. She was allowed updates on our work on a continual basis as recommended by Easterby-Smith et al. (2002, p.75). In the end no alterations had to be made per request of our contact person in the thesis itself.

Convenience sampling was used in the selection of managers participating in the study. Our contact person suggested the managers in her business unit ((Saunders 2012, p.291). These managers had different responsibilities, all working with business report from a system called Report and they were also covering the entire business unit. This group was found to be suitable for participation in this study, since it corresponded well to other groups of managers in the company as well as presenting a situation thought to be typical for this type of large companies. The findings from our investigation of this group of managers may well be applicable to other, large companies with similar

![Organisational chart for NCC Construction](image-url)
organisations. Gaining the trust and confidence of respondents is important in order to be able to ask sensitive questions (Saunders, 2012, p.391). In the study this was to some degree circumvented by studying use of reports from the old system Report, which was soon going to be replaced. NCC Construction and related companies in the Nordic region are jointly implementing a new system for reporting and analysis. This allowed us to ask questions to managers regarding their use of reports in the old system. This was good since then the managers felt allowed to answer our questions honestly and perhaps even critically. The new system was not yet in use, so it was not deemed likely to affect users perceptions of the old system.

There is always a risk when doing a single case study in not being able to generalise the findings (Cooper and Schindler, 2011, p.256) However, for the purposes of this study it was deemed more valuable to conduct an in-depth study, in order to investigate a situation deemed typical and applicable to many other businesses. Thus, a typical situation such as found in our study subject merited the choice of a descriptive study (Yin, 2012, p.49). Furthermore it was an appropriate choice since little is known previously how managers use business reports, as found in our background section as well as experienced due to the lack of relevant studies and findings encountered during our literature review.

3.2 Data collection
A common feature of case study research is the use of triangulation (Saunders, 2012, p.179; Myers, 2009, p.10). In our case study three different data collection techniques were used. Firstly an archival search of documents was conducted, primarily from the study subject’s intranet. This search provided much of the background to our case study and facilitated writing questions for our questionnaire. Secondly all of the 17 managers using the system Report, working within the five profit centers in Anläggning, were asked to take part in a questionnaire. Finally, the five managers heading the profit centers were picked out for semi-structured interviews, to expand answers given in the questionnaire. Thus, data from both interviews and questionnaires allowed us to compensate weaknesses with interviews with the strengths of questionnaires and vice versa (Cooper and Schindler, 2011, p.256). Giving us the opportunity to see the topic from different angles and provided a more complete picture (Myers, 2009, p.10).
Our first contact with NCC mainly involved gathering background information. It also allowed us to prepare our archival search with our contact person. The introductory meeting with our contact person, controller business unit Anläggning lasted approximately 30 minutes.

3.2.1 Archival search
Our archival search strategy involved gathering information from NCC’s intranet, project documentation and from the annual report for 2012. Our main focus was finding background information on the company, as well as its current and upcoming management information system for reporting and analysis. This because it was deemed to describe part of the reality we wished to study (Saunders, 2012, p.178-179), the systems and the organisation the managers work in. Access can be an issue in archival research. We were fortunate to access documents both through intranet-mediated access as well as internet-mediated access, to various knowledgeable persons inside the organisation in a position to help us in our search for appropriate documentation. (Saunders, 2012, p. 210)

3.2.2 Questionnaires
Access was granted to a group of 17 managers within NCC Construction’s business unit Anläggning. The group of managers consisted of all the managers working with business reports from the system Report, from all the five profit centers in the business unit Anläggning, see. Figure 2. They were representative of managers in other business units at NCC Construction. Thus the questionnaire provided us the opportunity to create an overall picture of this group and their use of reports.

![Figure 2. Organisational chart for NCC Construction Anläggning](image)

It was deemed appropriate to prepare and send out a questionnaire in order to create an overall picture of the use of business reports among the group. We wished to create a better understanding of a larger group of managers and how they use reports and the reporting tool Report at NCC. Questionnaires are suitable for this purpose and were
deemed a good fit to allow the collection of data in a standardised way and facilitate comparison between managers (Saunders, 2012, p.176-177). By gathering responses from a larger group within the studied unit and then averaging them, it was possible to better avoid individual-level differences affecting our analysis (Luft and Shields, 2003). However the weakness of questionnaires is respondents’ lack of ability to assess causality, when accounting for theirs or others behaviour (Alreck and Settle, 1995, p.6), in our case how the managers use business reports. Therefore conducting semi-structured interviews with a sample of the group further strengthened the findings. These allowed us to more in depth examine interesting findings from the questionnaire and to probe for possible links between important issues, rather than relying on respondents to self-assess how they work.

When preparing the questionnaire we created the questions and statements with the four sections of our literature review in mind. The aim was to have approximately three questions or statements for each section, as to not make the questionnaire too time consuming for the respondents. The connection between the literature and the questionnaire and interview questions can be seen in Table 1.

