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Intellectual Capital

- A comparison between internal and external disclosures

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Preface

The authors would like to express our gratitude to all the people that have supported us during this study. First of all, we want to thank our tutor and supervisor Johan Dergård for all his fruitful insights, constructive discussions, guidance and advice during our process of research and completion of this master thesis. Secondly, a special thank goes to our colleague Peder Holst.

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Lund, 25 may 2011

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Abstract

- Title:** Intellectual Capital – A comparison between external and internal disclosures.
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- Authors:** Henrik Larsson, Carl Leijonhielm
- Advisor:** Johan Dergård
- Five key concepts:** Intellectual capital, Human Capital, Relational Capital, Structural Capital, Value creation.
- Purpose:** The purpose of this thesis is to empirically study companies internal and external reporting of intellectual capital to answer the following three questions: i) How much and what kind of IC information is reported to the top-management inside a company and ii) How much and what kind of IC information is presented to the stakeholders in the annual report. iii) Is there a correlation or is there discrepancies between I and II. How potential discrepancies exploited between i) and ii) could be explained with the help of theories.
- Methodology:** An iterative approach has been used. Quantitative data has been collected through email questionnaires with CFO's, and annual reports have been analyzed with content analysis.
- Theoretical perspectives:** Mainly the Stakeholder theory backed up with reasoning around the concept of value creation.
- Empirical foundation:** The empirics derive from answers (1) collected from questionnaires that were sent to the examined companies, and (2) from a content analysis made on the annual reports on those companies.
- Conclusions:** In the final chapter we present the findings of our research in accordance with its purpose. Furthermore we carry out some critical review of the used methodology. Lastly we present some suggestions for further research.

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1. Introduction

The purpose of this introductory chapter is to give the reader a background to the topic of this thesis. The background is the basis for the subsequent discussion, problematization and purpose. The chapter ends with a disposition chart of the essay.

1.1 Background

In the background the concept of intellectual capital (IC) is explained and the development of IC during the last two decades is presented. The reader is provided with an idea of why IC is an interesting area of study.

Accounting models constantly need to develop in order for them to display relevant information through internal and external reporting. The reporting is intended to give both internal and external stakeholders a picture of the current state and future prospects of the company. To make a correct evaluation of a company it is not enough to look at its tangible assets. In complement, the intangible assets of the company should be taken into consideration for a more accurate valuation (Bukh, 2003). Intellectual capital is the most common model to define and classify the intangible assets (Choong, 2008).

One way of describing the importance of intellectual capital is to use a metaphor, put forward by Edvinsson (1997). He argues that in order to understand how healthy a tree is at a given moment, the taste of its fruits or the color of the leaves provides you with suitable information. However, if you are interested in how the tree will grow in years to come studying the root system provides you with more interesting information. In a corporate setting the tangible assets would be the fruits and leaves, while the Intellectual capital is found in the roots. In the same line of thought, Choong argues that Intellectual capital is the hidden driver behind success because it possesses values that generate future benefits (Choong, 2008).

There are many possible explanations to why the interest in intellectual capital has evolved during the last two decades. An important driving force seems to be that certain industries are characterized by a highly competitive business environment and simultaneously faced

with an exceptionally limited amount of resources. Intellectual capital is a crucial asset under such circumstances (Kaufman & Schneider, 2004). Another reason for the recent focus on intellectual capital is the growing importance of knowledge in the economy of today. Knowledge could be seen as a commodity and should be accounted for just like any other commodity owned by a company (Kaufman & Schneider, 2004; Alvesson, 2004).

Although intellectual capital is theoretically considered to be increasingly important, this development still does not seem to be fully accompanied by a different attitude and focus regarding the disclosure of intellectual capital in the external reporting. One reason why companies are reluctant to present information about intellectual capital in the annual report is because the benefits generated by this capital are not necessarily immediately identifiable, but rather accrued over a long time period (Abeysekera, 2008). If the company has a short sight focus the IC information is likely not prioritized in the report.

Another reason for the reluctance to disclose IC information is that the investors, who are important stakeholders, are ambivalent or even critical to IC information compared to financial data. The investor skepticism has at least four explanations:

- They do not understand that IC is a major contributor to company value creation.
- Even if they understand the connection between IC and value creation they do not rely on the indicators.
- They distrust all IC that relates to human knowledge because the intangible asset cannot be owned by the company.
- They cannot control that the measures actually matter in management control processes.

(Johansson, 2003)

The main reason for the poorly developed IC reporting in the 1990s and early 2000s has probably been the lack of a formalization of IC via an appropriate definition and categorization. The unification process has speeded up in the last years with notable contributions from EU funded projects (MERITUM-project, RICARDIS-project) and scientific research articles (Choong (2008) and Kaufman & Schneider (2004)). Evidence indicating

maturity in the field is that a widely recommended framework for categorizing IC has evolved. In this framework intellectual capital is divided into the three subcategories:

- Human capital
- Relational capital
- Structural capital.

It is important to note that IC information is measured and disclosed through a variety of methods within companies. There are plenty of examples of more or less famous models attempting to measure the IC in a company. Two Swedes have received international recognition in the development of these models. Leif Edvinsson created the Skandia Navigator that measures key figures regarding human capital, customers and processes. (Ax, Johansson, Kullvén, 2005). Karl-Erik Sveiby developed another model called “Intangible Asset Model”. This model includes indicators of growth, renewal, efficiency, stability and risk (Sveiby, 1997). The Balanced Scorecard developed by Kaplan and Norton (1992) is a model which is used in many companies and which also captures a great portion of IC in the three perspectives customers, internal processes and learning and growth. The BSC was, however, not designed to capture intangibles in particular like the Edvinsson and Sveiby models (Kaufman & Schneider, 2004). These examples illustrate how IC information is gathered in practice in different kinds of management control models.

In the sections above an explanation is given of the rapid development of Intellectual capital during the last two decades. A framework has been built up of how to measure company assets that are not recognized in the balance sheet. The actual use of models to measure IC in companies indicates that companies view IC as something important. The tight connection between IC and the company’s ability to create value catches our interest. We find it interesting to execute a study on the companies reporting behavior because it could tell the story of how information about the companies’ future value creating capacity is accounted for and disclosed to stakeholders.

1.2 Problematization

The problematization discusses how IC information is gathered for two distinct reasons and a potential problem that could be a product of that is defined.

Today's companies have a variety of stakeholders to take into consideration when presenting annual reports. The different stakeholders are interested in the actions, the value and the performance of the company. According to theories described both in the introduction and in the theory section IC information is, or at least could be, a vital component to give the stakeholders the opportunity to correctly analyze the company. Consequently, IC disclosures are expected in the annual report. Previous research has studied the disclosure patterns of IC. A suitable method when searching for IC disclosures is content analysis (Beattie & Thomson 2007). Content analysis is further explained in the method section of the study. The reason is that IC tends to be disclosed in a variety of ways including in headings, in body copy sections, in graphs and tables. The advantage of content analysis is that it manages to evaluate material disclosed in such various ways.

Companies are also expected to gather IC data for internal use. This is a basic condition for identifying strengths and weaknesses in the different types of IC that a company has built up to stay competitive. Results from such IC work could be found by looking at internal models that measure IC levels like the Skandia Navigator, the Balanced Scorecard or by interviewing or sending out a questionnaire to the company. We have chosen the questionnaire method due to reasons explained in the method section.

The IC information is therefore collected for two reasons: (1) To provide stakeholders with information, and (2) to provide internal management with information for internal analysis. If stakeholders are seen as indispensable it is logical to assume that the IC disclosed to them should be of the same quality and quantity as the IC information that is intended for the internal management. If this is the case, the situation could be considered as fair in the sense that internal management and external stakeholders are given the chance to make decisions based on the same information.

In summary our research question can be formulated as follows:

Are there discrepancies between the external and the internal dimensions of IC information and can these discrepancies be explained through the use of contemporary theories?

We are interested in studying whether the IC information disclosed in the internal- and the external dimensions are the same both in terms of total quantity and type of information. If there are discrepancies, we find it also interesting to explain these with the help of relevant theories. This discussion leads us to the following purpose of the thesis.

1.3 Purpose

The purpose of this thesis is to empirically study companies' internal and external reporting of intellectual capital to answer the following three questions: i) How much and what kind of IC information is reported to the top-management inside a company? ii) How much and what kind of IC information is presented to the stakeholders in the annual report? iii) Is there a correlation or are there discrepancies between i) and ii) and what potential discrepancies exploited between i) and ii) could be explained with the help of theories?

1.4 Outline

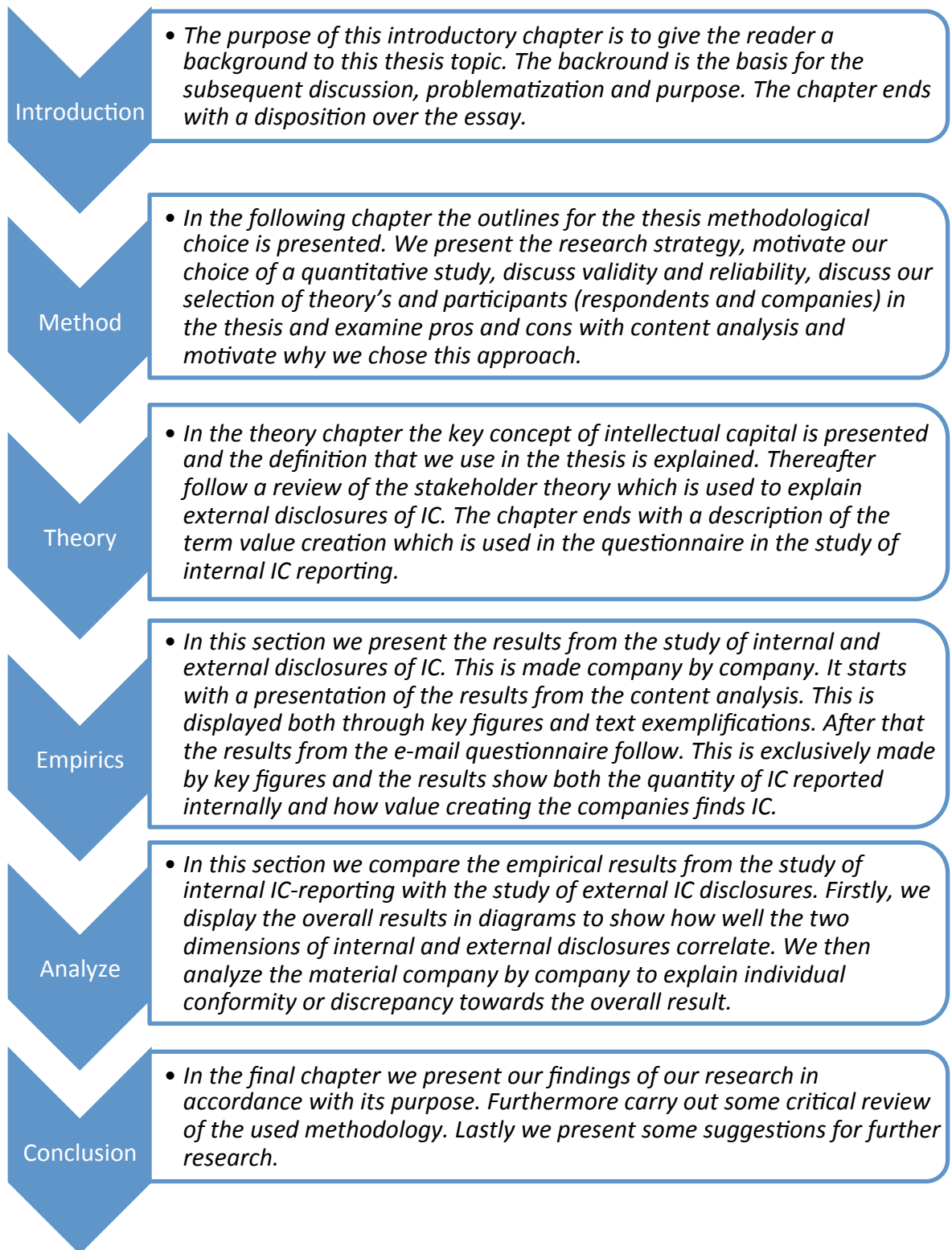


Figure 1. Thesis outline.

2. Method

In the following chapter the outline for the thesis' methodological stand is presented. We present the research strategy, motivate our choice of a quantitative study, discuss validity and reliability and discuss our selection of theories and participants (respondents and companies) in the thesis. The pros and cons with content analysis are discussed we motivate why we chose this approach.

