Company characteristics and voluntary disclosure of intellectual capital
A study on Swedish listed companies

Master’s thesis within Business Administration
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Jönköping May 2015
Master’s Thesis in Business Administration

Title: Company characteristics and voluntary disclosure of intellectual capital – A study on Swedish listed companies

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Date: 2015-05-07

Subject terms: Intellectual capital, voluntary disclosure, company characteristics, Sweden

Abstract

**Purpose** – The purpose of this thesis is to identify the determinants of voluntary disclosure of intellectual capital in a Swedish context in 2013.

**Research design** – The thesis is a quantitative, cross sectional study. The data is collected from firms’ annual reports using a disclosure index developed by Bukh et al. (2005). The data was analysed using ANOVA, Mann Whitney U-test and Pearson’s’ r.

**Findings** – The drivers of voluntary disclosure in a Swedish context are industry type, age and size. There was no significant relationship found between ownership concentration, leverage and profitability and the amount of voluntary disclosure.

**Contribution** – There has been a limited amount of research performed on Swedish companies and voluntary disclosure. This study contribute trough mapping the disclosure situation in Sweden. The study also offers an insight to the situation the year before the new directive (2014/95/EU).

**Value** – This paper gives a recent depiction of the disclosure situation in Sweden. The thesis has a more extended theoretical framework than previous studies and interpret the result with four different theories.
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I Introduction

This chapter gives an overview of the background information related to the field of study, thereafter the purpose will be introduced.

1.1 Background

The economy of today is characterised by big amounts of intangible assets compared to older days. In a marketplace driven by knowledge, talent, customer relationships and other intangible assets, they hold more value than the traditional tangible assets (Ferreira, Branco & Moreira, 2012; Guthrie, Ricceri & Dumay, 2012; Ousama, Fatima & Hafiz Majdi, 2011; Singh & Kansal, 2011; Whiting & Miller, 2008). As companies have become more complex, the gap between market value and book value have increased, a trend that started in the middle of the 1980s (Petty & Guthrie, 2000). This gained the attention from International Accounting Standard Board who developed a standard stating that companies must account for intangible assets that are identifiable in their annual reports. However, not all intangible assets fulfil this criteria, so much of the intangible assets cannot be recognized on the balance sheet (Branswijk & Everaert, 2012). This leaves an information gap that is not satisfying for the stakeholders (Lev, Cañibano & Marr, 2005). One way to more accurately reflect the companies’ value is through voluntary disclosure of value-relevant information (Branswijk & Everaert, 2012).

It is difficult to define and explain what makes up the difference between market value and book value (Choong, 2008). One term that is commonly used is “Intellectual Capital” (Kwee, 2008). Companies that use voluntary intellectual capital disclosure provide information about their employees, corporate culture, and environmental policies, to mention a few examples (Bukh, Nielsen, Mouritsen & Gormsen, 2005).

Looking at the history one can see that the general concept of intangible value existed in the early 1980s. During this time it was more general than specific and often labelled “goodwill”. In the late 1980s and the early 1990s initiatives were made to measure and report intellectual capital. In 1994 the Swedish insurance company Skandia provided an evaluation of their intellectual capital in addition to their annual report. This woke the
interest from many other companies that wanted to follow the example, and in the late 1990s an intellectual capital movement had emerged (Petty & Guthrie, 2000). In 2005, the European Union adopted the International Financial Reporting Standards (IFRS) along with Australia, Singapore and Hong Kong. Liao, Chan and Seng, (2013) concluded that the voluntary disclosures of intellectual capital increased during the period after the adoption of IFRS in high-tech companies. The research field has developed and the flow of articles about intellectual capital accounting has steadily increased during the years 1999-2009, which is shown by the specialist academic conferences books and journals that have started within the field (Guthrie et al., 2012).

Intellectual capital disclosures are important to investors, analysts and other stakeholders when valuing a company. Therefore it is crucial for companies to report such values in order for the market to value them correctly (Abhayawansa & Guthrie, 2014; Holland, 2004). Because of the limited mandatory rules, the disclosure is to a large extent voluntary and therefore makes an interesting research field (Whiting & Woodcock, 2011). It has been proven beneficial for companies to voluntarily disclose intellectual capital. One of the reasons is a lower cost of capital due to the reduction of information asymmetry (Botosan, 1997; Francis, Khurana, & Pereira, 2005). The increase of transparency also means a cost for the company. Not only is it the cost for production and publishing of the information, it may also lead to competitive disadvantages since competitors also can access the information (Prencipe, 2004). This explains why the extent of voluntary disclosure differs between different companies (Broberg, Tagesson & Collin, 2010). This raises questions about what kind of companies that use voluntary disclosure to a larger extent and if there are other things that influence the amount of voluntary disclosure. These are questions that made us look for an explanation to what motivates the variation in voluntary disclosure.

There is a long list of articles under the subject of intellectual capital. Researchers have found many different angles for their research on the topic. The studies that inspired this thesis have focused on different company characteristics and their relationship with voluntary disclosure. In the previous studies there are many cases that show that type of industry is a relevant factor for the amount of voluntary disclosure. Companies in high technology sectors, such as research intensive firms, have a tendency to disclose more
information than companies in low technology sectors, such as manufacturing firms (Bozzolan, Favotto & Ricceri, 2003; Bukh et al., 2005; Rimmel, Nielsen & Yosano, 2009). Results of previous studies have also found that companies with more dispersed shares disclose more voluntary information in their annual reports (Oliveira, Rodrigues & Craig, 2006; Prencipe, 2004; Whiting & Woodcock, 2011). Association with company size and amount of disclosure has also been found. Bozzolan et al. (2003), Broberg et al. (2010) and Cordazzo (2007) found that larger companies provided more voluntary disclosure.