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**Table 1.** Connection between the literature and the questionnaire and interview questions

The questionnaire is included in the appendix (Appendix 1). The questionnaire was designed to start with more general questions, which are easy and quick to answer as suggested by Alreck and Settle (1995, p.144). For the questions regarding the four aspects; aggregation, timeliness, flexibility and dimensions, we created two to three statements covering each part (see Table 1), using Likert style rating, which is influenced by the Likert scale (Saunders, 2012, p.436). This rating style was chosen because it makes it easy for the respondent to answer many questions fast, as the same scale can be used to answer several questions. We elected to make use of a five-point rating scale, because we knew respondents cannot be as precise as we would want them
to be (Alreck and Settle, 1995, p.141), but we wanted to limit the options between low, neutral and strong disagreement to be able to clearly see their attitudes. The questionnaire was concluded with two open questions to allow the respondents to use their own words describing their use of reports and capture what is in top of their minds (Saunders, 2012, p.433). The questions and statements were designed to be as short and direct as possible, as questionnaire questions should be focused, short and as simple as possible. (Alreck and Settle, 1995, p.88) To facilitate respondents understanding we deliberately chose to ask questions in Swedish (Ibid p.90-91).

The questionnaire was created in an Internet tool and sent out electronically. A small group, including our contact person, pilot tested the questionnaire to make sure that there was no problems understanding or answering the questions (Saunders, 2012, p.452). Some minor changes were made after the pilot tests. Out of the 17 managers, ten managers responded on our first request to fill out the questionnaire. To increase the response rate our contact person was asked to send out a reminder. This resulted in an additional six managers responding. Thus 16 out of 17 managers in the group responded to our questionnaire. This was deemed adequate to proceed with preparations for the interviews.

3.2.3 Interviews
Out of our total group of 17 managers, the five profit center managers of Anläggning were chosen to participate in the interviews (Figure 2). These five had similar responsibilities for their profit centers and all reported directly to the senior vice president of NCC Construction. One drawback with this approach is that the interviews may not reflect the group as whole, as opposed to other means of choosing a sample group, this because the group of managers participating in the questionnaire were more diverse than our interview subjects. However, this was by design, as it was suitable to ask more detailed questions directly to those deemed to be most knowledgeable about reporting at NCC, this being most likely true for senior managers with a lot of experience, able to reflect back on their experience from other positions.

All interviews, except one, were conducted by telephone, as geographical distances precluded personal interviews. The drawback could be that if the telephone interviews go on too long we could risk losing the respondent's cooperation (Alreck and Settle, 1995, p.38-39). This was not a problem during the execution of the interviews as none of
them took more than 30 minutes, which was according to plan. In addition to this, there was also a trust issue when interviewing people we had not met before and the respondent might avoid sensitive issues (Myers, 2009, p.127). This trust issue could also have been reinforced since we made the interviews over telephone. However, the questions were not too sensitive since they largely covered an old system, which was soon going to be replaced.

When preparing interview questions we relied on data gathered during questionnaires and our archival search as well as our understanding from the literature. The same method as for the questionnaire questions was used, creating about four questions for each section from the literature review (Table 1). These formed the basis for deciding upon which questions to focus further on in the interviews. The interview questions are included in the appendix. (Appendix 3) We choose a semi-structured approach for our interviews, as we wanted the answers to complement our questionnaire but also allow new questions that might emerge during the interview (Myers, 2009, p.124; Bell, 1993, p.119). We wished to get a deeper understanding about the managers’ use of business reports and ask more detailed questions about how and why they use the reports. One risk in doing this type of more unstructured interview is that the results may be affected by bias, for example if the interviewer tries to get responses that are in line with the interviewers own opinions (Saunders, 2012, p.381; Myers, 2009, p.127; Bell, 1993, p.119). However, some structure was needed due to the risk of loosing the subject. The answers could easily be more directed towards the design of systems instead of the use which we were interested in. With semi-structured interviews we could avoid this problem.

Before the interviews the contact person notified the managers, to be prepared for an interview with us. No additional information was given to respondents before the interviews. We both took active part during interviews to ensure that all important topics were covered during the interview sessions. This also facilitated interpretation of answers given by interviewees, as we later discussed and evaluated these answers. Immediately after the interviews our initial impressions was written down. The interviews were also recorded for later analysis. We decided not to transcribe the interviews, this because it is a time consuming process which in this study did not promise any additional value to the later analysis.
3.3 Data analysis

As mentioned above we made use of several methods of data collection, as to create a situation where findings from one method of data collection reinforced the others. (Saunders et. al, 2009, p.179) Our questionnaire was constructed as to allow groups of questions to provide results pertaining to the four different aspects covered in our literature review. The interview questions were constructed in a similar fashion.