2.1 Research strategy

To fulfill the purpose of our study, the starting point for this thesis is derived from are previous literature and theories. The reason for this is that the idea of this paper is to examine existing theories and see how well they conform to reality rather than to generate new theories using the empirical investigation. Hence, in terms of the relationship between theory and research it can therefore be argued that a deductive approach is appropriate to apply. A deductive approach inclines that existing theory is used as a starting point and steer the thesis subsequent research to achieve a result that leads to either confirmation or revision of the theory (Bryman & Bell, 2007). This approach differs from the inductive approach where the empirical investigation is used as a basis for generating new theories (Bryman & Bell, 2007). As mentioned in the problem discussion, the authors also intend to contribute to the improvement of the theories of the emergence of such a need, a target of inductive character. The authors have thus fluctuated back and forth between data and theory, as well as being both deductive and inductive, which means that a so-called iterative approach has been used (Bryman & Bell, 2007). The choice of the iterative approach is justified by the existence of numerous studies in the field whose results have been considered interesting but slightly limited and that this review may lead to a contributing complement to the theory.

The current studies of intellectual capital (IC) are rather limited in our point of view and they have mainly focused on external disclosures as exemplified in Beattie and Thomson's article "Lifting the lid on use of content analysis to investigate intellectual capital disclosures" (Beattie & Thomson, 2007). Studies that have investigated the link between external and internal IC disclosures have focused mainly on one part of intellectual capital, namely Human capital, while we have extended our study to comprehend the whole concept. We have also

tried to explain the findings of our research with theories such as stakeholder theory and this is also a new input to the existing research.

2.2 Quantitative/Qualitative

There are two distinctive methods that can be applied in the research strategy for collecting data, namely quantitative and qualitative research (Bryman & Bell, 2007). Most researchers find it helpful to relate to one of the two paradigms. Quantitative research focus on collection and analysis of data, while qualitative researches emphasizes words rather than quantity and numbers in the analysis, and view the social reality as a continuously changing and constructed by individuals. The choice between qualitative and quantitative methods is based on which type of information that is desired for the purpose and intended result of the research (Bryman & Bell, 2007).

For our purpose, we started with the thought of applying a mainly quantitative approach because we believe it to be more suitable for the iterative approach, even though we realize that the approach shifts between quantitative and qualitative methods. Our aim is to provide a more generalizable study than possible if a qualitative method with very few research respondents had been chosen. This is because of the need of extensive information from the companies that are examined. The ambition is to make it easier to make a valid analysis and help the reader to understand the figures and results. The authors choose questionnaires instead of interviews so that the observer role does not have any effect on the respondents' answers in the companies. Lundahl & Skärvad (1999) confirms that the interviewer might affect the interviewee. This is because the researchers, in this case the authors, are external observers that cannot affect the respondent examined in the same way as we could have done if it was an interview face-to-face or over telephone. A totally quantitative approach is difficult because of the limited amount of companies examined, as well as the fact that information gathered from the companies incorporates widespread information which makes it hard to capture all of it through quantitative methods. Despite this we used a typical quantitative method to collect our empirical data material, namely a questionnaire that we e-mailed to the respondents. The reason for using a questionnaire instead of personal interviews was that the questionnaire was designed to only have

numerical and graded answers and to fulfill the purpose of the study we did not desire any extensive answers in floating text from the respondents.

Because of the extensive and widespread nature of the information collected both internally and externally we also applied some qualitative reasoning in both the empirics, where we gave some examples of the important ICs disclosures from the annual reports, as well as in the analysis where we evaluated qualitatively to add depth to the more numerical charts and tables.

2.3 Selection of companies

There are two central steps when applying quantitative methods for collecting data and these are (1) selection of a research site, and (2) selection of documents (Bryman & Bell). We choose to only examine Swedish companies. The reason for this is that Swedish companies are expected to have much management practices and knowledge around IC (Ax & Marton, 2008). The range of companies is limited to publicly listed companies and the reason for this is that the comparison between internal and external disclosures becomes interesting only if they have disclosed enough information in their annual reports. It is necessary to have publicly listed companies because private companies with a concentrated ownership do not need to disclose more information than necessary, and we make the assumption that they do not disclose more than needed.

The study includes *Biotech/Medical* companies, *Manufacturing* companies and *Data/IT/Telecom* companies. The reason behind this is that we do not want randomly chosen companies from different industries if, as we assume, there are some context-specific conditions in their disclosure that could weaken the result of our study. We chose these industries because they are big industries with a considerable number of listed companies so that it would be possible to get in contact with a sufficient amount of companies. There are approximately 500 publicly listed companies in Sweden and over 60 of them can be found in these 3 categories (Retriever Bolagsinfo, 2011). In order to find appropriate companies, the database "Retriever Bolagsinfo" was used. All companies that have a total turnover of at least 1 MSEK in the chosen industries were selected. The reason for this is the same as above, that those companies are assumed to disclose more IC items. This is because we expect that larger companies, that have greater resources, have made considerable

deliberations on intellectual capital related disclosures to incorporate in the annual report. There was also a maximum number of 1000 MSEK of total turnover because the authors assume that CFO:s of very large corporations are hard to get in contact with and it could also be assumed that they disclose such a large amount of intellectual capital in their annual reports that it would be too much to analyze in this type of study.

Several of the representatives that answered our questionnaire expressed their desire for anonymity, so the authors have chosen not to disclose the company names or the names of the individual respondents. Another advantage with keeping the respondents confidential is that they hopefully answered more honestly with a low risk of their answers being biased to a significant extent (Lundahl & Skärvad, 1999).

Instead of calling the companies "Company 1" and "Company 2" we use fictitious names when we anonymise the companies. The reason for doing this is to make it easier to separate the companies for the reader. We selected names that were closely related to the line of business that the company operates in. Consequently, the anonymized coded names that are being used for the companies in this study are the following:

- The Aluminum company = Alucomp
- The IT company = Itcomp
- The Biotech company = Biocomp
- The Net operator = Netcomp
- The Furniture company = Furcomp
- The Blood cell company = Cellcomp
- The Medical instrument company = Medcomp
- The Electronic label company = Labelcomp

To achieve a higher rate of recurrence of answers we initially called all the CFO's that participated in our email questionnaire to inform them of our study. The questionnaire is as stated before quite extensive with several dimensions, and to make sure that the participants understood the questionnaire and filled it out in a correct way, we rigorously explained how they should interpret it. It is of utmost importance that the questionnaire is interpreted in the same way by the respondents. We also explained the main concepts of intellectual capital to make sure that the respondents had a good understanding of the

concepts so that they would give us sufficiently accurate answers. Furthermore, we examined the companies from a group perspective and not only the single parent company. This is important because the IC disclosed in the annual reports often refers to the whole group and not solely the parent company or subsidiary.

Out of the 60 companies we contacted, 16 respondents said that they would respond to the questionnaire before we sent it out. Out of those 16, answers were collected from 8 companies, which meant a total response rate of 13 percent. According to Bryman and Bell (2007) a low percent of response rate isn't good and weakens the result of a study, and the authors are well aware of this. However, we chose to narrow our search according to our criteria (specific industries, Swedish companies, turnover between 1 MSEK and 1000 MSEK) which means that the population is rather small and the entire population was asked to answer our questionnaire. This procedure is significantly different from picking a sample of companies to contact out of a much larger population, and hence a lower response rate is to be expected.

2.4 E-mail Questionnaires

The e-mail questionnaire has been designed after extensive literature review, where the items and assumptions have been supported by the studies from Ax & Marton (2008) and Edvinsson et al. (1997). We seek answers to questions of how much IC disclosures exist internally and how much that type of IC contributes to the value creation within the company. To answer these questions, we constructed an extensive questionnaire with a considerable amount of questions categorized into Human capital (HC), Relational capital (RC) and Structural capital (SC) where the respondents were asked if they have internal written reports, steering documents or other policies regarding IC. The questionnaire is attached in Appendix 1.

The questionnaire is divided into 4 different parts where part 1 is focused on the importance of different stakeholders, while part 2 - 4 consists of questions related to intellectual capital. Part 2-4 is divided into two separate columns where column 1 is about the extent to which the company has internal disclosures about different intellectual capital items. Column 2 approaches to what extent the particular items add value to the company. The scale in the questionnaire is a Likert scale, ranging from 1-7. When answering a Likert questionnaire,

respondents indicate their level of agreement to a statement/question (Likert, 1932; Bryman & Bell, 2007). In column one the answer “1” stands for “to a very limited extent” and a “7” for “a very large extent”. In column 2 the answer “1” stands for “not important” and a “7” stands for “very important”.

The language of the questionnaire sent out is Swedish because of the assumption that it would give more qualified answers and a higher response rate if the respondents could answer on their native language. The translation of the questions and items in the questionnaire was then validated by our tutor to secure the quality of the translation.

2.5 Content analysis of annual reports

The study of external reports has been carried out through a content analysis of the companies' annual reports.

The main reason why a content analysis of annual reports were chosen is because it has been widely used in accounting research and Krippendorff (1980) states that it is a good technique *“for making replicable and valid inferences from data according to their context”* (p.21). Furthermore, the content analysis is advantageous since it is a transparent method which is easily replicable (Bryman & Bell, 2007)

In the content analysis the information from the annual reports is broken down into words, sentences and diagrams. These are scrutinized, evaluated and then summarized down to figures to make a valid comparison of the answers from the annual reports and the answers from the questionnaires. Again, the content analysis proved to be a good choice of method because it is a flexible method that researchers can use to analyze unstructured information.

It is important to explain in more technical terms how we have conducted the search. A central point is to explain how the unit of analysis is defined (Bryman & Bell, 2007). This paragraph explains how that is made in this study. When a piece of information about IC is found in the annual report it needs to be judged by the authors if the particular “hit” really refers to or describes intellectual capital in the company. We have identified three criteria for classifying “hits” as “false hits” (and consequently not count them). By using these criteria, we aim to avoid subjectivity in our judgment. The criteria are (1) The IC information has nothing to do with the company, e.g. *“An ISO standard could be a way of measuring*

quality” (this is an explanation of an ISO-standard, not an indication that it is in place in the company) (Beattie & Thomson, 2007). (2) The IC information is too vague for being characterized as an indicator on IC in the company, e.g. “...members of the company board have heard and like the idea about a new ISO standard”. (3) The word is mentioned two times but it is still only one indication on IC, e.g. “...our company comply with this ISO-standard (true hit). This is because this ISO-standard is good (false hit)”. A normal single “hit” in this case would typically be disclosed like “We are certified with ISO-standard”.

In order to eliminate “false hits” in the content analysis, we carried out the search manually and not electronically. When examining entire annual reports the manual method allows us to make the judgments described in the paragraph above. The electronical search has two distinct disadvantages in this setting. The first is that we would have had to make a selection of words or expressions to search for. Given that intellectual capital is a broad term we would need to search for hundreds of words to find a reasonable amount of IC disclosures, which is complex and time consuming. Bontis (2003) found that electronical search results in a very limited amount of IC disclosures. A possible explanation was that he did not include a sufficient amount of words in his electronical search and the results therefore became less reliable.

The second problem with electronical search is the inadequacies rising from not evaluating every single “hit” and consequently take in “false hits” in the total amount. Earlier studies regarding IC reporting confirm that the whole sentence should be analyzed in order to grasp the meaning of an IC disclosure (Milne & Adler, 1999).

In the empirical section, the result from the content analysis is presented company by company. Along with the numbers we describe what type of IC disclosures the particular company focus on and present examples of such. This study is primarily quantitative but we argue that this descriptive selection is motivated as a supplement to the number of “hits” displayed. The reason is that the text explains interesting details that are not revealed by the numbers and this information is useful as a complement to the analysis.

2.6 Reliability, validity and objectivity

Reliability refers to the question of whether the outcome of a study are repeatable and stable so that the reader (or other stakeholders) of the study can be confident that the result do not fluctuate too much and are not too sample dependent. Usually, a test-retest method is used to test if the quantitative data analyses have a high correlation (Bryman & Bell, 2007). Due to the limitation in time and resources, the authors have been unable to do a qualified re-test and we are aware that this limits the reliability of our research and that there are qualitative features that influence the results which the quantitative method do not take into account. The authors are also aware of the reliability issues so that we have been able to alleviate problems related to subjective self-perception. We still acknowledge that researcher objectivity is hard to achieve (e.g. Alvesson & Sköldbberg, 2009)

However, since the study is based on a structured questionnaire, the findings are reliable to the extent that the respondents all have answered the same questions. That is, of course, under the assumption that our precautions to make the respondents answer truthfully and interpret the questions in the same way, has been successful.

Validity is concerned with the issue of whether a measure really does reflect the concept that it is supposed to measure (Bryman & Bell, 2007). To strengthen the report's validity and to ensure what we seek and intend to measure, the questionnaire was sent out to potential respondents with similar duties and hierarchical status in different companies in different industries, which should eliminate some industry- and company-specific factors, which is desirable because we are seeking conformity in disclosing procedures regardless of industry. The respondents in the survey were solely Chief Financial Officers (CFO's) or equivalent. We chose CFO:s although we assumed that we would get fewer respondents (due to their heavy work burden) so that we could get the highest possible quality and relevance in the answers. By quality we refer to the fact that CFO's are in a very high hierarchical position within the company and therefore presumably possess greater knowledge than subordinates.