The Scandinavian countries have a tradition of constructing intellectual capital statements and especially Sweden and Denmark have been noticed for it (Bukh et al., 2005; Holland, 2004; Rimmel et al., 2009; Saleh, Hassan, Jaffar & Shukor, 2010). This tradition has made us focus on Sweden along with the fact that there are not many other studies on voluntary disclosure in Swedish companies. It has been done before, latest by Broberg et al. (2010) who wanted to explore the effect of the new accounting standards, IFRS that was introduced in 2005. In that study they used annual reports from 2002 and 2005. In this study, annual reports from 2013 will be used in order to get a more recent insight.

The literature shows that there are a range of factors that influence voluntary disclosure, including type of industry, size, leverage and corporate governance structure. Also, the importance of the different factors varies depending on things like culture and political systems (Saleh et al., 2012). Therefore there is a need to know what factors influence voluntary disclosure in a Swedish context.

### 1.2 Purpose

The purpose of this thesis is to identify the determinants of voluntary disclosure of intellectual capital in Swedish listed companies. This will be achieved by investigating if there are statistical significant differences in the quantity of voluntary disclosure between companies that have different characteristics. Based on the factors that have been considered important in the literature, we came up with the research question:
Is there any relationship between the company characteristics, *industry type, age, size, ownership concentration, leverage* and *profitability* and the amount of voluntary disclosure in Swedish listed companies?
2 Theoretical framework

This section of the thesis starts by explaining what is meant by intellectual capital followed by relevant theories. Thereafter the results from previous studies are presented and the hypotheses developed.

2.1 Intellectual capital

The term ‘intellectual capital’ refers to knowledge, experience, expertise and other hidden values (Klein, 1997). There are several different definitions of the term made by different researchers. A number of researchers define intellectual capital as the difference between market value and book value of a company (Edvinsson & Malone, 1997; Mouritsen, Larsen & Bukh, 2001; Sveiby, 1997). There are also more specific descriptions of the term, several of them mentioning ‘knowledge’. Most of them stated that intellectual capital lacks physical body, is non-monetary but creates benefits for the company and thus have value (Kwee, 2008).

Intellectual capital is the hidden value that cannot be accounted for in the balance sheet while intangible assets can. In order for an intangible asset to be accounted for it must fulfil the criteria in IAS 38 which requires that the company possesses control over the asset and that future benefits will be achieved through the asset. In this thesis focus will be on intellectual capital which are not incorporated in the balance sheet.

Intellectual capital can be divided into sub-categories. Usually it is divided into three sub-categories that was first suggested by Sveiby (1997) and Edvinsson (1997). These are human capital, external capital and internal capital (Petty & Cuganesan, 2005; Whiting & Woodcock, 2011). Human capital is the competence and training possessed by the employees, external capital is the company’s relationship with its customers and suppliers, but also includes factors such as brand names and reputation. The internal capital focuses on the internal structure of the company and the value that lie in there, and also consist of research, patents and the like (Petty, Cuganesan, Finch & Ford, 2009; Whiting & Woodcock, 2011).
2.2 Relevant theories

In this section, four theories will be presented that are recurrently used when explaining organisations’ voluntary disclosure. As stated earlier, companies can benefit from increased voluntary disclosure. At the same time businesses do not wish to inflict costs of being too transparent, as it promotes benchmarking (Prencipe, 2004). The four theories used in this study are Agency Theory, Signalling Theory, Stakeholder Theory and Legitimacy Theory. It is suggested by Beattie (2014) that studies within accounting narrative would benefit from theoretical pluralism. These theories are most commonly used in the area of voluntary disclosure and are suggested as a framework by An, Davey and Eggelton (2011). Solely the presented theories do not serve as a sufficient theoretical framework, therefore all four have been used, as the theories are linked. (An et al., 2011).

Agency Theory deals with the cost incurred when delegating responsibility. Jensen and Meckling (1976) defines the agency relationship as a contract where the principal dele-
gates responsibility to the agent. A common case is when the shareholder is the principal and the manager is the agent. The managers’ preferences might divert from the shareholders’, therefore the decisions made by the manager might not always be the most preferred, seen from a shareholders’ perspective. Consequently it is a cost for the principal to delegate responsibility to the agent. This is what Jensen & Meckling (1976) refers to as agency cost. An important aspect of Agency Theory is the information asymmetry, which is when one party has access to more information than the other. The agency costs are increasing with information asymmetry which may lead to two types of agency problems. The first is one called moral hazard or hidden costs where the manager might work to slow or give himself too many benefits. The principal has limited access to observe the performance of the manager and can only assess it based on the outcome. The second agency problem is adverse selection. The manager provides the information and can therefore choose what to disclose to his own benefit (Subramaniam, 2006).