During our data analysis we combined our archival search, questionnaire and interview results in order to create a narrative of the company and the context which group of managers studied worked. As we had grouped the questions we tried to build the narrative on the four aspects that were identified in the literature review (Appendix 3). Since we made use of several data collection methods we were able to use them to contrast their results to provide a richer analysis, both by looking at differences between questionnaire answers and what was said during interviews as well as incomplete or contradictory views of the managers (Myers, 2009, p.170-171). Our analysis aimed at confirming the findings from previous studies on how managers use business reports, concerning the four aspects aggregation, flexibility, timeliness and dimensions. Where no such confirmation could be found we attempted to problematize our findings and discuss why our findings diverged from our literature. Where needed, we drew on additional literature as to further enrich our analysis. One problematic issue with our approach is that it can be hard to know when to conclude the analysis. (Myers, 2009, p.194) We therefore attempted to contain our analysis in such a way that we stopped once it was readily apparent our research question was sufficiently discussed, in view of our previous understanding of aspects in the literature.
4. How managers use business reports

4.1 Business reports at NCC

4.1.1 The group of managers
The five managers interviewed all have long experience working at a variety of positions within NCC. Thus, they share a considerable experience based expertise on how things are done at NCC Construction. Examples of such positions previously occupied by managers participating in the study are site supervisor, project manager and other managerial positions at different levels. Currently, the interviewed managers work as profit center managers. In the larger group of 17 managers, which the five managers are a part of, the production managers from all profit centers and the vice president of Anläggning are included. All but one of these also has a long experience working at NCC of ten years or more. They all share educational background in the technical fields.

4.1.2 The Report system for reporting and analysis
For the managers at NCC Construction the system called Report was one of the primary tools for reporting and analysis. Report is intended to be used for analysis and monitoring of financial information, for registration and analysis of budget and forecasts. NCC has recently decided to implement a new system for reporting and analysis called Cobra. (Stjärnan, NCC’s internal newspaper) This system is not used by managers in the study as of yet. There were also mentions of use of other systems used by managers, for example E-analys to view more detailed accounting information at project levels.

Managers use the existing Report system to work with prognoses and budgets. It is also used to do analyses, follow-up balance of payments and liquidity, order intake and degree of project completion (Appendix 2 - 1.1-5). About half of them use it every week, the other half use Report every month or more seldom (Figure 3).

![Figure 3. Frequency of use](image_url)
There are no discernable patterns in the frequency of managers’ use of Report. Managers’ responses during interviews revealed this are due to differences in work practices. Some managers are frequent users of Report and the associated system E-analys, doing a lot of work themselves in the systems when reading reports:

“Report shows our current position in actual terms. It is easy to go through the 50 pages to look at projects, to see if (any project) is not keeping up. There is almost always a reason it's so, then I can ask a control question.”
- Manager 3

4.1.3 Working with reports and with other roles
There are differences in how managers at NCC access reports. Some of them rely on controllers’ assistance to produce and provide commentary to reports. Having a good working relationship with the controller allows the manager to receive as specific and detailed information as he or she required. (Manager 1, 2 and 4) The ability to access and work with Report to produce reports depends on frequency of use and thus the controller is sometimes in a better position to do more advanced work. The manager is more likely to be relying on standardised reports when working on his own (Manager 1).

The controller’s role in assisting the manager can be to filter accounting information according to the managers needs. (Manager 4) It can also be to help the manager adjust reports to better suit the managers’ requirements:

“[...] when I sat in another business unit they [the controllers] made customised reports for us. So we had a couple of reports, which were complementary, to receive the information we needed.”
- Manager 5

4.2 Aggregation
4.2.1 Understanding the overall picture
Managers at NCC were found to use reports to attempt to find a context in order to better understand situations: “You want to see the complete picture, not a single paper taken from its context. You want to see the background” (Manager 4). Managers desire information that informs them of the overall developments in their area of responsibility. Information serving to provide an overview picture: “It (Report) is good
enough for me. I am supposed to have an general overview.” (Manager 3)

Managers rely on business reports as a common language for discussions with others. The accounting information contained in these reports is presented and interpreted as a close approximation of developments in actual operations. This may be especially important in more senior managerial positions: “We have lots of challenges and topics for discussion in each project. But it [Report] gives me the economical foundation to be able to talk about all projects”. (Manager 3)

In the larger group of managers who answered the questionnaire, the managers’ positions may impact use of business reports. One manager said he or she would be more likely to use the reports in Report if he or she had another position in the company, implying that the information was to aggregated for his duties. Furthermore there were one manager requesting more descriptions and details about specific projects. (Appendix 2 - 2.1)

4.2.2. Understanding specific situations
Context is important to managers, but managers also use business reports to find information relevant to the matter at hand, for example to follow-up individual projects. If they are to be able to find information relevant to current issues, the business reports have to contain information the managers find to be relevant. In general, managers at NCC Construction find reports to be specific, likely to contain actionable information as well as to provide detailed information (Figure 4).