The researchers' personal values can always have an effect on a study (Jacobsen, 2002), which we have tried to avoid during the study. This has been sought by the questions in the questionnaires derives from theories and previous research from several different

researchers. By doing this the authors have strengthened the validity in this area of the study (Bryman & Bell, 2007).

2.7 Method for analysis

In the analysis of this study, we compare the values that we got from the answers from the questionnaire with the values that we got from the content analysis. These two values often have completely different scales and meanings. This makes them comparable only relative to each other, i.e. if company A had the most hits in the annual report by the companies we examined they had “many hits” and if it had few hits in the annual report it “disclosed little IC”. The essence of this is that while the answers from the questionnaire can be judged based on the absolute scale, the values from the analysis of annual reports only carry value if related to other research objects.

2.8 Theoretical Framework

The theories used in the study are chosen because they are helpful both to explain *what* is included in the term intellectual capital and *how* IC is disclosed both internally and externally in companies. We also need theories in our attempt to answer the question of *why* IC is disclosed in a certain pattern.

Regarding intellectual capital, we start out with stating that the concept is fairly young and has undergone a substantial development during the last two decades. A review of the most common models used to measure IC demonstrates the wide range of possibilities to account for IC.

Our choice of IC framework is partly explained by its widespread acceptance – the particular model has been argued for by prominent academics in the field, for instance Edvinsson (1997) and Bontis (1998) and it is supported by guidelines from EU-funded reports (MERITUM-report and RICARDIS-report). Another reason for the choice is that our model aim to identify and measure the whole spectra of IC through the three distinct subcategories of human-, relational- and structural capital. This ambition suits the purpose of the study and consequently, present IC models are too narrowly focused on a specific part of IC, like the models used by Ax and Marton (2008) (Human capital focus) or Sveiby (1997) (Structural focus), which is not acceptable.

The IC theories chosen are analyzed in the three respective parts of HC, RC and SC. This provides us with knowledge of what kind of information to (1) ask for when designing the e-mail questionnaire intended for the company CFO:s and (2) look for in the content analysis of the annual reports.

In order to understand why companies chose to disclose some IC related information and not other it is useful to consider a theory that describes how an organization relates to the external environment. After scrutinizing several such theories we chose Stakeholder theory e.g. Freeman (1984) as the most suitable tool to help us understand the disclosure behavior of the examined companies. The reason for this is two-folded. (1) It has been proved useful in previous similar IC studies (Gray 1995). (2) We base our study of external reporting on the analysis of annual reports. This document is not exclusively directed to a specific stakeholder but intended as communication channel to all stakeholders of the company. Stakeholder theory emphasizes the importance of taking many stakeholders into consideration and, is consequently suitable in this study.

The last section of the theory is devoted to a definition of the term Value creation. Even though value creation might not be formally considered a theory it is important for us to define how the expression is interpreted in this study. The reason for this is that the e-mail questionnaire states a specific meaning of value creation which has implications for the analysis.

3. Theory

In the theory chapter the key concept of intellectual capital is presented and the definition that we use in the thesis is explained. Thereafter follow a review of the stakeholder theory which is used to explain external disclosures of IC. The chapter ends with a description of the term value creation which is used in the questionnaire in the study of internal IC reporting.

3.1.1 A background to why intellectual capital matters to companies of today

This theoretical background elaborates further on the question addressed in the introduction: Why is IC information important?

The need for reporting intellectual capital is rooted in the changes that have taken place in the economy from the last decades of the 20th century until present time. During this period different forms of intangible assets have become a key determinant of value creation in companies. As a result of this transition company stakeholders request a disclosure of IC information by companies since it is an indispensable aspect to take into consideration in the analysis of a company (Meritum project 2002). If we measure modern companies with an old and unmodified framework for accounting and financial reporting we will not be able to correctly evaluate the companies of today. (Sveiby, 1997)

There is a significant difference between the traditional point of view on capital and the position taken in intellectual capital regarding the purpose of valuation. The objective of presenting intellectual capital data is to explain to the stakeholders how the company creates value and how it intends to create value in the future. The objective of valuation is therefore value creation. This is fundamentally different to the traditional valuation, which aims at describing the current state of assets in the company (Mouritzen, 2001).

The traditional accounting model is not only focusing on today's numbers but it is also backwards looking. In other words, it is a system measuring historical cost. That is a logical starting point in assessing the performance of a company but it is, however, not sufficient to get the complete picture of the prospect of it (RICARDIS-report, 2006). The explanation to this is that only a fraction of all the intellectual capital inherent in a company is accounted

for in the balance sheet under the section intangible assets. Most components of intellectual capital are forward looking and therefore crucial to account for in order to make accurate predictions.

3.1.2 How to define IC

A starting point when describing the term intellectual capital is to define the intangible assets held by a company. (Choong, 2008) According to IFRS, intangible assets are resources held by an organization that comply with the following three requisites.

- The asset should be identifiable.
- It must be controlled by the organization as a result of past events.
- Future economic benefits from increased revenues or reduced costs are considered to be expected to be generated from the intangible asset.

(IAS plus, 2011)

Intangible assets such as patents, goodwill and copyrights are one part of what constitutes intellectual capital. However, the concept is much broader because it goes beyond the capital assets reported in the balance sheet. A result of this is that a stakeholder who only uses the financial statement does not get a complete picture of the intangibles that are either controlled or owned by a company. (Meritum project, 2002).

A description of IC where there is consensus among researchers is that a key characteristic of all IC is that it is resources, activities and systems that are expected to generate future cash flows that are typically accrued over a long term period rather than quickly gained by the organization (Meritum project, 2002; Abeysekera, 2006). Beyond this definition of cash flow generating capacity IC it is hard to find common traits in the wide range of IC frameworks that we will present in the two next sections.

3.1.3 Early definitions of intellectual capital (IC)

In this section we describe early attempts made to define and classify IC. We shortly review three models that are of relevance since they have had influence on the model for IC reporting that is recommended today.

One of the first concepts developed of how to measure IC is was made by Edvinsson & Malone (1997) and Brennan (2001). These authors compare the market value of a company to the book value of the company's equity. The difference between the two values indicates the amount of intellectual capital. By displaying the difference to stakeholders, the relevance of the reporting is increased. This in turn would make it more reliable to base investments on the information in external reports. When Edvinsson et al. break down IC in components they consider it to consist of three components: human, organizational and customer capital. The notable IC researchers Bontis (1998) and Sullivan (1998) accede to this framework.

The first prominent classification model of IC coming from a non-accountant was developed by Sveiby (1997). His focus was slightly different from the model described above. Sveibys framework focused on measuring employee (individual) competence, internal structure and external structure.

Another way of describing intellectual capital was suggested by Brooking (1996). Her framework built upon the assumption that an enterprise only consists of tangible asset plus intellectual capital. A condensed description of IC in this setting is to say that it is everything that enables a company to function. More specifically Brooking's theoretical framework divides IC into four separate categories: Market assets, human centered assets, intellectual property assets and infrastructure assets. By combining these assets a company demonstrates its intellectual capital. (Brooking, 1996)

The models described above were developed during the 1990s. This was relatively early in the study of this field but the pioneering research has had a significant influence on later attempts of constructing a standardized model of how to account for intellectual capital. The

standardization process is positive in the sense that it increases the comparability and interpretability of the IC information displayed. The lack of a uniform definition of IC opens up the possibility to form individual definitions. A result of this could be that companies disclose IC in an ad-hoc fashion that fit their own purposes (Martensson, 2000). The reporting loses both relevance and comparability under such circumstances. Rigid rules ensure that companies report in accordance with a certain scheme could also bring negative effects since the IC reporting should be designed around features specific for a certain company or industry. (RICARDIS-report, 2006).

3.1.4 The state of the current categorization of intellectual capital

In this text we discuss two EU-funded-projects that propose recommendations about IC reporting and what framework to use for internal and external disclosures. Both projects have taken models described in the last section into consideration. This section is motivated in the study because the reports referred to is fundamental for our interpretation of IC.

The first report is the RICARDIS-report (2006). It provides small and medium Enterprises (SME) in the EU with general principles of how to report intellectual capital. The recommendations focus on three key areas which are described and analyzed in the sections below.

The first recommendation concerns the question of how to classify and group different parts of intellectual capital. The idea here is to use the same taxonomy that is present for intangible assets today and use it to identify all IC elements. The idea is thereby not to create a new set of tags but rather to expand existing ones. (RICARDIS-report, 2006)

The second area of interest deals with the level of specificity and detail in the indicators reported. In this respect RICARDIS classifies into the information in three levels. It ranges from a basic set of general indicators, over to sector (industry) specific indicators to the organization specific indicators. The standardization is particularly directed towards the first level with the aim of using measures that could be calculated by all companies and relevant in comparisons. The standardization process should also take place at the second level

where industry trade organizations are the appropriate body to specify important indicators. At the company level no standardization take place. In this discussion it is important to emphasize that what is described is the amount of *standardized* IC information that are expected to be disclosed at the different levels. The companies are on top of this expected to present IC information that is specific or unique for their own company and could be of interest for stakeholders. (RICARDIS-report, 2006)

The third area concerns the structure by which IC information is to be presented. Regarding this point the RICARDIS-report refer to a model presented in the MERITUM-report which is another EU-funded report from 2002. The term Intellectual capital is divided into three subgroups: Human capital, structural capital and relational capital.

The RICARDIS-report recommends this model for two reasons. Firstly, the model is designed to embrace all kinds of intangibles. Secondly, it is widely accepted and used by many companies in their IC reporting. It is important to remember that it is only a recommendation and that companies could classify and measure IC according to another system that better fit their organization. (RICARDIS, 2006). We have chosen to structure our search for empirical data after the MERTIUM project model. In the following sections we explain what kind of intellectual capital that are recognized and measured in the categories human capital, relational capital and structural capital.

3.1.5.1 Human Capital (HC)

Human capital could be defined as the knowledge that the employees take with them if they decide to leave the company (Meritum-project, 2002). The intellectual capital held by an employee is in part explained by genetic heritage and in part by the experiences and educations an employee is exposed to and his/her attitude towards these experience and educations (Hudson, 1993). The ability for an individual to gain human capital is explained by pointing at certain personality traits as key factors. More specifically, persons that are energetic, committed, reliable, imaginative, creative and have the desire to share information are likely to build up strong human capital. (Fitz-enz, 2000) Human capital is manifested through knowledge, skills and abilities (Meritum project 2002).

Employees are often regarded as a company's most important asset. (Abeysekera et al, 2004). In the highly technological and changeable business climate of the 2000s, the demand for an intelligent and adoptable workforce is greater than ever. The main reason for this opinion is that a working force characterized by high human capital possesses the ability to create innovations and undergo strategic renewal (Bontis, 1998; Abeysekera et al, 2004).

3.1.5.2 Relational Capital (RC)

The relational capital is the component of the intellectual capital that focuses on the relations with stakeholders outside the organization. The major part of the relational capital is customer capital which consists of customer interactions and market knowledge. Devoting internal resources to build customer capital is important because the process of developing knowledge about customer preference is the most complex task in managing IC (Bontis, 1998).

Besides managing customers, relational capital refers to the interplay between the organization and other influential stakeholders. One example is the control over marketing channels which is a factor determining competitive advantage in industries dealing with fast-moving customer goods. In other industries the contract terms regarding licensees or franchisees are examples of relational capital information relevant to stakeholders. (MERITUM, 2002)

The relational capital is intended to build, store and maintain a strong organizational image (RICARDIS-report, 2006, p.29). In order to do this a sole focus on customers is not enough. Resources should also be allocated to support key suppliers with information. If the company is part of a strategic alliance or joint venture, governing the relations with partners strengthen the relational capital. If the company is frequently debated in media, the media relations are important since they can affect stakeholder perceptions about the company. A key issue in creating all types of relational capital is to influence the stakeholder's perception about the organization (Meritum project, 2002).

3.1.5.3 Structural Capital (SC)

Structural capital consists of what is left in the company at the end of a working day when the human capital has gone home. (Edvinsson & Richtner, 1999). A definition of structural capital has been suggested by Winter (1987): *“The myriads of relationships that enable the organization to function in a coordinated way [but] are reasonably understood by [at most] the participants in the relationship and a few others...”* This means that *“the organization is...accomplishing its aims by following rules that are not known as such to most of the participants in the organization”* (p.171). Consequently, an employee at a firm can have good qualification to do excellent work but if the company has poor procedures and systems to take advantage of the individual’s performance his total intellectual capital will not be utilized optimally. Nicolini (1993), referred to in Bontis (1998) goes one step further when he states that if you structure your intellectual capital in good ways that benefits the organizations, individuals “know-how” it could be turned into a group property.