Signalling Theory also deals with information asymmetry. The party possessing more information can signal in order to reduce it. The signal can indicate quality and enhance positive characteristics of the signaller. Morris (1987 p. 48) explains the theory by the example of a buyer and a seller. He states that, “sellers in a market are assumed to possess more information about their product then buyers. If buyers have no information about specific products but do have some general perceptions, the buyers will value all products at the same price which is a weighted average of their general perceptions”. This implies that sellers with superior quality products suffer opportunity loss since their products could sell at a higher price if customers knew about the higher quality. While sellers of below average products, make an opportunity gain. In order for the high quality seller to stay in the market he must communicate his superior quality to the buyers. Morris (1987) further explains that this communication is done through signalling (for example product warranty), which indicates the superior quality. In order for this to work the signalling cannot be easily copied by the poor quality sellers, therefore the signalling cost has to be inversely related to quality.
Now turning to a theory that takes a wider perspective, the Stakeholder Theory. Freeman (2010) argued that organisations should not only attend to the needs of the shareholders but also implement strategies to deal with a larger amount of constituents. A stakeholder is defined by Freeman (2010 p. 53) as “any group or individual who can affect or is affected by the achievement of the organization's’ purpose”. According to Deegan and Uneman (2011), Stakeholder Theory has both an ethical branch and a managerial branch. The ethical branch argues that all stakeholders have the right to be treated fairly by the organisation, without regard for how powerful they are. Consequently implying that organisations have a true social responsibility. With it comes accountability to all stakeholders in society who have the right to be provided with information about how the organisation is affecting them. The managerial branch describes how to deal with different stakeholders. According to this branch the organisation will not treat all stakeholders equally and thus devote more efforts to the powerful ones.

The last theory brought to light in this section is Legitimacy Theory. It considers the society’s expectations on an organisation. The theory is often used to explain the voluntary disclosure in annual reports (Deegan, 2006). The organisations’ legitimacy can be considered a resource upon which an organisation can be dependent for its survival (Deegan, 2006). Legitimacy Theory is similar to Stakeholder Theory, except for the fact that Stakeholder Theory only focuses on the stakeholders of an organisation while Legitimacy Theory focuses on society as a whole, including non-stakeholders. Organisations should ensure that their practices follow the norms and are perceived as legitimate. The expectations of society on how an organisation should act are not always in line with the needs of the organisation. This difference is referred to as a legitimacy gap (Deegan, 2006).

The four theories presented above provide a basis to explain the disclosure behaviour in organisations. As agency costs increase with information asymmetry, it could be reduced through increased disclosure (An, et al., 2011). The reduction of information asymmetry and the associated costs has been established as one of the drivers for firms to voluntarily disclose information (Oliveira, 2006; White et al, 2007). Li, Pike and
Haniffa, (2008) argues that voluntary disclosure enhance the monitoring, which in turn can lead to less opportunistic behaviour such as insider trading. Further, providing more information leads to a higher creditor and investor confidence, which result in a lower cost of capital (Singh & Van der Zahn, 2008). Stakeholder Theory could be seen as an expansion of Agency Theory. Forasmuch as voluntary disclosure can improve the relationship between the principal and the agent it can also mend the relationship between the organisation and other stakeholders (An et al. 2011). Singh et al. (2008) states that the reduction of information asymmetry favours various stakeholders. According to Legitimacy Theory, organisations should voluntary disclose information that is expected by society. This will in turn give the organisation more support and approval. When an organisation is perceived as legitimate they can attain capital, labour and satisfied customers. By providing information the organisation can also deflect attention from their negative influences (Deegan, 2006).

2.3 Previous research

As mentioned before, there are many studies performed in the area of voluntary disclosure of intellectual capital. The research that is emphasized in this literature review come from a time span between 1985 and 2013. They also relate to circumstances that took place during the investigated time, for example the IT bubble (Vandemaele, Vergauwen & Smits, 2005). As can be seen in table 2-1, the studies have investigated companies in several countries from different continents, such as Europe, Asia, North America and Oceania. The time period that are studied in the articles differs. Some are extended over several years while some are limited to one year. The sample size also varies between the studies. There are researchers that have gone through over 300 annual reports while others were satisfied by 30.

The method used to investigate the voluntary disclosure is content analysis, where the content of annual reports is scrutinized and, in most cases, quantified. Annual reports as the source of information has been used in all the articles studied. Reasons for this are that they are easy to access (Whiting & Miller, 2008) and that they are the main source of communication for the company (White et al., 2007).
The studies have also taken different perspectives. Some are focused on the users of the information (Abhayawansa & Guthrie, 2014) and others take the perspective of the company itself (Saleh et al., 2010). What can be seen when going through the previous research, and also pointed out by Whiting and Miller (2008), is that older articles are mostly descriptive in nature, while later ones are testing explanatory variables. The older ones measure the extent of intellectual capital disclosure (Vandemaele et al., 2005), while more recent ones develop hypotheses in order to test different theories (Broberg et al., 2010; Ferreira et al., 2012). The most commonly used theories, as stated above is Agency Theory, Legitimacy Theory, Stakeholder Theory and Signalling Theory. There are also other theoretical perspectives used in the studies such as Institutional Theory, Political Cost Theory and Risk Aversion Theory, among others (Whiting & Woodcock, 2011).