![Figure 4. Managers' perception of aggregation](image)

Managers say they use the information contained in the reports to support them in their work. (Manager 1-5) One reflection of the relevance of information contained in reports
is how often managers discuss information found in them on their own initiative. Most managers discussed information from Report, on their own initiative, every week, although a few did this less than once a month. (Figure 5)

Managers also act on the information in the business reports (Manager 4; Figure 4), as one manager describes how he acts on information:

“I do act on it. Of course when things look shaky something needs to be done. But in my current position I question why things look the way they do and if I do not receive a good answer then the person in charge will have to look into the issue and report back. But of course, we do act on it.”
- Manager 5

Managers use information contained in business reports for discussions and concrete action. Managers analyse reports both a general level as well as at the project level (Manager 2). The level of detail required by the manager is determined by the problem or issue in question. When looking at project level managers sometimes desire very specific and detailed information. If it is not easily accessible in reports from systems, then they may have to ask controllers to find it. (Manager 1 and 2). It is also possible to view more detailed information in another system called E-analys. In E-analys information about every project can be viewed more in detail, and it also allows users to drill down to view more specific information. Managers wish this function to be integrated all in one system, to facilitate easier access to information.

“I would have liked to see every verification in the same system.”
- Manager 3
Looking in E-analys can complement or prepare the manager ahead of discussions with colleagues:

“When there is some account or project which is shaky then you can ask questions at the workplace or to those in charge of course. Looking in E-analys is also easy.”
-Manager 5

4.4 Timeliness
Managers at NCC found information contained in the reports to be current (Figure 6).

![Figure 6. Timeliness of reports](image)

Managers assume information in reports to be consistent and have a certain quality; therefore they place more importance on them being timely (Figure 7, managers 1-5).

![Figure 7. Quality versus timeliness in reports](image)

This does not mean quality is not important, rather managers rely on that other roles will do this and assume information presented to them to be reliable (Manager 1 and 2). Managers are aware some occasional errors may occur in accounting and take this into
consideration when working with reports. (Manager 3) Managers’ stance towards time versus quality can be summarised as:

“It is part of quality that it [the report] is current”
- Manager 5

Information in routine reports is sometimes known by the manager, for example by actively monitoring developments in the system or through other means such as observations (Manager 3; Figure 6). The manager may have a relatively good picture of what is happening without the reports (Manager 1). Discussion with colleagues allows the manager to create a picture of developments in operations before being presented with a routine report on his or her area of responsibility (Manager 4). Some of the information in the business reports may be received regularly through other means, but it is anyway needed in a summarised form in a report. Reports are useful even if they already have an idea about what they are going to contain and the aggregated information is taken from the systems. (Manager 1)

Nevertheless, the manager still want a system which is up to date and where it is possible to see changes (Manager 1). One manager would use the information contained in reports more often if they were updated faster at the end of the month (Appendix 2 - 2.2). All managers had the option to access reports at their leisure:

“We fetch them [reports] ourselves, so you get them when you want them.”
- Manager 5

However, reports are not continuously updated, since the information in them comes from different systems and therefore the system requires one night to be up to date. (Manager 1 and 5)

Not all managers desire daily updates of reports, expressing satisfaction with receiving routine reports once a month. They consider them to be current and timely (Manager 4 and 5):

“The numbers are new. I do not dig into the numbers and look at them every day. Rather
this is done when I receive the report, to see how things look and then the information is new. The previous report is known, so perhaps there are no big surprises, but you are curious how things are going, how they develop. So in that way it is new.”

- Manager 5

4.5 Flexibility

Managers at NCC Construction prefer flexible reports to standardised reports (Figure 8). During interviews managers are found to connect the issue of flexibility to Report and its ease of use. A few managers consider it to be challenging to use, they did not find it very flexible in regards to what can be done. There are occasions when managers desire to make changes in reports looks and contents (Figure 8). One manager claimed to be more likely to use reports if there was an opportunity to “design” reports himself or herself. Another manager would use reports more if they could be more flexible, now most are fixed or locked (Appendix 2 - 2.3-4). This was also evidenced in the statement of a manager regarding the importance of flexibility:

“It would have been an advantage to be able to find the information without any help from the controller. The information in the system is not adapted to the managers’ needs. The information is there, but it’s not presented in a good way.”

- Manager 1

![Figure 8. Flexibility in reports](image-url)
If flexibility increased, managers as users could work more independently without assistance from the controllers in the Report system. Currently adjusting reports to suit a managers needs requires system knowledge and cooperation with other roles to make changes in Report (Manager 5). Even managers viewing themselves as frequent users can see the benefits of greater flexibility, for example in more analysis capabilities in the system like graphs and trends:

“The current solution can be improved further. With more graphs and trends. This will be solved in the new system”
- Manager 2

Managers’ perception of reports in the current system being too inflexible also appears connected to them having to alternate between different systems. Managers switch between systems when looking for information on developments in the operations (Manager 3). Working in many different systems may be a challenge; it is not always possible to get them to work together (Manager 5).

There remain challenges and opportunities to increase flexibility in reports. Yet on the whole managers view flexibility as adequate. Some even experience it to be good (Manager 3). There are managers experiencing a lot of opportunities in the systems to pick and chose:

“Everything is possible in reports today. [...] You can ask for whatever you want to support you in your work. [...] It’s not worth investing more resources to make reports more flexible, we get everything we need.”
- Manager 2
4.6 Dimensions

The accounting information making up the basis of business reports in the Report system at NCC is felt to be adequate by most managers. Most managers do not desire any additional information from other sources to be included in the business reports (Figure 9; Manager 4).