According to Bontis (1998), structural capital is quite difficult to measure. He means that the core lies in the knowledge rooted in the routines of an organization. In a wider meaning, structural capital consists of a company’s routines, procedures, systems, cultures, databases, etc; For example, a firm’s flexibility, the use of information technologies and the capacity to learn (Meritum project, 2002).

3.2 Stakeholder Theory

In this section stakeholder theory is discussed. The different branches of the theory and the motives behind these are explained. We also explain why stakeholder theory is suitable for the setting of our study.

A company consists of a broad range of internal and external parties who affect or are affected by the actions taken by the company. Generally speaking these parties are characterized as *stakeholders* in organizational management. (Business dictionary, 2011)

Swedish business culture is to a high degree based on the concept of mutual agreements between different stakeholders and because of this, Swedish business culture could be

characterized as “stakeholder capitalism” (Bjerke (1999); Näsi (1995); Grenness, (2003) in Ax & Marton, 2008). Another piece of evidence of this is that Swedish companies care about satisfying not only the shareholders, but also other relevant stakeholders of the company through the widespread use of the Balanced Scorecard. A substantial share of Swedish companies have even adopted a modified version of the original Kaplan and Norton Balanced scorecard model which puts more emphasis on employees, who are stakeholders, to the degree that they are measured under a separate perspective (Ax & Björkenak, 2005).

The stakeholder theory was originally presented by Edward Freeman and the fundamental idea is that the management of a company need to meet the needs and expectations of all different stakeholders (Freeman, 1984). A company needs to analyze different stakeholders in order to understand their particular concerns as a group. By doing so, a company gets access to information and knowledge about how to develop objectives that stakeholders are likely to support. A company could only expect to stay successful in the long run by gaining this kind of broad support from different stakeholders. (Freeman & McVea, 2001) Examples of stakeholders are suppliers, customers, employees, the Government, regulators, Non-Governmental organizations, Banks and private investors. This theory represents a sharp contrast to the Stockholder theory, put forward by Milton Friedman in which the sole responsibility of the company management is to look after the interest of the company shareholders and consequently generate large profits. (Friedman, 1962). These conflicting theories of corporate governance have become a polarizing pair over the last decades. (Waldkirch, 2008)

In the theoretical framework of this study we have chosen stakeholder theory as the main point of reference. There are several reasons why we argue that stakeholder theory is a better tool than stockholder theory in explaining behavior taking place in Swedish listed companies in the 21st century. In the following section we outline different types of justifications behind the stakeholder theory and which of them we find most relevant for our study.

3.2.1 Ethical versus Positive approach to stakeholder theory

Stakeholder theory has two main branches, one ethical (moral) branch and one positive (managerial) branch (Guthrie & Ricceri, 2006). Advocates of the ethical branch argues that business in capitalist secular society possess resources and carry out burdens that historically where entrusted to the Government or the Church. Along with this role comes a responsibility to behave ethically correct towards all parts of society involved or affected by the business (Phillips, 2010). The accounting scandals of Enron and WorldCom in the 2000s and the financial crisis in 2008 are modern examples of the devastating effects resulting from partly reprehensible moral actions taken by accounting and financial management in various firms. The counterargument that finance and accounting are immoral services is likely to meet fierce criticism when taking into account the unemployment and money losses resulting from such scandals. (Phillips, 2010). Argumentation for stakeholder theory out of ethical reasons is however not the main reason why we think it is a suitable theory in this study.

It is also possible to justify the choice of stakeholder theory with another line of reasoning. Instead of emphasizing the moral obligations towards stakeholders that follow with corporate activity one could look at it the other way around. This implicates that if a company wishes to be successful it must recognize the needs of different stakeholders. A way to distinguish this justification from the ethics justification is by referring to Peter Druckers (1984) explanation of two different motives behind corporate social responsibility. He points out the clear distinction between *“Do good in order to do well”* and *“Do well in order to do good”* (p.54). These quotes refer specifically to the subject of corporate social responsibility but the line of thinking is applicable for a company dealing with different stakeholders. The reason for not treating the different stakeholders in isolation and always trying to meet demands from all types of stakeholder is based upon the idea that superior stakeholder satisfaction lead to successful results. Through the work of D’Áveni (1994), this statement is proved to be valid and of special importance to companies in a hypercompetitive environment. Most of the companies analyzed in this thesis do find themselves in such an environment and therefore this theory is relevant in our work.

The reasoning in the paragraph above refers to the positive branch of stakeholder theory. It motivates the company management to focus on the balanced interest from different stakeholders not for ethical reasons but for the sake of organizational survival. This view goes further in that it states that a company will not answer to all stakeholders equally. The degree of attention and compliance in the relations vary. The explaining factor behind a stakeholder's power and legitimacy is its degree of control over resources required by the company (Watts & Zimmerman, 1990). The demands from Stakeholders that possess something that is critical for business success or has the power of changing people's opinions about a company are consequently addressed with great awareness. (Deegan, 2000).

Examples of such stakeholders could be found in a variety of people/organizations in a company's environment. It could be a supplier delivering a unique component, it could be a union leader with the ability to raise opinion, it could be an investigating journalist or simply a key customer. All of these stakeholders must be managed in order to avoid risk. Consequently, a non-profitable customer or an employee that is easily replaceable to a low cost does not get the same amount of attention from the company management. This fictive example points not only to the big difference between positive stakeholder theory compared to the owner-focused stockholder theory but also in comparison with ethically based stakeholder theory where all stakeholders ideally deserve and could expect genuine attention.

3.2.2 Complementing Theories

Since we have chosen to use stakeholder theory, an assumption is made that the disclosing of information on intellectual capital is made to satisfy the company's most important stakeholders. This theoretical approach is a widely accepted tool and used in previous research on disclosure and reporting behavior (Gray et al., 1995).

It is important to note that other theories have been used to explain results in studies regarding company disclosure. Ax and Marton use the decision-usefulness theory where the reporting of human capital is explained by the degree of usefulness to the user of the

information. (Ax & Marton, 2008). Another example of a theory possible to use in the thesis is the resource-dependency theory which states that the external resources of organizations affect the behavior of the organization. (Pfeffer & Salancik, 1978). This study is linkable with one of these theories or with an eclectic approach where several theories are used to give the best explanation to our empirical result. We have however decided to stick to one theory to reduce the complexity of the analysis and on the basis that stakeholder theory has been used in earlier studies in the field as noted above.

3.2.3 Value creation

In our empirical studies we ask how different kinds of intellectual capital are related to value creation in the companies. Value creation could be regarded as vague and the term is possible to interpret in many different ways. We have chosen to use the definition that value creation takes place when a business earns a revenue (or return on capital) that exceeds the expenses (the cost of capital) (Reference for business, 2011)

Consequently we ask our respondents to answer how much different components of intellectual capital (e.g. customer relations, employee training, company routines etc.) contribute in creating value according to the above mentioned definition. We are well aware that it is hardly possible to indicate the exact connection between a specific item of intellectual capital and to what extent it is a driving force behind value creation. What we are aiming for is to understand how important the respondents view each specific item. This provides us with an explaining factor when analyzing discrepancies or similarities regarding internal and external reporting in the thesis.

4. Empirics

In this section we present the results from the study of internal and external disclosures of IC. This is made company by company. It starts with a presentation of the results from the content analysis. These are displayed both through key figures and text exemplifications. After that the results from the e-mail questionnaire follows. This is exclusively made by key figures and the results show both the quantity of IC reported internally and the extent to which companies finds IC value creating.

4.1 Introduction

In this section we present the results from the content analysis that we have made on the annual reports. The content analysis is a technique for coding and counting text units. We have chosen to use it because it generates a quantifiable result and it has been tested as analyzing technique in previous studies of intellectual capital in annual reports. (Beattie & Thomson, 2007).

It is important to clarify what we are looking for in the content analysis. We have divided the theoretical concept of Intellectual capital (IC) into three subcategories, Human capital (HC), Relational capital (RC) and Structural capital (SC). This is based on the classification of IC that we have stated in the theoretical frame of reference. A thorough discussion of the content analysis including a technical explanation of how the search was performed is placed in the method section 2.4.

4.2 External Disclosures

A summary of the total hits of intellectual capital from their annual reports in the examined companies:

Table 4.1. Hits in the annual report from content analysis.

Company	Hits in the annual report from the content analysis			
	HC	RC	SC	IC
1. NETCOMP	16	34	13	= 63
2. Medcomp	10	29	12	= 51
3. Alucomp	13	20	13	= 46
4. Cellcomp	8	19	11	= 38

5. Labelcomp	9	16	9	= 34
6. Furcomp	5	25	3	= 33
7. Itcomp	8	16	2	= 26
8. Biocomp	5	9	11	= 25
Mean =	<u>9.25</u>	<u>21</u>	<u>9.25</u>	= <u>39.5</u>

4.2.1 NETCOMP

Human capital items: 16

Relational capital items: 34

Structural capital items: 13

= Total intellectual capital Items: 63

Netcomp is a company in the telecom industry that delivers services in data communications, IT-service and telephony. The company only handles business to business relations and most customers are large retailers that are typically situated in many cities and towns in Sweden. The company is the parent company of the NETCOMP group. In 2010 the group turnover was 296,3 MSEK and the net income was 29,7 MSEK.

The disclosures of Intellectual capital mainly take the shape of relational capital and structural capital. The customer analysis is carried out in detail and other stakeholders are both categorized on the basis of importance and addressed accordingly. The use of quality standards and different sustainability initiatives are also elaborated on.

Market trends and customer preferences in the business are described in detail. The strategic choices taken by the company, such as aiming for total solutions for the clients demand for IT and telephony services and favoring long-term clients is explained by the disclosure of different rates of return by different segments. The company also points at the frequent contact and visits to clients and the importance of offering supplementary consulting services to strengthen customer loyalty. (Relational capital)

For the second consecutive year the company presented its sustainability reporting in line with the Global Reporting Initiative (GRI). The company was one of the first listed companies on Nasdaq Stockholm OMX small cap to live up to this standard. A central feature is to

prioritize issues of sustainability in relation to the importance and urgency to stakeholders (1) and the importance and urgency to the company (2). Issues that score high in both (1) and (2) are consequently the most relevant to inform about through disclosures. In this case matters of gender equality, energy consumption, the production of greenhouse gases and information security was determined most important issues. The company goes through these four in detail and explains how they use routines, processes and standards to control each area. An example of such control in place is the environmental standard ISO 40001. Another example is the discussion about how the company actively searches for female applicants, encourages women to apply to top-management and has eliminated the salary discrimination between genders. A third example is the wide use of real-time video conferences that is environmental friendly because the staff travels less frequently. (Structural capital and Relational capital)

Beside the demands from the most important stakeholders the company disclose information about their philanthropy ambitions. The project “The digital hope” where they provide IT- and English education to children in Vietnam is an example of such social sponsorship. (Relational Capital)

The company is certified to ISO20000. This indicates solid quality in strategic and operational processes. This certification postulate interaction with suppliers and implies the company to implement continuous improvements in its processes. (Structural Capital)

There are very little human capital disclosures in the annual report. However, the company points out that they do acquire front edge competence through the process of acquisitions. In the year of 2010 they strengthend this kind of human capital since they incorporated two new subsidiaries to the group. (Human Capital)

4.2.2 Medcomp

Human capital items: 10

Relational capital items: 29

Structural capital items: 12

= Total intellectual capital Items: 51

Medcomp develop, manufacture and market medical devices. The turnover for 2010 was 83,4 MSEK and the net loss was -2,6 MSEK.

In the annual report Medcomp is one of the companies that we examined that disclosed most intellectual capital information. They have examples of all the three main aspects of IC, namely Human capital (HC), Relational capital (RC) and Structural capital (SC) but they have an emphasize on relational capital. Below follow the most common and accented IC disclosures in the annual report.

Medcomp states that one of their key determinants for success it to continue to deliver high standard products that are rather expensive, and make their costumer pay for quality. To be able to reach out to the market Medcomp have invested in their sales department and brought in a lot of new faces. The feedbacks from their customers and distributors have generally been positive about these changes and they have initiated discussions with several new customer. Still they lost one major customer during the year. They have also updated the way they communicate with the market. Examples of this are a new homepage, a more distinct focus on their products and generally a whole new marketing material. Besides this they also participate in strategic important exhibitions. (Relational capital)

The underlying growth for the company is driven by demographic and socioeconomic factors such as increasing life expectancy and higher welfare. The United States is Medcomps biggest market and is expected to continue growing. Medcomp have a world market share of between one and two percent. (Relational capital)

Medcomp implements a business system that are prepared and certified in accordance with ISO 13485:2003. The certification covers the design, manufacture, sale and servicing of the company. They also work with sustainability and to minimize their impact on the environment. To do this they keep records of their use of chemicals and they strive do lower the use and dependence of it. (Structural capital)

Medcomp seeks to minimize occupational injuries and ill-health within the organization. Health care is an important element of the company and they have regular health checks and massages. They also have a systematic rotation between different jobs to avoid monotonous work and the related injuries that repetitive work brings. (Human capital)

The average number of employees was 52 under 2010, and of those 31 percent were women. (Human capital)

4.2.3 Alucomp

Human capital items: 13

Relational capital items: 20

Structural capital items: 13

= Total intellectual capital Items: 46

Alucomp is a manufacturer of customized sections and components in Aluminum. It is the parent component in the Alucomp group. The group turnover for 2010 is 901,4 MSEK and the net income 15,6 MSEK.