When focusing at the studies that test different industry characteristics, one can see that there are some similarities and some differences in the results. For example Ousama et al, (2012) found profitability to be a relevant factor while Oliveira, (2006) did not. Breuggen, Vergauwen & Dou (2009) argue that these differences could be explained by differences in time, sample sizes, country specific regulations and culture. Below, table 2-1 summarises previous studies and their findings. The studies are investigating many different characteristics but only those relevant to this thesis are presented in the table.

Previously there have been done studies on Swedish firms by Cook (1989), Olsson (2001), Olsson (2004) and Broberg et al, (2010). The studies done by Olsson are descriptive and focus on the extent of human capital disclosure. Cook (1989) is one of the few older articles that are testing independent explanatory variables. He found that size and type of industry were influential factors. Broberg et al. (2010) found that research intensive industries such as healthcare and telecommunications disclosed less voluntary information, which contradicts most previous studies reviewed. The study has a large sample of 393 companies lending a high credibility to their findings.
<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Sample Size</th>
<th>Year Span</th>
<th>Positive influence</th>
<th>Not Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, Lee &amp; Tower (2007)</td>
<td>Australia</td>
<td>96</td>
<td>2005</td>
<td>Age, size, leverage</td>
<td>Ownership concentration</td>
</tr>
<tr>
<td>Breuggen, Vergauwen &amp; Dou (2009)</td>
<td>Australia</td>
<td>125</td>
<td>2005</td>
<td>Type of industry, size</td>
<td></td>
</tr>
<tr>
<td>White, Lee, Yuningsih, Nielsen &amp; Bukh (2010)</td>
<td>UK, Australia</td>
<td>156</td>
<td>One year (unknown)</td>
<td>Size</td>
<td></td>
</tr>
<tr>
<td>Whiting &amp; Woodcock (2011)</td>
<td>Australia</td>
<td>70</td>
<td>2006</td>
<td>Type of industry</td>
<td>Ownership concentration, leverage, age</td>
</tr>
<tr>
<td>Nurunnabi, Hossain &amp; Hossain (2011)</td>
<td>Bangladesh</td>
<td>90</td>
<td>2008-2009</td>
<td>Type of industry, size</td>
<td></td>
</tr>
<tr>
<td>Williams (2001)</td>
<td>Canada</td>
<td>100</td>
<td>1996-2000</td>
<td>Type of industry, leverage</td>
<td>Size</td>
</tr>
<tr>
<td>Bukh, Nielsen, Mouriissen &amp; Gormsen (2005)</td>
<td>Denmark IPO</td>
<td>68</td>
<td>1990-2001</td>
<td>Type of industry</td>
<td>Size, age</td>
</tr>
<tr>
<td>Bozzolan, Favotto &amp; Ricceri (2003)</td>
<td>Italy</td>
<td>30</td>
<td>2001</td>
<td>Type of industry</td>
<td></td>
</tr>
<tr>
<td>Prencipe (2004)</td>
<td>Italy</td>
<td>94</td>
<td>1997</td>
<td>Age, size, ownership concentration, leverage</td>
<td>Profitability</td>
</tr>
<tr>
<td>Cordazzo (2007) IPO</td>
<td>Italy IPO</td>
<td>86</td>
<td>1999-2002</td>
<td>Size</td>
<td>Age, type of industry</td>
</tr>
<tr>
<td>Rimmel, Nielsen &amp; Yosano (2009)</td>
<td>Japan IPO</td>
<td>120</td>
<td>2003</td>
<td>Type of industry</td>
<td>Size, age</td>
</tr>
<tr>
<td>Yau, Chun &amp; Balaranan (2009)</td>
<td>Malaysia</td>
<td>60</td>
<td>2003</td>
<td>Size, profitability, type of industry</td>
<td>Profitability(large firms)</td>
</tr>
<tr>
<td>Atan &amp; Rahim (2012)</td>
<td>Malaysia</td>
<td>104</td>
<td>2009</td>
<td>Type of industry</td>
<td>Size, profitability</td>
</tr>
<tr>
<td>Oliveira, Rodrigues &amp; Craig (2006)</td>
<td>Portugal</td>
<td>56</td>
<td>2003</td>
<td>Size, ownership concentration, type of industry</td>
<td>Leverage, profitability</td>
</tr>
<tr>
<td>Ferreira, Branco &amp; Moreira (2012)</td>
<td>Portugal</td>
<td>45</td>
<td>2006</td>
<td>Size</td>
<td>Ownership concentration, leverage, profitability, type of industry</td>
</tr>
<tr>
<td>Hossain, Hammani (2009)</td>
<td>Qatar</td>
<td>25</td>
<td>2007</td>
<td>Age, size</td>
<td>Profitability</td>
</tr>
<tr>
<td>Cooke (1989)</td>
<td>Sweden</td>
<td>90</td>
<td>1985</td>
<td>Size, type of industry</td>
<td>Leverage</td>
</tr>
<tr>
<td>Author</td>
<td>Country</td>
<td>Sample Size</td>
<td>Time Period</td>
<td>Disclosures Considered</td>
<td>Industry Type Considered</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------</td>
<td>-------------</td>
<td>----------------------</td>
<td>------------------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Broberg, Tages-</td>
<td>Sweden</td>
<td>393</td>
<td>2002, 2005</td>
<td>Size, leverage, profitability</td>
<td>Size, leverage, profitability (negatively related), ownership concentration</td>
</tr>
<tr>
<td>son &amp; Collin (2010)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watson, Shrives &amp;</td>
<td>UK</td>
<td>313</td>
<td>1989-1983</td>
<td>Size, type of industry</td>
<td>Profitability</td>
</tr>
<tr>
<td>Marston (2002)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Li, Pike &amp; Haniffa</td>
<td>UK</td>
<td>100</td>
<td>2004-2005</td>
<td>Size, ownership concentration, profitability, age</td>
<td></td>
</tr>
<tr>
<td>(2008)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eng &amp; Mak (2003)</td>
<td>USA &amp; Singapore</td>
<td>158</td>
<td>1995</td>
<td>Ownership concentration, size, leverage</td>
<td>Profitability</td>
</tr>
</tbody>
</table>