![Figure 9. Dimensions of reports](image)

Managers are not in favour of mixing different kinds of information in reports, deeming it adequate to look at different sources for different kinds of information:

“The accounting information should speak for itself and be compared straight across [...] Of course personal issues are very interesting to us. They are not possible to include in the reports, it is my opinion they should be put in a separate system. It easily becomes a sensitive material. Strategies likewise, it is too much”

- Manager 3

However, when asked what information they would include managers indicated an interest in market share and competitors (Managers 1, 4 and 5). This is a challenge managers view as hard to solve but of great worth to them in their work. Currently managers may for example look at numbers reported in competitors’ annual reports or those gathered by other actors such as Sverige Bygger, an external information source providing market information. However, such information may be hard to compare across organisations, for example NCC has business units sometimes working closely together but remaining separate which are viewed as one in external statistics from Sverige Bygger. Managers found having control of the exact market share too be valuable, but were uncertain how it would be accomplished (Manager 3, 4). There are
other, external sources of information managers look at, as a part of their work, for example market trends, changes in the economy, competitors, external actors and their returns, equity, volumes and marginals' (Manager 1, 3 and 5).

“Competitor analyses are always interesting. But they are more bound to the stock exchange and what is shown in annual reports”
- Manager 3

Managers keep themselves updated about the business situation, for example regarding competitors, through other means. Some managers view it is hard to see how external information could be integrated into the reports. (Manager 2 and 4)

“Although it is important to be updated regarding the business situation and competitors, this is not something which is easy to include or suitable for these kinds of reports.”
- Manager 2

However, not all managers are pessimistic about the possibility of including other information in business reports.

“Of course you can gather it together. I do not believe it would be that difficult.”
- Manager 5

4.7 How business reports and accounting have changed
Reporting and accounting in general have changed significantly over time (Manager 1, 2, 4, 5). For example in 1975 there were no cell phones and reports in the company came in a heavy envelope each month (Manager 2). The evolving nature of the organisation in a large company such as NCC affects how reporting is done. Managers used to work more in a local context in small subsidiaries, not taking into account efficiencies of scale but rather looking at their own area of responsibility. Nowadays managers employ a larger perspective in their work, looking more at what is good for the entire company. (Manager 4) Other changes involve changing accounting standards in the industry during the years, such as the percentage-of-completion method, which also affects reporting (Manager 5).
Previous issues concerning divergence between accounting and the actual operations has improved significantly according to several managers:

“There has been a very loose connection between how it looks in the accounting system and how it looks in the reality in the projects if you go back [in history]. Then there has been a gradual shift to today’s position where we try to get the right accounting in the right project.”
- Manager 3

For example a local manager in charge of several projects could chose to:

“...take costs from one project and move them to another project. For example when ordering a load of gravel, putting the costs where they do not belong. In order to even out costs and show three decent projects instead of one good and two bad projects. In that case it is easier to show three projects developing decently well”
- Manager 3

The company have corrected this issue in several ways. Today, managers are connected in real time (Manager 2) and the reporting is much more clear. With a better connection between accounting information and the actual operations:

“We have taken giant leaps in the right direction, but there are still some things that need further work”.
- Manager 3

Managers view developments in reporting as progress, towards what is believed to right and correct. They view it as important to be thorough and for reports to provide an accurate picture of reality (Manager 5). Previous workarounds have been reduced or eliminated by among other things working with values, NCC becoming more of a value driven company. Creative solutions are no longer acceptable:

“What we have today is a company lead by values where we do not accept creative initiatives in the same way. Or rather, not at all.”
- Manager 4
Technology also impacts how fast and accurately reporting can be done, making it easier both make reports and to correct mistakes. A manager and the controllers assisting that manager may use the reporting system to find deviations and ask questions regarding details, in order to get the right accounting in projects (Manager 3). Reporting, both external and internal, is competitive between different companies in the industry. One company may be the fastest at internal and external reporting. Then it’s competitors know what is possible to do and all wants to be that fast:

“I think the whole market has a focus on showing how things are. We want to be fast with our annual reports and show the world how things are and how NCC is developing.”
- Manager 5
5. Analysis

Business reports are found to be used by managers at NCC, with a majority using them once a week or more. Most central to this study is the question how managers use business reports. Managers in this study use business reports to do prognosis work, follow-ups and analysis of business developments. However, the importance placed by managers on different aspects of business reports differed somewhat from our expectations from the literature, for example the lacklustre interest in discussing aspects such as timeliness, which was assumed beforehand to be a much thought of subject by managers.

5.1 Aggregation

The literature suggests business reports are more likely to be used by managers if they contain information they perceive as specific and actionable (Carlsson, 1951 p.89; Mintzberg, 1973, p.149; McKinnon and Bruns, 1992, p.132). Two strategies were found to be employed by managers at NCC to find specific and actionable information. Controllers can be asked to assist managers to varying degrees in sifting and preparing reports taken from systems to make sure they are suited to managers needs. Managers could also themselves elect to delve more into the workings of systems used to produce business reports, becoming frequent and perhaps even avid users, gaining detailed knowledge about how to work in the systems to extract specific and actionable information.