The company discloses a lot of intellectual capital information in the annual report. There is plenty of examples how resources are allocated to produce or maintain human-, relational- and structural capital. We will present the IC disclosures that are most common and emphasized in the Annual report.

The company states that the employees' level of personal and professional progress is a key determinant for success. A couple of initiatives the company stresses are the wide use of job rotation and the continuous investment in supplementary training. The company received a EU-subsidy earmarked to education of the employees. (Human Capital)

The initiative to provide free health and gym service to all employees is highlighted and described as a reason behind the decreasing and generally low levels of absence due to illness. All employees undertake cardiopulmonary resuscitation (CPR) training. During the

year an employee's life was saved due to his colleagues' knowledge of how to give first aid in a situation of cardiac arrest. (Human Capital)

The company does indicate solid market knowledge and uses several pages and diagrams to display their own market share and the development and potential in new markets. Further they present a thorough customer analysis where they go through different segments and reason about the amount and size of the customers and to what extent they contribute to total profits. (Relational Capital)

During the year the company recruited a new CEO. Both the replaced and the new CEO write in their respective personal letters that the company focuses on both good relations and a high degree of integration with suppliers. The importance of suppliers is manifested through the project "Aluminum in new ways" where 500 employees, mostly from key suppliers, were provided with industry specific competence. (Relational Capital)

The company did attend the national Aluminum conference and did set up commitments with valuable clients. Further the company has increased the level of employees with industry specific knowledge at customer visits. (Relational Capital)

The company did 2010 initiate a large-scale programme aimed at improving processes. The programme was set up with the Kaizen methodology of small but continuous improvements to smoothen the flow of materials and to speed up the production. (Structural Capital)

The company is dependent on staying innovative and flexible to manage the business concept of providing relatively complex customized components. The integration of suppliers, the constant search and evaluation of possible acquisitions to gain core competence and the company motto of encouraging employees to question routines and processes are all concrete examples on this strive stated in the annual report. (Structural Capital)

The company is environmentally certified through ISO 14001. They also disclose both the emission rates of aluminum and the company levels of energy consumptions (Structural Capital).

4.2.4 Cellcomp

Human capital items: 8

Relational capital items: 19

Structural capital items: 11

= Total intellectual capital Items: 38

Cellcomp is a company in the biotech industry that develop and market systems solutions in medical microscopy. Cellcomp is the parent company of the Cellcomp Group. In 2009 the Group turnover was 109,0 MSEK and the net income was 14,2 MSEK.

The company discloses a fairly large amount of IC in all three subcategories (HC, RC and SC). Knowledge about market trends and driving forces behind change are both major sources to disclosures in this report. The structural capital is also highlighted with a focus on processes and routines. Human capital is mainly emphasized through the efforts of cultivating the staff.

Several initiatives leading to the development of employees are disclosed. Examples of such are the removal of monotonous work, a high degree of participation from low level employees in project-groups and the recruitment of committed talents with a high ability to learn and make progress. (Human Capital)

The majority of the products are sold in foreign markets and especially USA or Japan. Information about these customers' preferences and the problems they wanted to be solved is displayed in the annual report. (Relational Capital)

Internal rules and routines and control systems are disclosed and presented as an important condition in order for processes to be trustworthy and efficient. IT-security and quality systems are especially important control areas. (Structural Capital)

Another type of structural capital presented in the annual report were deals with company patents. It is a fundamental building block for staying competitive. Disclosures are made about the current amount of patents. A description is given of the key patent regarding a special method used in microscopic test slide analysis. Furthermore the company provides information on how they try to stay innovative in order to create new patents. The company's technological front edge R&D are supplemented with a tight collaboration with customers and a creative working atmosphere. (Structural Capital)

4.2.5 Labelcomp

Human capital items: 9

Relational capital items: 16

Structural capital items: 9

= Total intellectual capital Items: 34

Labelcomp provides the retail industry with electronic display and solutions for communicating price and product information on the retail floor. The company key factor for success is driven mainly by information technology so therefore we categorize the company to a company within the category *Data, IT and telecom company*. The group turnover for 2009 was 327,3 MSEK and the net income 25,2 MSEK.

In the annual report Labelcomp disclosed quite ordinary information that could be described as intellectual capital. There is a rather equal distribution between human-, relational- and structural capital with a small emphasize on relational capital.

Labelcomp's encourage responsiveness and short decision-making path within the company and it's employees. The employees are also encouraged to seek additional knowledge and they continuously attend courses to improve their competencies. (Human capital)

Labelcomp has been re-evaluated by there key clients and has been re-validated as a key strategic supplier by all of them. Labelcomp has a market share at 55 percent and there

systems are installed in stores in over 40 countries, where France and Japan stands for the biggest part of all installations. They only have one big competitor in the industry. Both Labelcomp's studies and analyses made by their customers' show that in average there is a payback period of less than one year in installing a Labelcomp system. (Relational capital)

The company has a rather small number of large customers who accounts for the main part of their sales. Labelcomp actively seeks to reduce its dependence on individual businesses by creating partnerships and adding a larger number of customers. (Relational capital)

2009 was a year where the food retail had to adapt to financial troubles and therefore Labelcomps had some troubles with the sales of their products to the retail industry. Still they withheld a high profit. This was possible because of improving efficiency throughout the organization, such as introducing programs to lower carriage costs and improve customer response. (Structural capital)

Labelcomp it taking effort to ensure that expertise is retained within the company. It is always a risk that employees leave with key competencies but by working with knowledge transfer and documentation of work processes they try to reduce this risk. During 2009 Labelcomp has also invested extensively in increased efficiency, capacity and alternate suppliers of critical components. (Structural capital)

4.2.6 Furcomp

Human capital items: 5

Relational capital items: 25

Structural capital items: 3

= Total intellectual capital Items: 33

Furcomp is a manufacturer of furniture (87%) and eyewear (13%). In 2010 the group turnover was 778 MSEK and the net income was 24,2 MSEK.

In the annual report the company discloses quite little IC information. 25 out of the 33 hits found are related to relational capital. Most of the Relational capital is different forms of

customer or market related information that concerns the same issues under separate business areas. Consequently the company does not disclose a wide variety of IC related pieces of information.

There is a lot of analysis about future market development. The disclosures around this topic take the form of predictions of customer preferences, new opportunities rising from material and design development and explanations of how economic factors affect the industry. (Relational capital)

The company sell a substantial proportion of its products to large customers such as libraries and customers and administrative authorities. These customers' demands and level of satisfaction is emphasized throughout the report. (Relational Capital)

Apart from the customer focus the company few examples could be found where the annual report is used as a communication channel to nurture the relation to other stakeholders. On exception are the disclosures on sustainability efforts. The ISO 14001 certification and the environmentally friendly processes described in the report indicate awareness in this area. The company also complies with ISO 26000 about social responsibility (Relational Capital).

The company discloses a few paragraphs about the recruitment strategy of contracting famous designers to increase the likelihood of creating innovative furniture and to build a strong brand. (Human capital)

4.2.7 Itcomp

Human capital items: 8

Relational capital items: 16

Structural capital items: 2

= Total intellectual capital Items: 26

Itcomp is a company in the telecom industry and a vendor of TV and music streaming services. They have both businesses and consumers as costumers. They are the parent

company of the Itcomp group. In 2010 the company turnover was 270,9 MSEK and the net loss was 130,9 MSEK.

The most information and numerical data that are disclosed in the annual report regarding intellectual capital are different forms of relational capital and more specifically stockholder-, customer- and market knowledge. Another centre of attention is the well defined and articulated company culture which is part of the structural capital.

The company devotes about 10 pages of the annual report to descriptions of the markets they currently act. They carefully consider the TV, music, mobile solutions and mobile search markets. In all these sections they reason about market and customer trends and occasionally strengthen that with numerical data. (Relational Capital)

They are active in young and relatively unstable markets. As a result of this there is a constant evaluation of where to compete. Itcomp uses the instrument of forecasting in an attempt of constantly staying up to date with shifts in preferences and the creation of new digital services. The company's tendency to rely on trends spotted is exemplified through the decision taken in 2010 to sell of the previous core business of Mobile Entertainment business segment. The reason behind this decision was a forecasted poor market situation and not only current losses. (Relational capital)

The stockholders are addressed specifically in a separate section of the annual report. Information is disclosed about the staff stock option program that is in place in the company. The discussion of the program focus both on the technical setup and on the underlying idea of creating incentives for senior managers to participate in company value growth and strive for company progress. The dividend policy is also explained to stockholder in great detail. Two pages of diagrams and graphs specifically directed towards stockholder end this section. (Relational capital)

The company culture is broken down into the five core values: Brave, Innovative, Committed, Enthusiastic, Playful (BICEP). The culture is underlined as a driving force behind the goal of delivering "world class experiences that really make a difference in people's

everyday lives". The devotion to this culture is the only big sign of structural capital expressed in the annual report (No description of how they actually work with processes or resource allocation etc. to form innovative services). (Structural capital)

The human capital disclosures are presented rather condensed. The information disclosed are average age on employee, average work experience (years), staff turnover and percentage of employees with academic degree. This is presented both in words and diagrams. (Human Capital)

4.2.8 Biocomp

Human capital items: 5

Relational capital items: 9

Structural capital items: 11

= Total intellectual capital Items: 25

Biocomp is a company in the biotech industry that develops, produce, market and sell biosensing techniques. The product is used for detecting micronutrients from different substances. It is the parent company of the Biocomp group. In 2010 the group turnover was 6,8 MSEK and the net loss 46,0 MSEK.

Most of the intellectual capital disclosed in the annual report is characterized as different types of structural capital. They devote several sections to describe the two latest product lines that include two patents. According to the company board these patents are crucial to position themselves as a cutting edge biotech firm. (Structural Capital)

Beside these products the company explains how they have both acquired a German technology research company and started up an R/D focused subsidiary during the year. The goal with these investments is to enlarge the internal R/D capacity. A possible outcome is a variety of structural capital such as "knowhow", patents and intangible assets. (Structural Capital)

There is a short but detailed discussion about all the different patents owned. It is described how the patents protect technologies both regarding the chemical structure of products and technical constructions in instruments. They also inform about how they constantly analyze and modify the portfolio of patents to stay competitive. (Structural capital)

The company call attention to the development of the organization. During the year they have slimmed the organization and dismissed three out of 16 people. In order to strengthen both the marketing and the sales departments the company has allocated resources that have the expertise and ability to penetrate markets more intensely. (Human resources)

Biocomp display informative charts and explain the market situation. The focus is on the past and the current situation but information about prospect market and trends in current markets are provided rather scarcely. (Relational Capital)

In a passage the company disclose policies and numbers regarding compensation with a specific focus on bonuses. Information like the chairman of the board is pay three Swedish prisbasbelopp per year and the CEOs compensation package is a combination of a "a set salary, a yearly bonus, pension benefits and severance payment. (Human Capital)

4.3 Internal disclosures

In this section we present the results from the e-mail questionnaire that has been answered by the company CFO:s. The structure of the questionnaire follows the thesis's theoretical frame of reference. The questionnaire is divided into three main sections: Human capital (HC), Relational capital (RC) and Structural capital (SC). Under each section we ask 20 (HC), 20 (RC) and 11 (SC) questions. In order for the questions to adequately represent important issues in each section we have looked for guidance from studies conducted in this field with a similar idea of how to define and classify IC. The main areas to cover under each section are inspired by Beattie and Thomson (2007), Edvinson and Malone (1997) and Ax and Marton (2008) and those articles have been helpful in providing innumerable examples of IC measurements (Beattie & Thomson, 2007), (Edvinsson et al, 1997) (Ax & Marton, 2008)

The questions focus on how much internal report, steering documents and written policies that the company holds about different kind of IC. All questions are complemented by a second question about the extent to which that particular part of IC contributes to the company value creation. The link to value creation is important in order to explain why certain IC is prioritized over other in the internal reports.

The answers to all questions were made by putting a cross for the most suitable alternative in a scale from 1-7. In the IC-questions the range looked like this: 1= to a very limited extent – 7= to a very large extent. In the supplementary Value creation-questions the range looked like this: 1=Not important for value creation – 7= Very important for value creation. The questionnaire is part of the appendix in order for the reader to have the opportunity to look at the complete instructions and questions in detail.