Table 2-1 Table of previous research

### 2.4 Hypothesis development

As corporations work in different environments they are faced with different maps of stakeholders. The strategies on how to approach stakeholders is also different for companies (Freeman 2010). One can therefore assume that Stakeholder Theory would support that there would be differences in the amount of voluntary disclosure in different industries. High tech companies generally have a larger gap between book value and market value and therefore these companies depend on voluntary disclosure to a larger extent (Guo, Lev and Zhou, 2005). It is also possible to find arguments for increased disclosure in Signalling Theory. High tech firms generates their value through their intellectual capital and they need to signal to the investors why this intellectual capital is value relevant (Whiting and Miller, 2008). An et al. (2011) states that in the light of Legitimacy Theory it is especially important for organisations with high amount of intellectual capital to make voluntary disclosures because they cannot legitimize their status through fixed assets.

Most of the previous studies have found a that high tech firms disclose more information (Breuggen et al. 2009; Bukh et al, 2005; Nurunnabi et al. 2011; Rimmel et al. 2009; Whiting & Woodcock, 2011). Since the majority of the studies have found it to be a significant factor we state the following hypothesis:

**H1.** *Companies in high technology sectors disclose more information than companies in low technology sectors.*
Age as a determinant for disclosure could be explained by Stakeholder Theory. Organisations that have been listed for a longer time have a longer history and a reputation of providing stakeholders proof of their social responsibility. The stakeholders expect the company to continue to provide voluntary disclosure and may react to any drastic changes in strategies (Roberts, 1992). It can also be explained by Legitimacy Theory. In order to be perceived as legitimate the organisations need to inform society of their legitimacy. An organisation that have been listed for a longer time must have incorporated the resource of legitimacy in its culture in order to survive (Deegan, 2006).

In studies performed by Hossein and Hammami (2009), Prencipe (2004) and White et al. (2007) it was found that older companies disclose more information. In a study by Rimmel et al. (2009) the findings support that younger companies disclose more, contradicting other studies. Age as an influential characteristic have support in both theories and previous studies, therefore the following hypothesis was developed:

\[ H2. \quad \text{Older companies’ disclose more information than younger companies.} \]

When looking at company size and voluntary disclosure there are two obvious reasons that larger companies should disclose more information. Firstly, they have the resources to disclose more information. Secondly, large firms have better internal management information systems and therefore they are able to disclose more information (Ousama et al. 2012). From a stakeholder perspective, larger firms are more likely to be of interest to the general public. They usually have more shareholders interested in voluntary disclosure and are more likely to use formal channels to share the information (Roberts, 1992). In accordance with Agency Theory, if a larger amount of capital is delegated to the agents, the agency costs must also be higher. Companies with a larger market capitalization should therefore have higher agency costs (Jensen and Meckling, 1976). Companies can reduce agency costs through more disclosure and it would therefore be a larger incentive for them to provide more voluntary disclosure (An et al., 2011).

There are many previous studies that have found an association between company size and voluntary disclosure (Watson et al. 2002; Guthrie et al. 2006; White et al. 2007; Broberg et al. 2010). There are also studies that did not find a significant relationship
between size and disclosure (Atan & Rahim, 2012; Bukh et al., 2005). Since the majority of the authors have found an association, and there are support from the theories, the following hypothesis was stated:

**H3.** *Larger companies disclose more information than smaller companies.*

Because of the separation of ownership and control, agency costs arise (Jensen & Meckling, 1976). Looking at both Agency Theory and Signalling Theory, disclosure of information is a way for management to signal that they act in the best interest of the owners (Singh et al., 2008). In a company where the ownership is more concentrated the owners are more likely to have access to information and not be as dependent on the annual report (Li et al., 2008). Companies with more dispersed ownership are expected to disclose more information (Prencipe, 2004).

Haniffa and Cooke (2002), Oliveira et al. (2006) and Prencipe (2004) found that companies with more dispersed shares disclosed more information. White et al., (2007), Whiting and Woodcock (2011) and Ferreira et al. (2012) did not find any significant relevance. Even though the empirical evidence is mixed, companies with less ownership concentration is predicted to disclose more, in line with Prencipe (2004).