It is possible that managers have the possibility of either becoming experts themselves or working with other roles with expertise, they may experience reports to be specific either way. Reports remain the same but managers have developed ways to get the information desired, according to personal preferences. Managers were thus not as concerned about lack of specific and relevant information to their work tasks as was expected from a reading of the literature (Teittinen et al., 2012; McKinnon and Bruns, 1992, p.132). They expressed that progress had been made concerning addressing the lack of relevance between accounting and actual operations. They did not view reporting as too aggregated or too hard to view at different levels of granularity.

Chaudhuri et al. (2011) describe how BI technology now make it possible for managers to drill down into specific accounting information, looking at data at a finer granularity.
Managers at NCC have the option to drill down into an area of concern, for example looking at one specific project and looking at specific issues arising in that project. As opposed to older studies this indicates managers have access to improved capabilities, solving some issues regarding to aggregated information found by previous studies. However, to be able to drill down to specific information managers have to switch between different systems. Managers tend to take this into account and answer reports were specific even though reports in the system intended to be used by them for reporting and analysing, did not produce reports specific enough without managers switching to another system for more detailed information. Managers perceive reports in Report as suitable for them in their work; this aggregated level is complemented by the E-analys system. Some of the managers wish for E-analys to be integrated into Report, in order to add more details to reports from Report. We found that managers have sufficient access to detailed and relevant information, the caveat being it is still somewhat cumbersome technically and may require some interest from the managers' side if it is to be made to work without assistance from other roles. Even for managers not keen on learning to use systems there are no barriers to accessing detailed and relevant information, with some assistance from other roles, such as controllers.

Previous studies found managers using reports to search for deviations or trigger information directly pertaining to work tasks (Mintzberg, 1973, p.149). These findings are confirmed by the results in this study showing managers make use of reports to search for deviations from the expected, such deviations are used by managers as material for discussions with subordinates and colleagues. They did not view it as a foundation for making decisions, but as something to be used to raise awareness of an issue with those in charge of making sure things proceed according to plan, for example in a project. It is then up to those persons to either disprove the managers concern or to make necessary changes.

5.2 Timeliness
Managers desire reports to be timely. Our expectation was managers mentally shortening the space of time in which information could be perceived as current. However, managers in the study were not found to hold any common view or pattern in their use of reports. Some accessed reports daily to view developments while others were less frequent users. Our empirical findings give us no ground to support any
general view of what managers hold to be current and timely information in reports, except to observe the opinion of what is timely and current in reporting appears to differ between managers.

Business reports are assumed by managers to have a certain quality. Therefore they place more importance on it being current. In general managers view reports to be current and accessible on time. It is important for managers to get information in the right time, for example when working with prognoses. They do have other means to get information then waiting for aggregated reports over their whole area of responsibility. It is possible for managers to derive information in forthcoming reports from lower-level systems such as E-analys and by observations and discussions with colleagues. However, when asked managers expressly desire to view such information anyway. They want to do this for the purpose of confirmation and to gain a complete, aggregated overview of their area of responsibility. Previous literature gave us the understanding old information would be less useful to managers (Van der Veeken and Wouters, 2002; McKinnon and Bruns, 1992, p.132) this was not found to be the case for managers participating in the study. Even somewhat dated or known information may serve its purpose, supporting managers in getting an overview and complete picture.

Managers do not express much concern about information in reports being too dated or arriving much too late, which differs to our previous understanding from the literature. This may be due to technological developments or management practices bringing down time required to access reports as well as making managers more likely to be users of reporting systems themselves (Chaudhuri et al., 2011). This implies that reports no longer arrive as late as it was found to do in previous studies.

5.3 Flexibility
Previous studies found flexibility to be desired by managers in reports (Kotter, 1982, p.149; Carlsson, 1951, p.89; Mintzberg, 1973, p.39-40), but not at all costs (Vlahos et al., 2003). Routine or standardised reports could be cost-effective tools for managers in relation to the costs or time required to produce flexible reports (Vlahos et al., 2003).

This study found managers to prefer flexible reports, and they would use reports more if they were more flexible. Managers link flexibility to ease of accessing reports at the
desired level of detail, and if they are presented in a manner desired by the manager. Since systems are involved in producing reports, it implies that ease of use, in and between systems, affects managers’ perceptions of flexibility. If flexibility is closely connected to technology it also implies further developments in the software may improve flexibility. Certainly some managers are optimistic regarding further developments in computer software improving flexibility. Others were more neutral, either being satisfied with current systems or doubting they could be improved much. Some managers wish for more from future systems, other are satisfied with what they got and what is technically possible in current systems used to produce reports. This difference may largely depend to the degree of independent work performed by managers to access reports in the systems. Managers being active users sharing more opinions regarding possible improvements and being more knowledgeable about what is possible or not to do in systems when working with reports. Less active managers have not encountered such problems as to express opinions regarding possible improvements. Those managers regard it as more of a matter for the controller role.