The answers from the questionnaire have been analyzed and below follow a presentation on the key figures of internal IC reporting in the respective companies. All questions are equally important and are weighted the same when calculating those numbers. We find this calculation method adequate since we think that most of the 51 unique questions asked cover IC spectra’s that are relatively equal in size.

4.3.1 Summary internal disclosures

Table 4.2. A list of total amount of intellectual capital in the examined companies:

Company	HC	RC	SC	IC
1. Medcomp	5.21	4.17	5.42	= 4.93
2. Cellcomp	4.3	3.49	5.53	= 4.44
3. NETCOMP	4.42	4.29	4.08	= 4.26
4. Alucomp	4.04	4.74	3.64	= 4.14
5. Labelcomp	3.57	2.71	2.81	= 3.03
6. Itcomp	2.44	4.05	1.67	= 2.72
7. Biocomp	3.41	2.02	2.58	= 2.67
8. Furcomp	2.37	1.54	1.75	= 1.89
Mean =	<u>3.72</u>	<u>3.38</u>	<u>3.44</u>	= <u>3.51</u>

Table 4.3. Sorted by category of intellectual capital:

Summation	Internal reports	Value creation
IC	3.51	3.87
HC	3.72	4.03
RC	3.38	3.82
SC	3.44	3.77

4.3.2 Company for company

The tables below are the calculated means of intellectual capital and value creation, presented company by company. The complete answers from the questionnaire are attached in the appendix. The tables are sorted from top to below of the amount of internal disclosures of intellectual capital, with the highest starting from the top:

Table 4.4 Medcomp internal means

Medcomp	Internal reports	Value creation
IC	4.93	5.78
HC	5.21	5.86
RC	4.17	5.06
SC	5.42	6.43

Table 4.5. Cellcomp internal means

Cellcomp	Internal reports	Value creation
IC	4.44	4.43
HC	4.30	4.87
RC	3.49	3.47
SC	5.53	4.94

Table 4.6. Netcomp internal means

NETCOMP	Internal reports	Value creation
IC	4.26	4.07
HC	4.42	3.99
RC	4.29	4.48
SC	4.08	3.75

Table 4.7. Alucomp internal means

Alucomp	Internal reports	Value creation
IC	4.14	4.71
HC	4.04	4.74
RC	4.74	4.95
SC	3.64	4.44

Table 4.8. Labelcomp internal means

Labelcomp	Internal reports	Value creation
IC	3.03	4.18
HC	3.57	3.50
RC	2.71	4.56
SC	2.81	4.47

Table 4.9. Itcomp internal means

Itcomp	Internal reports	Value creation
IC	2.72	2.93
HC	2.44	3.41
RC	4.05	3.54
SC	1.67	1.83

Table 4.10. Biocomp internal means

Biocomp	Internal reports	Value creation
IC	2.67	2.81
HC	3.41	3.00
RC	2.02	2.85
SC	2.58	2.58

Table 4.11 Furcomp internal means

Furcomp	Internal reports	Value creation
IC	1.89	2.08
HC	2.37	2.84
RC	1.54	1.64
SC	1.75	1.75

4.3.3 Value creation

The questionnaire also included a column where the respondents answered how important every IC item is for the value creation in the company.

Below follow charts with the companies answers summarized in the categories human capital, relational capital and structural capital. The charts are sorted from top to bottom with the company with the highest amount at the top to the lowest at the bottom. The scale ranges from: 1 = unimportant to very important = 7.

Table 4.12. Value creation means:

Company	HC	RC	SC	IC
1. Medcomp	5.86	5.06	6.43	= 5.78
2. Alucomp	4.74	4.95	4.44	= 4.71
3. Cellcomp	4.87	3.47	4.94	= 4.43
4. Labelcomp	3.50	4.56	4.47	= 4.18
5. NETCOMP	3.99	4.48	3.75	= 4.07
6. Itcomp	3.41	3.54	1.83	= 2.93
7. Biocomp	3.00	2.85	2.58	= 2.81
8. Furcomp	2.84	1.64	1.75	= 2.08
Mean =	4.03	3.82	3.77	= 3.87

Table 4.13. Value creation intellectual capital summary:

Company	Value creation IC
1. Medcomp	5.78
2. Alucomp	4.71
3. Cellcomp	4.43
4. Labelcomp	4.18
5. NETCOMP	4.07
6. Itcomp	2.93
7. Biocomp	2.81
8. Furcomp	2.08
Mean =	3.87

Table 4.14. Value creation human capital:

Company	Value Creation HC
1. Medcomp	5.86
2. Cellcomp	4.87
3. Alucomp	4.74
4. NETCOMP	3.99
5. Labelcomp	3.50
6. Itcomp	3.41
7. Biocomp	3.00

8. Furcomp	2.84
Mean =	<u>4.03</u>

Table 4.15. Value creation relational capital:

Company	Value creation RC
1. Medcomp	5.06
2. Alucomp	4.95
3. Labelcomp	4.56
4. NETCOMP	4.48
5. Itcomp	3.54
6. Cellcomp	3.47
7. Biocomp	2.85
8. Furcomp	1.64
Mean =	<u>3.82</u>

Table 4.16. Value creation structural capital:

Company	Value creation SC
1. Medcomp	6.43
2. Cellcomp	4.94
3. Labelcomp	4.47
4. Alucomp	4.44
5. NETCOMP	3.75
6. Biocomp	2.58
7. Itcomp	1.83
8. Furcomp	1.75
Mean =	<u>3.77</u>

5. Analyze

In this section we compare the empirical results from the study of internal IC-reporting with the study of external IC disclosures. Firstly, we display the overall results in diagrams to show how well the two dimensions of internal and external disclosures correlate. We then analyze the material company by company to explain individual conformity or discrepancy towards the overall result.

5.1 Introduction

In the empirical part of the thesis we have studied both internal and external reporting of IC. In the analysis we are interested in comparing those empirical results in line with the purpose of the thesis. In the first section of the analysis we consolidate the results into four diagrams (IC, HC, RC and SC). The diagrams are designed to show the correlation between internal and external reporting for the eight companies examined.

As explained in the introduction such a correlation could be motivated with the following line of thought. If a company devotes a lot of internal resources to generate and document IC, the IC would logically be seen as a value creating activity for the company. In order to describe the current state and future prospects correctly to company stakeholders the same company would be interested in including IC in the annual report (the central document for communication with stakeholders).

In the second section after the charts we go through the results company by company. Conformity and discrepancies between the internal and the external reporting are identified. With the help from positive stakeholder theory and the company's opinion about different types of ICs value creating capacity we try to explain the reporting behavior.

5.2 Charts of the correlation between internal and external disclosures

Chart 1. Chart of the correlation between the internal means of IC and hits in the annual report

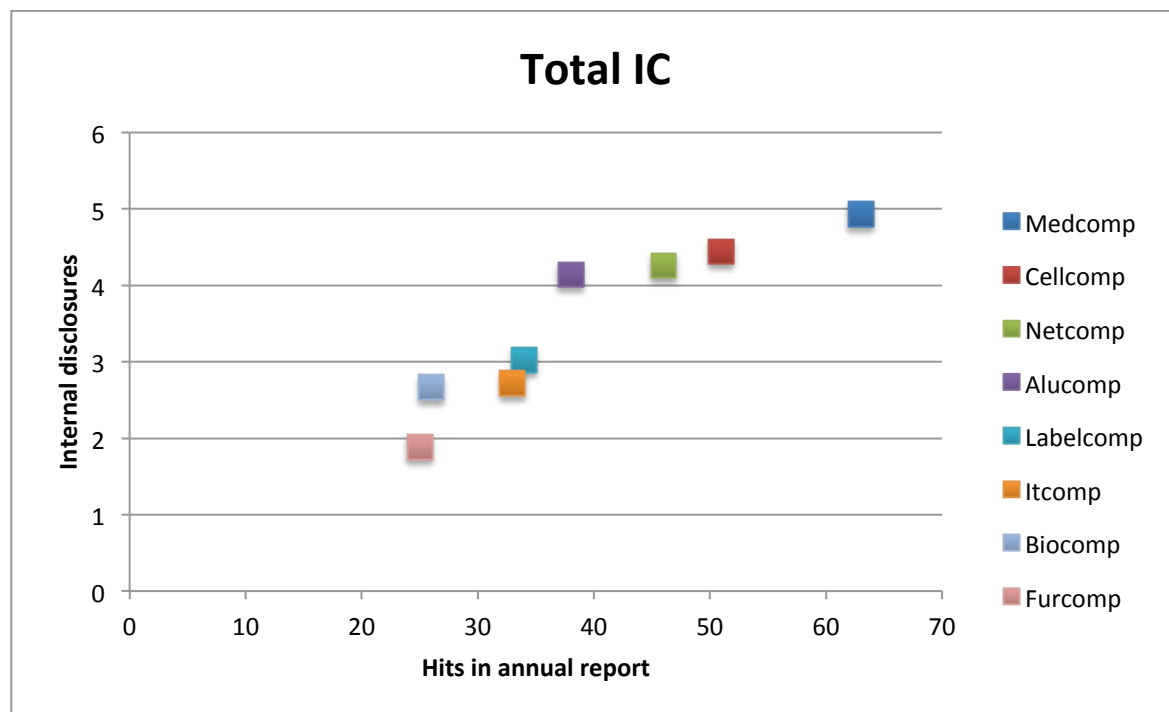


Table 5.1. Table of the internal means of IC and the IC hits in the annual report

Company	External hits	Internal IC mean
Medcomp	63	4,93
Cellcomp	51	4,44
Netcomp	46	4,26
Alucomp	38	4,14
Labelcomp	34	3,03
Itcomp	33	2,72
Biocomp	26	2,67
Furcomp	25	1,89

Chart 2. Chart of the correlation between the internal means of HC and the HC hits in the annual report

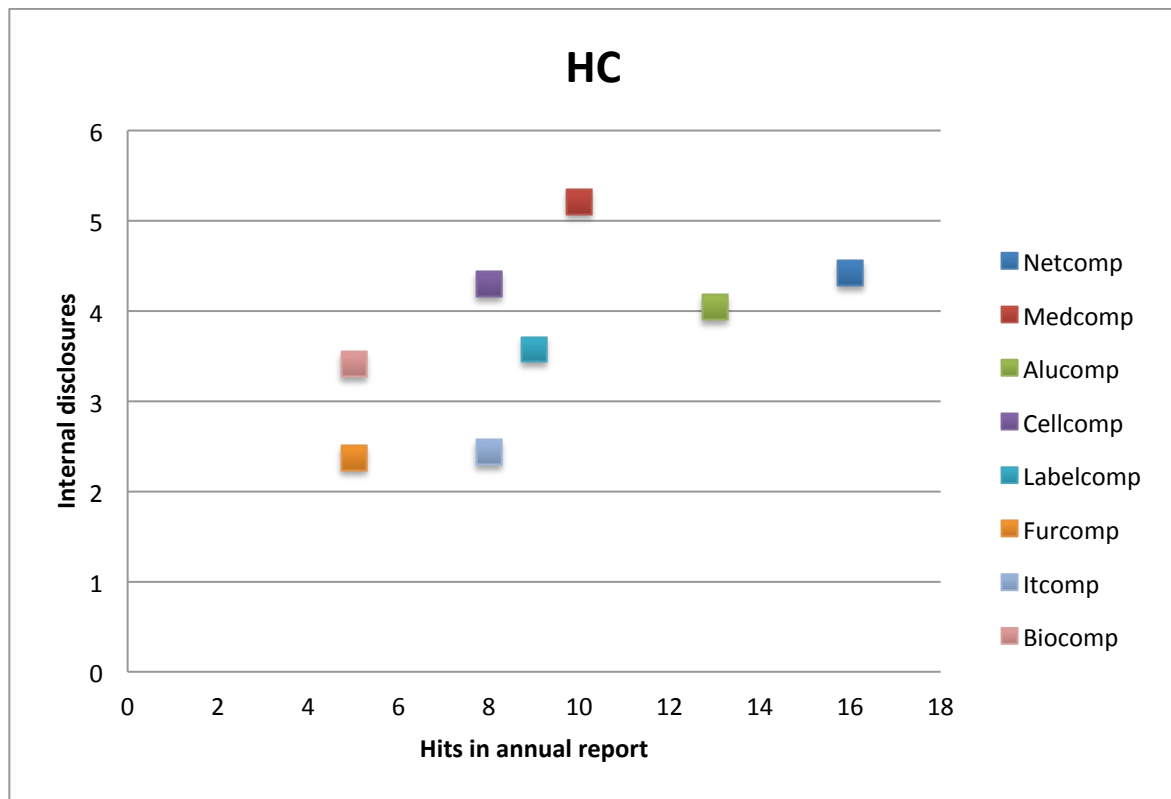


Table 5.2 Table of the internal means of HC and the HC hits in the annual report

Company	External hits	Internal HC means
Netcomp	16	4,42
Medcomp	10	5,21
Alucomp	13	4,04
Cellcomp	8	4,3
Labelcomp	9	3,57
Furcomp	5	2,37
Itcomp	8	2,44
Biocomp	5	3,41