**H.4** *Companies with more dispersed shares disclose more information than companies with less dispersed shares.*

Agency Theory can also be used to predict the level of voluntary disclosure in relation to the level of leverage in a company (Whiting & Woodcock, 2011). If a firm gets debt from the outside, agency cost will arise due to the different interests of the debt holders and equity holders (Berger & Bonaccorsi de Patti, 2006). These agency costs can be reduced by disclosure of information and thus gives an incentive for firms with more debt to disclose more (Oliveira et al., 2006). In contrast, firms with low level of leverage also have an incentive to disclose more to show their advantage, which is in accordance with Signalling Theory (Oliveira et al., 2006).
Previous studies that have tested leverage as a determinant for the amount of voluntary disclosure show a variety of results. Broberg et al. (2010), Prencipe (2004), White et al. (2007) and Williams (2001) found that firms with more debt had more voluntary disclosure. On the other hand, Whiting and Woodcock (2011), Haniffa and Cooke (2002) and Oliveira et al. (2006), among others, found no significant relationship between the level of leverage and voluntary disclosure. This thesis will test the impact leverage has on voluntary disclosure from the standpoint of Agency Theory and therefore the hypothesis is:

**H5. Firms that are more leveraged disclose more information than less leveraged firms.**

Signalling Theory suggests that companies should signal their advantages to the market (Whiting & Miller, 2008). Profitability is of many considered to be an indicator of investment quality (Prencipe, 2004). Therefore Signalling Theory can be applied to suggest a positive relationship between profitability and voluntary disclosure (Ousama et al., 2012). It is more likely for highly profitable companies to disclose good news to decrease the risk of getting undervalued (Oliveira et al., 2006).

The empirical evidence from previous studies are inconclusive. Ousama et al. (2012), Haniffa and Cooke, (2002) and Broberg et al. (2010) found a positive relationship between profitability and voluntary disclosure. However, Oliveira et al. (2006), Prencipe (2004) and Hossain and Hammami (2009) did not find a significant relationship. This study tests the association between profitability and voluntary disclosure on the base of Signalling Theory and accordingly the hypothesis is:

**H6. Companies that are more profitable disclose more information than less profitable companies.**
3 Method

Within this chapter the chosen method is described. First, the sampling technique is presented, which is followed by data collection. Moreover a description of the statistical tests that are used to analyse the data are described.

3.1 Sampling

The study investigate larger firms in Sweden, from the NASDAQ OMX Stockholm Large Cap and Mid Cap. The study is limited to Swedish companies as they follow the same rules and regulations, along with the same norms and customs. The results therefore contain less noise. The study does not include banks and insurance companies because they operate under different regulations (Cooke, 1989; Principe, 2004).

The sampling technique used is random sampling. All companies that are listed on Large Cap and Mid Cap, with the exception of banks and insurance companies, was given a number. The numbers assigned do not indicate any order of the companies, it is used only for identification since ordering them may create bias (Bryman, 2012). This is a total of 124 companies, from which a sample was selected using a website\(^1\) recommended by Bryman (2012). It randomly picked 70 numbers and the companies with the chosen numbers were selected into the sample. The name of the companies included in the sample are presented in Appendix 1. A sample of 70 is deemed to be sufficient to fulfil the purpose, as there are previous studies with a similar sample size (Bukh et al, 2005; Whiting & Woodcock, 2011; Yau et al, 2009). Since it is more than half of the population, it should be large enough for the results to be generalized to Swedish listed companies that are not in the financial sector.

In order to perform statistical tests, the companies were divided into different groups. For the test of hypothesis $H_1$, industry type, the companies in the sample were divided into two groups, high tech and low tech. When determining to which sector a company

\(^1\) [www.psychicscience.org/random.aspx](http://www.psychicscience.org/random.aspx)
belongs, the classification on NASDAQ has been followed. The high tech group is companies from the sectors Healthcare, Telecom and Technology and the low tech group is companies from Oil & gas, Materials, Industrials, Consumer goods, Consumer services and Utilities. As mentioned before, in this study companies from the financial sector are excluded and the companies classified as Financials was therefore omitted. This classification gave 13 companies in the high tech sector and 57 companies in the low tech sector. As the division of the companies into different industry types are collected from an external party, it is objective and easy to access for anyone.

It appeared that the most logical method for dividing the sample when testing (H2- H6), would be to split it at the median which will result in two equally large groups. This technique has been used before by Liao et al. (2013). In order to test the age characteristic, the companies was ranked by the amount of years they have been listed. This measure was also used by Prencipe, (2004), Haniffa and Cooke (2002), Li et al. (2008) and Liao et al. (2013). Companies that had merged was counted from the year of the merger. This resulted in one group of older companies and one group with relatively younger companies. When the sample was split by the median there were companies with the listing age of 16 in both groups. In order to avoid companies with the same age being in different groups two tests were conducted. One where the firms in the older group were 16 years and older and one other where they were 17 years and older. This resulted in a division of the sample where the group with older firms consisted of 38 companies for one test and 33 for the other. When testing for size, the companies were ranked according to their market capitalization as was used by White et al. (2007). The ownership concentration was measured by how large part of the shares that are owned by the three largest shareholders. This measure was also used in a previous study by Oliveira et al. (2006). In order to rank the companies after leverage their total liabilities was divided by their total assets, the same was used by White et al, (2007). The measure that was used to measure profitability is return on equity. This was achieved by dividing the companies’ net income by the shareholders equity, as was used by Haniffa and Cooke (2002) and Eng and Mak (2003). The information used to form the groupings are gathered from audited annual reports, and thus is objective enough to make sure the information is interpreted the same way regardless of who is observing it.
Description of the different groups regarding (H2- H6) can be found in table 3-1.