Business reports found to be more flexible than expected from previous studies, mainly due to technological developments. Many managers appreciate being able to have more options concerning flexibility in reports and in designing reports to suit their needs. We found them hoping for even more flexibility in the future from new systems used for reporting and analysis. This is something that is neither unreasonable nor unlikely in view of developments found in this study compared to previous studies.

5.4 Dimensions

Previous findings indicate that managers desire multi-dimensional reporting containing more than just accounting information, these to better reflect their actual information use (Mintzberg, 1973, p.67; Kivinen and Lammintakanen, 2012). If business reports do this, previous studies suggest they would better be able to answer questions posed by managers and support managers in their work. We expected the desire to make reports more multi-dimensional to remain an issue for managers. However, managers in this study were found to be relatively sympathetic to business reports remaining restricted to accounting information. Although it was revealed they do access other external information, such as market trends and information on competitors. This was considered valuable information that is of use to managers in their work, but was not seen as such
information able to be integrated with current reports, even if they could see the usefulness if that could be the case.

In contradiction with previous studies, managers did not see the need to include non-financial measures such as included in for example the balanced scorecard, into the business reports. Some of the information was considered too sensitive to include, which managers wished to be kept separate. Managers not desiring external information in reports may have to do with improvements in quality and access to external information. Managers today access external information easily through other means, so they do not need it to be served in business reports. Technological limitations and the restricted nature of external information on for example markets make attempts to integrate it into business reports difficult. Sometimes the external sources that managers use, are not directly comparable to their own areas of responsibility, where external sources for example compare several units within the company and present them as one. Managers are aware of these challenges and adjust their expectations to what can actually be done.

5.5 How business reports and accounting have changed

When reading existing literature, one common theme found were researchers referring to the effects of changing business practices and technologies on managerial work (Kaplan and Johnson, 1991, p.5; Berry et al., 2009; Nolan, 2000, p.217). Therefore managers were asked to reflect back on how reporting have changed at NCC during their years of employment. Managers experience developments over the decades to be both significant and to be affecting them in their work. Changes in technology affect managers’ use of reports, allowing faster reporting in accordance with what Chaudhuri et al. (2011) described about BI technology developments. Reporting can also be more detailed at managers request since they now have the opportunity to work in systems themselves rather than receiving reports on paper. This provides them with more detailed information when demanding it.

Changing business practices are reflected in the case of NCC Construction in how the organisation functions, compared to earlier structures managers experience the company working more as a whole rather than as separate units. In the same manner changing business practices have made it much less acceptable for managers to independently focus on their own interests. With the company practices encouraging working with the
entire companies interests more in top of mind accounting has changed and become more accurate. More accurate reporting in turn, is more useful to managers and thus allows them to make more frequent use of and place more trust in the contents of business reports.
6. Conclusions

6.1 How managers make use of business reports

More needs to be done to fill out the lack of research on “how and why managers use accounting information” (Jönsson, 1998; Hall 2010). This study examines how managers use written accounting information by investigating how they make use of business reports.

Managers use business reports to support them in their work; to plan for the future, to monitor developments in the business and to make analyses. Managers at NCC Construction use reports on a weekly basis or more often. They use reports as a common ground in discussions with colleagues, for example after conducting an analysis and encountering a deviation from the expected.

Business reports are used by managers at NCC Construction to view aggregated information for the purpose of gaining an overview and sense of context of their area of responsibility. They are also used to drill down into very specific and detailed information. Technological developments have made it possible for managers to view information at the desired level of detail, this in turn place requirements on reports to be quite flexible in order to accommodate managers' requests. Ideally systems used to produce such reports should incorporate all levels of information, from aggregated information concerning whole profit centers down to individual project level with very detailed information.

We did not find timeliness of reporting to be a pressing issue for managers at NCC Construction. They are satisfied with information in reports, finding them to be mostly current and useful. On this issue as well, technological developments have contributed to improvements for managers in their use of business reports. Managers can access reports more often if desired and view individual parts of their overall area of responsibility, to gain an understanding of developments without waiting for the reports for the area to be completed. Neither is quality much of an issue for managers, they know some errors may occur but take this into account and are not concerned or worried by the existence of such errors to the extent it affecting their use of reports.
Managers prefer a flexible report to a standardised report. However, the satisfaction with the flexibility in the reports may vary. Managers who are frequent users of the Report system were found not to be completely satisfied with flexibility in reports. They tend to desire additional options to change looks and contents of reports and to add more capabilities regarding analysis. Managers not being frequent users of the Report system are in general more satisfied with the flexibility, probably because they get the reports they require from their controllers.

Managers at NCC Construction are satisfied with business reports constricted to accounting information, not seeing any pressing need to include other information in business reports. They use and value other types of information, such as competitor analyses and market trends, but they do not want them to be included in the business reports.

We find support for other researchers claims concerning the importance of changing business practices and technological development on managers’ work. Regarding reporting it has led reports to become faster and more suited to managers needs. It has also led reports to more accurately reflect the real world operations, making them more useful to managers. In conclusion, the lack of relevance in reporting to the real world operations once thought to be lost (Johnsson and Kaplan, 1991; Kaplan, 1984; Otley, 2001) has according to the results from our study now been found.