Chart 3. Chart of the correlation between the internal means of RC and the RC hits in the annual report

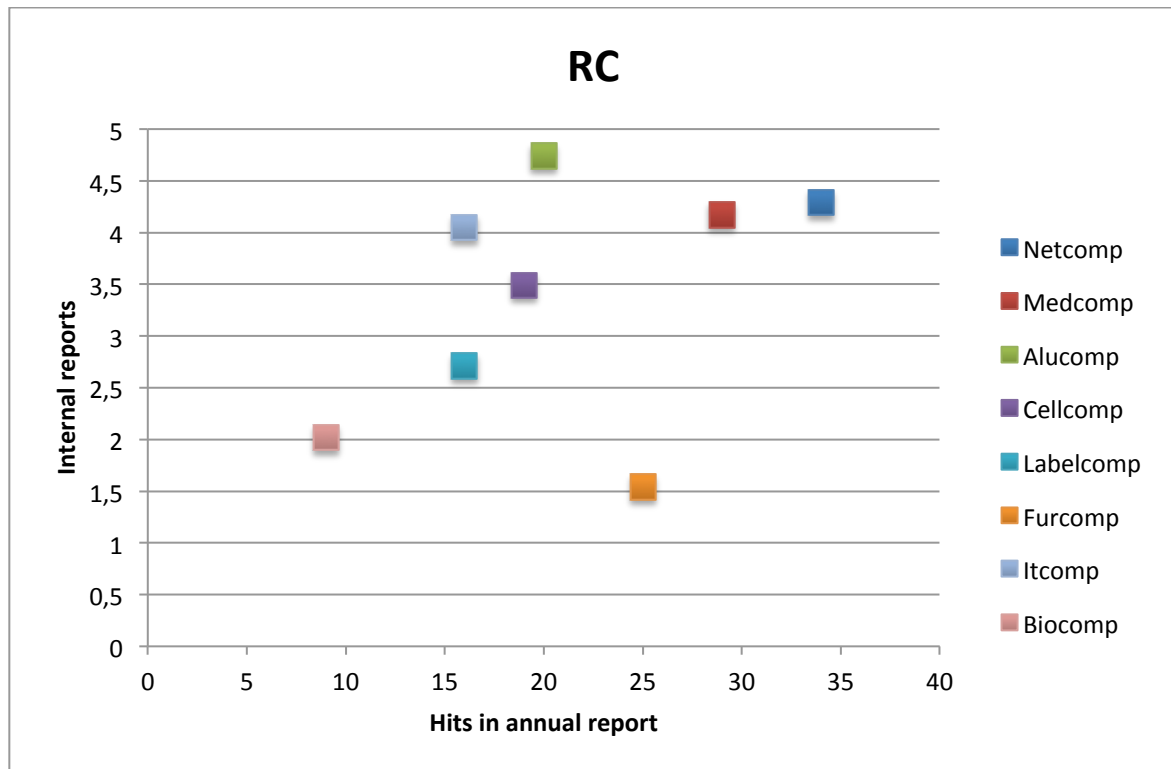


Table 5.3 Table of the internal means of RC and the RC hits in the annual report

Company	External hits	Internal RC means
Netcomp	34	4,29
Medcomp	29	4,17
Alucomp	20	4,74
Cellcomp	19	3,49
Labelcomp	16	2,71
Furcomp	25	1,54
Itcomp	16	4,05
Biocomp	9	2,02

Chart 4. Chart of the correlation between the internal means of SC and the SC hits in the annual report

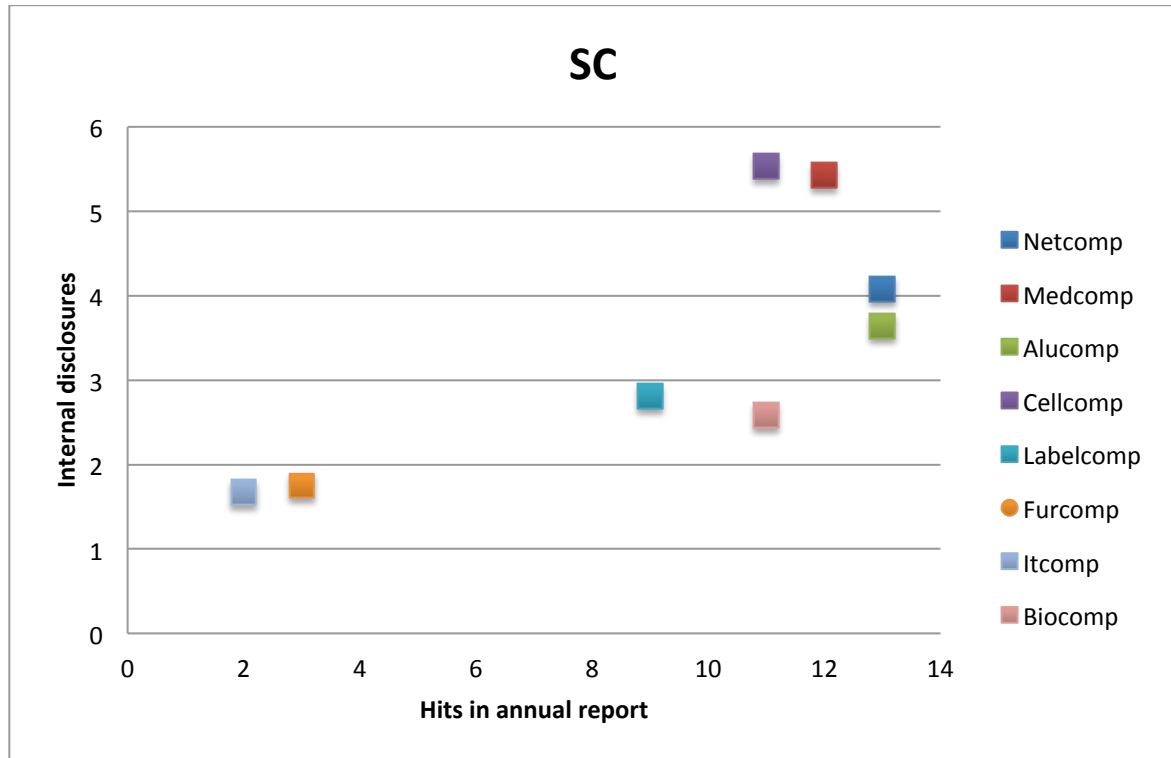


Table 5.4 Table of the internal means of SC and the SC hits in the annual report

Company	External hits	Internal SC means
Netcomp	13	4,08
Medcomp	12	5,42
Alucomp	13	3,64
Cellcomp	11	5,53
Labelcomp	9	2,81
Furcomp	3	1,75
Itcomp	2	1,67
Biocomp	11	2,58

5.3 Analyze company by company

5.3.1 NETCOMP

Table 5.5. Value creation means:

Company	HC	RC	SC	IC
1. Medcomp	5.86	5.06	6.43	= 5.78

Table 5.6. External disclosures:

Company	Hits in the annual report from the content analysis			
	HC	RC	SC	IC
1. NETCOMP	16	34	13	= 63

Table 5.7. Internal disclosures:

NETCOMP	Internal reports	Value creation
IC	4.26	4.07
HC	4.42	3.99
RC	4.29	4.48
SC	4.08	3.75

NETCOMP is the company examined with the highest amount of external IC hits (63). This observation correlates well with the relatively high amount of internal IC reporting (4.26). The correlation is not surprising because the company thinks that IC reporting is an important factor behind value creation (4.07). According to stakeholder theory the disclosure behavior is logical since the company is eager to provide the stakeholders that legitimize the existence of the company with relevant information regarding the company performance.

RC is identified by 34 hits. Behind this high number is a disclosure pattern of caring about a lot of different stakeholders. Information about philanthropy projects, detailed environmental ambitions and disclosures about the rigorous use of standards is a mix of information directed to a variety of stakeholders. This focus is also found in the broad spectra internal disclosures of RC pointed out by the high RC Mean from the questionnaire (4.48).

The company focuses more on RC and SC (In relative terms) than on HC in the Annual Report. It is not possible to explain this by arguing that HC has a weak connection to value creation since the company has indicated that HC is not unimportant for value creation (3.99).

5.3.2 Furcomp

Table 5.8. Value creation means:

Company	HC	RC	SC	IC
8. Furcomp	2.84	1.64	1.75	= 2.08

Table 5.9. External disclosures:

Company	Hits in the annual report from the content analysis			
	HC	RC	SC	IC
6. Furcomp	5	25	3	= 33

Table 5.10. Internal disclosures:

Furcomp	Internal reports	Value creation
IC	1.89	2.08
HC	2.37	2.84
RC	1.54	1.64
SC	1.75	1.75

Furcomp is the company in the study that had the weakest correlation between the internal and external IC disclosures. The content analysis resulted in 33 IC hits which are below but not very far from the overall external IC mean of the study (39.5). The internal disclosures are extremely rare with a mean of only 1.89 which by far is the lowest in the study. The low rate is in line with the view that internal IC reporting is weakly connected to value creation (2.08). This discrepancy between internal and external IC reporting could be explained in several ways. One possibility is that the company wants its stakeholders to believe that they have an IC focus. The reason for this could be that IC is regarded by modern business research (described in the IC theory section) to be an important source behind competitive advantage and consequently of interest to company stakeholders.

Human and Structural capital are both reported to a very limited extent in the annual report (3 and 5 hits). In these categories their disclosures correlate well between internal and external reporting.

The overall discrepancies are rooted in the different disclosure of RC. The CFO:s description of the internal reporting summed up in a very low RC mean (1.54) while the content analysis found 25 hits which are 4 hits higher than the mean for all companies. This could be interpreted as a strong will to please stakeholders in the sense that the tiny efforts put on stakeholder relational work internally are overemphasized or exaggerated in the annual report.

5.3.3 Medcomp

Table 5.11. Value creation means:

Company	HC	RC	SC	IC
1. Medcomp	5.86	5.06	6.43	= 5.78

Table 5.12. External disclosures:

Company	Hits in the annual report from the content analysis			
	HC	RC	SC	IC
2. Medcomp	10	29	12	= 51

Table 5.13. Internal disclosures:

Medcomp	Internal reports	Value creation
IC	4.93	5.78
HC	5.21	5.86
RC	4.17	5.06
SC	5.42	6.43

Medcomp is the company with the most internal reports and the company really thinks IC is important for the value creation. This is also reflected in the annual report where Medcomp has the second most hits of external IC disclosures of the companies in our survey (51). This correlates very well with the internal report of IC that shows a high extent of disclosures

(4.93). They also seem to truly think that IC disclosures matter because they show a high correlation between the internal and external disclosures and to what extent this information contributes to the value creation (5.78).

The high correlation is a theme that is applicable for Medcomp even if we break down IC into the categories HC, RC and SC. The company has quite a few hits on HC in the annual report (10) and has a high correlation against the internal disclosures with a high extent of reports and documents (5.21). Medcomp also seem to appraise human capital disclosures high because they also have a high figure in the column value creation (5.78)

There is also correlation between the internal and external disclosures when it comes to RC where Medcomp have lots of hits in the annual report (29) and at the same time have lots of internal disclosures (4.17) that they believe are important factors for success in the company because of the high number in value creation (5.06).

Finally Medcomp has 12 hits of SC in the annual report. This is high in relative terms in a comparison to the other companies in our study and this is also reflected in their internal reports where they have a high figure (5.42) and think that SC is very important disclosures for the value creation (6.43).

5.3.4 Itcomp

Table 5.14. Value creation means:

Company	HC	RC	SC	IC
6. Itcomp	3.41	3.54	1.83	= 2.93

Table 5.15. External disclosures:

Company	Hits in the annual report from the content analysis			
	HC	RC	SC	IC
7. Itcomp	8	16	2	= 26

Table 5.16 Internal disclosures:

Itcomp	Internal reports	Value creation
IC	2.72	2.93
HC	2.44	3.41

RC	4.05	3.54
SC	1.67	1.83

Itcomp was one of the company's in the content analysis with the lowest amount of external IC hits (26). This observation correlates very well with the low amount of internal IC reporting (2.72). The correlation also conforms to the fact that the respondent doesn't think that IC is an important factor behind value creation for the company (2.93). So in this case there are no discrepancies between their internal- and external disclosures if we analyze their total amount of intellectual disclosures.