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Mean</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years listed)</td>
<td>1</td>
<td>21</td>
<td>97</td>
</tr>
<tr>
<td>Market capitalization (billions in SEK)</td>
<td>1,5</td>
<td>44</td>
<td>478,5</td>
</tr>
<tr>
<td>Ownership Concentration (3 largest shareholders)</td>
<td>9,4</td>
<td>36,1</td>
<td>84,9</td>
</tr>
<tr>
<td>Leverage (total liabilities/total assets)</td>
<td>0,13</td>
<td>0,55</td>
<td>1,05</td>
</tr>
<tr>
<td>Profitability income/shareholders equity)</td>
<td>-3,7</td>
<td>0,06</td>
<td>0,88</td>
</tr>
</tbody>
</table>

Table 3-1  Sample description

### 3.2 Data collection

Accounting narratives can be found in everything from formal documents, websites, and press releases to social media posts (Beattie, 2014). It is not possible to go through all that information in one study. The information in this study is therefore retrieved from annual reports since it is the main communication channel for companies (White et al, 2007). To gather the data, the consolidated annual reports from the year end 2013 in electronic form has been collected from the companies’ websites. For companies that have a broken financial year, the annual report from 2013/2014 is used. The content of the annual reports was scrutinized and the voluntary disclosure was quantified in order to analyse it. In order to reduce the risk that something was overlooked the researchers had a checklist of relevant search words. The list was created so that there were different search words covering all the 78 items. A list on where to find the annual reports is presented in Appendix 2, and a list of the search words is found in Appendix 3.

A disclosure index that was developed by Bukh et al. (2005) was used to score the annual reports in order to quantify the amount of voluntary disclosure. The index has been effectively used in other previous studies (Rimmel et al., 2009; White et al., 2007), which indicates that it is a good way to measure voluntary disclosure. It consist of 78 items that are divided into six different categories, which are employees, customers, IT, processes, research and development, and strategic statements. For the complete disclosure index, see Appendix 4. If an item is disclosed in the annual report of a company, it
got a score 1 and if it is not disclosed the score was 0. Using this method, the amount of voluntary disclosure was quantified and statistical tests possible to perform.

This thesis uses content analysis as method, where subjectivity of the coders are always present (Husin et al., 2012; Marston & Shrives, 1991). To ensure the consistency of the coding between the two independent researchers, both analysed the annual reports independently to see if there were any differences between the coding. According to Smith, (2011) there is no level that is agreed upon to be satisfactory, but it is suggested a consistency level above 80% should be achieved. When comparing the results after going through the annual reports a consistency of 92, 3% was achieved and therefore the inter-observer consistency is judged to be at a satisfactory level.

### 3.3 Data analysis

In order to see if there are significant differences between companies that have certain characteristics and the amount of voluntary disclosure, statistical tests was performed. Parametric tests are the most powerful and are therefore the preferred tests to use. They do however rest on an underlying assumption about the data, which is that the data is drawn from normal distributed data (Smith, 2011). Non-parametric tests are not as powerful, but they do not make such assumptions and therefore they can be used even if the data cannot be assumed to be normally distributed (Smith, 2011).

Normal distribution can be assumed if the sample size is 30 or higher (Aczel, 2009). When testing $H2$-$H6$, there are two equal groups of 35 companies in each. This is enough to assume normal distribution. However, when testing for $H1$, industry type, the two groups was not equal and the group with high-tech companies were lower than 30. Therefore a non-parametric test was used when testing $H1$. For all the tests a significance level of 95 % was used, which is the convention among social researchers (Bryman, 2012).

In order to test all the hypotheses, except for $H1$, analysis of variance (ANOVA) was used. This test is used to see if the samples differ from each other so much that they can
be judged to come from different populations (Smith, 2011). ANOVA tests the difference between the sample means in relation to the variation within the samples. If the difference between the samples are bigger than within the samples, it is assumed that the samples come from different populations and thus, the null hypothesis is rejected (Smith, 2011).

In order to test the hypotheses $H1$ industry type, normal distribution cannot be assumed and therefore the Mann-Whitney U-test was used. It answers the same question as the ANOVA: Could the samples have been drawn from the same population or are the differences between them so large that it is unrealistic? The difference between the two is that Mann-Whitney U-test is a non-parametric test and therefore it is based on the rank order of the values within the groups instead of the variance as is the case in a parametric test.

In order to measure the association between certain company characteristics and the amount of voluntary disclosure the correlation was calculated by using Pearson’s $r$. It shows if there is a relationship between variables, the direction of it and how much of the variation in one variable that is explained by the other (Bryman, 2012).
4 Results

This section of the thesis starts by providing descriptive statistics of the sample. Thereafter, the results of the hypotheses tests are presented.