6.2 Recommendations for future research
Further studies should seek to for example examine one of the four areas of aggregation, timeliness, flexibility and dimensions more in depth. It would also be appropriate to look at different managerial levels in an organisation as their use of reports may differ.

Furthermore, it would be interesting to study how managers make use of reports using other methods, for example by shadowing. It would be interesting to study both managers’ own work in systems to access reports as well as their interactions with colleagues and other roles in connection to use of reports. This would serve to further fill the gap in lack of knowledge about how and why managers use accounting information.
7. References


Otley, D., 2001, “Extending the Boundaries of Management Accounting


Yin, R. K., 2006, *Case study research*. Slovenia: Liber AB.

8. Appendix

1. Questionnaire questions

Questions were posed to managers in their native Swedish language. The following questions have been translated to English after the questionnaire was sent out.

Managers use of internal business reports

This questionnaire is part of a master thesis in business and management at Uppsala University. If you have any questions please contact Lotta Mähönen.

Participation is anonymous.

1. What is your educational background?
   - Technical
   - Business
   - Other

2. How long have you worked at NCC?
   - Less than a year
   - 1-3 years
   - 4-10 years
   - More than 10 years

3. How often do you work in Report?
   - Daily
   - 2-3 times a week
   - Once a week
   - Once a month
   - More seldom

4. How often do you discuss information received from a report in Report on your own initiative?
   - Every day
   - Every week
   - Every month
- More seldom
- Never

5. What of the following is most important to you in a report?
   - It is updated in realtime
   - It is quality proofed

6. The information in the reports is current
   I disagree completely  1  2  3  4  5 I agree completely

7. It is probable that you already have received the information contained in reports
   I disagree completely  1  2  3  4  5 I agree completely

8. The information in the reports is specific to your area of responsibility
   I disagree completely  1  2  3  4  5 I agree completely

9. You can view detailed information in the reports
   I disagree completely  1  2  3  4  5 I agree completely

10. It is probable that you will act on the information in the reports
    I disagree completely  1  2  3  4  5 I agree completely

11. It is probable that you will use the information you receive in regular reports
    I disagree completely  1  2  3  4  5 I agree completely

12. There are occasions when you wish to make changes to the reports looks or content
    I disagree completely  1  2  3  4  5 I agree completely

13. You prefer a flexible report to a standardised (report)
    Given flexible reports being more expensive or time consuming.
    I disagree completely  1  2  3  4  5 I agree completely

14. It is easy for you to request a report in Report
    I disagree completely  1  2  3  4  5 I agree completely
15. You consider the reports to be more useful if they only contain financial information.
I disagree completely 1 2 3 4 5 I agree completely

16. There is information from other sources you wish were in the report?
   - Yes
   - No

17. How do you work with Report?
   [Optional free text answer]

18. What would lead you to use information in reports more often than you do today?
   [Optional free text answer]

2. Questionnaire results - free text answers

1. How do you work with Report?

1. To follow of balance of payments and liquidity, degree of completion, orders, balance brought forward, balance carried forward, contribution margin, contribution ratio and so forth.

2. To keep updated on volumes, balance of payments and inflow of orders for my area of responsibility. To view contribution margin and contribution ration concerning ongoing projects. To make prognoses in connection to quarterly reports. Then it is a good tool. To view trends and to compare with history.

3. For use in my own analysis. When making prognoses and during briefings with colleagues.

4. I work with these reports mainly when its time to make prognoses and annual reports.

5. Primarily in connection with prognoses and for follow-ups, order intakes and degree of completion.

2. What would lead you to use information in reports more often than you do today?

1. A description of the project with specific issues affecting it, and contacts for persons who have solved these problems. After that personal contact.

2. Faster updates at the end of the month.

3. If it was possible to “design” reports on your own.

4. It would be if reports were more flexible, now most is fixed or locked.
3. Interview questions

30 minutes interview.

**General information**

1. Describe your educational background.
2. Describe your career at NCC.
3. Why do you use reports from Report?

**Aggregation**

4. Do you experience reports to be targeted enough to your area of responsibility?
5. How important is detailed information?
   - Do you miss more specific information?
6. Do you act on information in the reports?
   - If so, in what way?
   - If not, why not?

**Timeliness**

7. When you get reports, is it common that you already have received the information through other means?
   - If so, can the reports still be useful? In what way?
8. Can you think of other means to get the same information faster?
   - If so, what are those?
9. How do you view quality versus timeliness in reporting?
   - How does it affect your work?

**Flexibility**

10. How do you get information/reports?
    - by searching yourself or getting it from your controller?
11. What do you think about the flexibility in the reports?
    (Is it flexible enough? Would you use it more if they were more flexible?)
12. Would it make sense to invest more resources in producing reports on demand to support your work?
13. How has reporting changed during your years of employment?

**Dimensions**
14. Think about your work and the reports you have access to. Do you miss something in them?
15. If you could choose freely, what other (external) sources of information you normally look at would you include in the reports?
16. What information do you require every week and per month?