When we analyzed and broke down IC in the 3 sub-categorize they also correlated quite well. The company has 8 hits of HC in their annual report and they don't have a high value, i.e. don't disclose much, in their internal rapports (2.44). But here there is a higher discrepancy with how important they think HC are for their value creation (3.41). This does not correspond so well with the stakeholder theory that states that Itcomp should disclose much HC disclosures in the annual report if they think it's important for the value creation and therefore reasonably should also be of importance for different stakeholders. On the other hand they don't have that much of internal disclosures to disclose in the annual report.

Itcomp have 16 hits of RC in their annual report. That's relatively low compared to the other companies. Here is also a discrepancy compared to their internal rapport were they have a quite high number of internal disclosures (4.05) that correlates rather well with how much it adds to the value creation (3.54). In this case you can apply the same reasoning as above, namely that it's rather odd that Itcomp doesn't disclose more RC in their annual report, especially as they have pretty much disclosures of RC internally.

Finally they only disclose 2 hits of SC in their annual report. But this correlates well with their internal reports because the company has very little internal reports of SC (1.67) and they don't think it's valuable for the value creation (1.83).

5.3.5 Alucomp

Table 5.17. Value creation means:

Company	HC	RC	SC	IC
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2. Alucomp	4.74	4.95	4.44	= 4.71
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Table 5.18. External disclosures:

Company	Hits in the annual report from the content analysis			
	HC	RC	SC	IC
3. Alucomp	13	20	13	= 46

Table 5.19. Internal disclosures:

Alucomp	Internal reports	Value creation
IC	4.14	4.71
HC	4.04	4.74
RC	4.74	4.95
SC	3.64	4.44

Alucomp was one of the companies in the content analysis of the annual report that had most hits of IC items (46). This correlates pretty well with the internal reports where they were on the upper half (4.14). It also correspond very well if you considerate that they think that IC generally contributes a lot to the value creation within the company (4.71). This means that Alucomp have a high correlation between the internal and external disclosures if you look at IC as whole and not divide it into sub-categories. This can also be seen in the plotted diagram (chart 1) where there are no big discrepancies.

Alucomp has a quite even spread between HC, RC and SC but as many of the other companies they have a few more RC hits then the other two categories. In total the content analysis showed that they had 20 hits. This is on the upper half of the companies that we examined in this thesis. Alucomp had the highest value on internal disclosures (4.74) and this correlates very well with the extent they believe that RC contributes to the value creation (4.95).

Alucomp had 13 hits of HC in the annual report. This was the second highest number of hits of HC in our study. This correlates rather good with both the extent of internal disclosures (4.04) and how much they think that this information contributes to the value creation in the company (4.74) and no discrepancies can be found on this segment.

Conclusively Alucomp had lots of SC-hits in the external reporting (13). On this sub-category there are some discrepancies between the internal reporting were they only had a pretty average reporting (3.64). On the other hand they think that SC is important for the value creation in the company (4.44) and therefore this can be the explanation for the pretty widespread disclosure in the annual report. This correspond well with the stakeholder theory which says that if you think that something is important for your company it is also important to disclose and provide this information to the companies stakeholders.

5.3.6 Cellcomp

Table 5.20. Value creation means:

Company	HC	RC	SC	IC
3. Cellcomp	4.87	3.47	4.94	= 4.43

Table 5.21. External disclosures:

Company	Hits in the annual report from the content analysis			
	HC	RC	SC	IC
4. Cellcomp	8	19	11	= 38

Table 5.22. Internal disclosures:

Cellcomp	Internal reports	Value creation
IC	4.44	4.43
HC	4.30	4.87
RC	3.49	3.47
SC	5.53	4.94

Cellcomp have as most companies in the study with very few exceptions, a very high correlation between the internal and external disclosures. But they have a little bigger focus on internal disclosures and have a tendency to disclose a little bit less in the annual report. They have 38 hits of IC in their annual report and this is very near the mean of the companies we examined. At the same time Cellcomp have a high number (4.44) in internal reports and a rather high value in the weighted value creation (4.43) but the discrepancy is very small and too little to draw any conclusions from.

Both the HC internal reports (4.30) and value creation mean (4.87) and SC internal reports (5.53) and value creation (4.94) mean shows a very high correlation with the hits from the annual report (8 HC hits and 11 SC hits). But there is a little higher discrepancy between the relational capital figures. Here Cellcomp as many other companies have lots of disclosures in the annual report (19) but they don't have so many internal documents (3.49) or think this information contributes to the value creation (3.47) in any large extent. The only logical explanation that we can think of is that the company itself doesn't think it's so important for the value creation (in relative terms) but they do believe it's important to please certain stakeholders and therefore overemphasize their RC disclosures in the annual report to please the stakeholders.

5.3.7 Biocomp

Table 5.23. Value creation means:

Company	HC	RC	SC	IC
7. Biocomp	3.00	2.85	2.58	= 2.81

Table 5.24. External disclosures:

Company	Hits in the annual report from the content analysis			
	HC	RC	SC	IC
8. Biocomp	5	9	11	= 25

Table 5.25. Internal disclosures:

Biocomp	Internal reports	Value creation
IC	2.67	2.81
HC	3.41	3.00
RC	2.02	2.85
SC	2.58	2.58

Biocomp is the company with the least amount of hits in the annual report with 25 IC-hits. Although this are low numbers of IC in the external disclosures it correlates well with their internal reports which show a very limited extent of disclosures (2.67). The respondent from

Biocomp does not think that IC generally contributes to the value creation in any wider extent (2.81).

The only thing that's noteworthy that makes Biocomp stand out a little bit from the other companies are that they have more SC disclosures than RC disclosures in their annual report. All other companies that we have reviewed had most RC disclosed of the 3 sub-categories in the external disclosures. But there are no discrepancies in Biocomp because they have a higher value of internal reports on SC (2.58) than on RC (2.02) so the correlation conform very well with the annual report where they have 11 SC hits compared to 9 RC hits.

5.3.8 Labelcomp

Table 5.26. Value creation means:

Company	HC	RC	SC	IC
4. Labelcomp	3.50	4.56	4.47	= 4.18

Table 5.27. External disclosures:

Company	Hits in the annual report from the content analysis			
	HC	RC	SC	IC
5. Labelcomp	9	16	9	= 34

Table 5.28. Internal disclosures:

Labelcomp	Internal reports	Value creation
IC	3.03	4.18
HC	3.57	3.50
RC	2.71	4.56
SC	2.81	4.47

Labelcomp has a quite average number of IC hits in their annual report. This correlates well with their internal reports were they also have a rather average number of internal reports (3.03). Despite this they tend to think IC is fairly important if you review the value creation figures where the mean are 4.18. This discrepancy is difficult to find any good explanation behind other than that Labelcomp as an individual company maybe has some areas to

improve in terms of reports and disclosures that they find important. This is particularly striking if you review the RC and SC figures where Labelcomp has rather decent amount of hits in the annual report (16 and 9) but really low extent of internal reports (2.71 and 2.81).

The only kind of intellectual capital where Labelcomp doesn't have any discrepancies is in the disclosures of HC. There are good correlations both externally (9 hits (average)) and internally (3.57 (average)), and with how much they think this information contributes to the value creation (3.50).

6. Conclusion

In the final chapter we present our findings of our research in accordance with its purpose. Furthermore carry out some critical review of the used methodology. Lastly we present some suggestions for further research.

6.1 Conclusion and results

The purpose of our study is as stated under section 1.3:

The purpose of this thesis is to empirically study companies internal and external reporting of intellectual capital to answer the following three questions: i) How much and what kind of IC information is reported to the top-management inside a company and ii) How much and what kind of IC information is presented to the stakeholders in the annual report. iii) Is there a correlation or are there discrepancies between I and II and how potential discrepancies exploited between i) and ii) could be explained with the help of theories.

Firstly the authors state that it's difficult to draw an absolute trueness that is generalizable from our study. The reason behind this is that the sample of companies that we examined is too small to give any certainty that the findings also are true and applicable for a larger population. Nevertheless the study showed significant and valuable results.

- (i) The first question is answered under section 4.3.1 in table 4.2. From the table it can be deduced that the companies examined had a mean of 3,51 of internal IC disclosures in the scale 1-7, where the pivot are 4. So neither large nor small amounts of IC are reported internally. Among the 3 different types of IC it was a fairly even distribution with most HC disclosures (3.72), middling SC disclosures (3.44) and least of RC disclosures (3.38).
- (ii) Question two can only be analyzed in relative terms because it is the number of hits in the annual report that are examined and not high or low extent as the internal disclosures were. The number of hits was analyzed company by company against how much internal IC disclosures they had and the result showed a very high correlation which is easily observed under the scattered chart 1 under section 5.2.

- (iii) As stated under (ii) our studies showed a very high correlation between internal and external disclosures with very few discrepancies between (i) and (ii). Another interesting observation is that almost all companies had most RC hits in their annual reports, despite the fact that it was the category that they had least internal disclosures on, as stated above. The reason behind this is not clear but if you apply the logics in the stakeholder theory it could be argued that the companies think that information about customer relations and other relational capital disclosures are important information for the stakeholders. Therefore the companies disclose a lot of information about RC even though their internal disclosures aren't as extensive.

6.2 Methodology critique

Finally we want to end this thesis with a critical review of our chosen methodology, and if it was suitable and worked as intended, or whether a different methodology had been better.

The Authors believe that our methodology of using questionnaires was quite solid but a few things could have been better. To start with we want to declare that it was a difficult task to construct a perfect methodology to reach a desirable result and fulfill the purpose because of the limited number of comparable studies that we could gain inspiration from. The biggest disadvantage with the empirics from our study is the low response rate from the respondents. In retrospect it could have been better to not apply such an extensive questionnaire, and in that way increase the chance of receiving more answers. Nevertheless this would of course had the effect that we would not have acquired so much information to analyze that we wanted to get a holistic perspective on the companies' internal intellectual capital. One way to get a higher response rate without lowering the extent of the questionnaire could have been to use a questionnaire that the respondents could answer in the web browser instead of via e-mail. This is often practical and one respondent even gave us that tip. So if we should have started from the beginning with a similar quantitative study we would presumably revise this possibility.

At last the authors are pleased with the other parts of the methodology in the study. It is worth mentioning that it is almost impossible to apply a perfect coding manual for the

content analysis without interpretations from the coders but we are satisfied how that part of the thesis turned out.

6.3 Suggestions for further research

As mentioned in the conclusion above our result isn't so generalizable due to the small sample that we examined. Hence a larger sample in future studies would be desirable, and would hopefully lead to a considerable contribution to the current theories.

The authors used stakeholder theory and reasoning around value creation to analyze the result of our study. It would also be interesting to use other theories and models to explain disclosure behaviour. It would also contribute to the research if a more qualitative approach could be used to examine the companies that show discrepancies between internal and external disclosures. It is almost impossible to scrutinize and come up with the real reasons behind possible mis-matches between internal- and external disclosures if you only do quantitative researches.

Finally the authors would find it interesting to involve an external factor such as profitability, cost of capital or stock price to examine if the companies that have a good correlation between internal and external disclosures of intellectual capital have advantages against the ones that don't.

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Part 3 - Questions relating to the reporting of relational capital

Relational capital is intangible asset held by a company in the shape of relations to external customers. Examples are image, customer loyalty, customer satisfaction, and links with suppliers, commercial power and negotiating capacity.

Below are various aspects of relationship capital that companies can report around There are two ways to answer. (1) If you have marked an X in column 1, you should also mark an X in column 2. (2) Mark with an X in column N/A if your company does not report, or if question is not applicable for you.

<p>Column 1. To what extent do you have INTERNAL written reports, policy documents or policies relating to: (scale ranges from: 1 = very limited extent to 7 = Very great extent. Indicate with an "X" in column 1)</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Column N/A</p>	Column 1							Column 2						
<p>Column 2. How important is information on this matter for the value creation in your company? (scale ranges from: 1 = unimportant to very important = 7. Indicate with an "X" in column 2)</p>		1	2	3	4	5	6	7	1	2	3	4	5	6	7
<p>3.1 Customer analysis</p>	X	X							X						
<p>1. the number of customers and the average duration of a customer?</p>															
<p>2. an internal rating system describing each customer's level of importance?</p>															
<p>3. number of new customers each year?</p>															
<p>4. number of customers lost each year?</p>															
<p>3.2 Customer contact</p>	X	X							X						
<p>1. the amount of sales contacts compared sales closed?</p>															
<p>2. the level of satisfaction held by customers (A customer satisfaction index, a report compiling customer complaints etc)?</p>															
<p>3. the amount of promotional visits by your company taking place at potential customers?</p>															
<p>4. the amount of money spent on marketing every year?</p>															
<p>3.3 Other important stakeholders</p>	X	X							X						
<p>1. what type of information about the company that should be displayed when dealing with media?</p>															
<p>2. the type of information to be communicated to financial analysts?</p>															