4.1 Descriptive statistics

<table>
<thead>
<tr>
<th>Sector</th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>28,50</td>
<td>2</td>
</tr>
<tr>
<td>Telecom</td>
<td>26,00</td>
<td>2</td>
</tr>
<tr>
<td>Health Care</td>
<td>24,78</td>
<td>9</td>
</tr>
<tr>
<td><strong>High tech</strong></td>
<td><strong>25,50</strong></td>
<td><strong>13</strong></td>
</tr>
<tr>
<td>Consumer services</td>
<td>20,00</td>
<td>10</td>
</tr>
<tr>
<td>Consumer goods</td>
<td>19,67</td>
<td>12</td>
</tr>
<tr>
<td>Industrials</td>
<td>18,19</td>
<td>26</td>
</tr>
<tr>
<td>Materials</td>
<td>20,43</td>
<td>7</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>13,00</td>
<td>2</td>
</tr>
<tr>
<td><strong>Low tech</strong></td>
<td><strong>18,91</strong></td>
<td><strong>57</strong></td>
</tr>
<tr>
<td>Total</td>
<td>20,14</td>
<td>70</td>
</tr>
</tbody>
</table>

Table 4-1 Sample score

Above is a table of the sample and the different sectors it consists of. The highest mean value (28,5) was achieved by the technology sector. The technology sector in this sample consist only of two companies, which is too few to draw generalizations. But if we include the telecom and healthcare sector which has the second and third largest means in the sample, the total mean score for the high tech firms is 25,5. This should be enough to make a generalization that high tech companies in Sweden provide more voluntary information than low tech firms. The lowest mean value can be found in the Oil & Gas sector with a mean of 13, consisting of only two companies. The total mean value for the low tech companies is 18,91.
The average disclosure when including all companies is 26% (20 items). Looking at the range in the sample, the lowest score was attained by Fenix Outdoor of 7,5% (6 items).

The highest score attained was by Active Biotech of 50% (39 items). Looking at the companies’ disclosure in the sample one can see that most information was provided about the companies’ employees, averaging 32% over the sample. Second comes strategic statements where on average 28% was disclosed. When looking at the sample one can see that the more knowledge intensive industries such as technology, telecom and healthcare have disclosed a higher amount of information about IT and R&D. This is not surprising since these sectors depend on IT and R&D to a larger extent than the others.

### 4.2 Results from hypothesis testing

The detailed results from SPSS are presented in Appendix 5.

*H1: Industry Type. When testing for industry type a Mann Whitney U-test was performed. Type of industry was found to be significant with a p-value of 0,004. The results therefore indicate that the high tech companies in the Swedish Mid Cap and Large Cap disclose more information than the low tech companies. The sample of high tech companies in this study had a mean rank of 50,08 while the low tech companies had a mean rank of 32,18.*
**H2: Age.** When testing for the variable age we performed two ANOVA tests. The first test with 38 large and 32 small companies resulted in a p-value of 0.041, with a mean of 21.68 for the large firms compared to a mean of 18.31 for the smaller firms. The second test with 33 large and 37 small companies resulted in a p-value of 0.036, with a mean of 21.97 for the older firms and a mean of 18.51 for the younger firms. The results indicate that there are a statistical difference between the groups’ mean scores. Also when performing a correlation test, a positive correlation of 0.362 between company age and voluntary disclosure was found. The correlation was significant with a p-value of 0.002.

**H3: Size.** When testing for company size, the ANOVA test resulted in a p-value of 0.008. Therefore it can be concluded that there is a significant difference between the groups mean scores and therefore it is unlikely that they come from the same population. The group of large companies had a mean score of 22.31 and the group of small companies had a mean score of 17.97 indicating that larger companies provides more voluntary information. A Pearson’s’ r test was performed and a positive correlation of 0.178 was found. However, it had a p-value of 0.140. Since the p-value is greater than 0.05 the Pearson’s r test is not significant because it cannot be proved that the correlation was not found by chance.

**H4: Ownership concentration.** Ownership concentration was found to be not significant with a p-value of 0.430 from the ANOVA test. This means that **H4** that claims that companies with more dispersed shares disclose more information is not supported by the test. The correlation test is also insignificant with a p-value of 0.961.

**H5: Leverage.** The ANOVA does not show any support for **H5** that states that companies that are more leveraged disclose more information than less leveraged firms. The p-value for the ANOVA is 0.242 and is therefore not significant. The correlation test showed a p-value of 0.270 and is also not significant.

**H6: Profitability.** The ANOVA test for the hypothesis showed that there was not a significant relationship between profitability and voluntary disclosure with a p-value of 0.560. Companies that was more profitable had a mean score of 19.66 and therefore dis-
closed insignificantly less information than less profitable companies that had a mean score of 20.63. The correlation test was also insignificant with a p-value of 0.089 and hence, no conclusions can be drawn from it.
5 Analysis of company characteristics’ influence on voluntary disclosure

In this chapter the results are analysed, starting with H1 moving on and ending with the analysis of H6. The results are interpreted with the use of relevant theories and previous research.

H1: Industry type. The impact of industry type confirm the theoretical assumptions made from Legitimacy Theory, Stakeholder Theory and Signalling Theory. Stakeholder Theory suggest that all stakeholders should be treated equally and get as much information they need and it can increase the confidence between the firm and its stakeholders. Signalling Theory stipulates that signals sent by voluntary disclosure enhance the quality of the firm. Knowledge intensive companies has a need to show their intellectual capital in order to satisfy the stakeholders’ need for information and to signal their value. The information is particularly important for investors when making investment decisions about industries that rely on intellectual capital (Breuggen et al., 2009). This is because there is a larger difference between the book value and market value in knowledge intensive companies (Guo et al. 2005). These companies are forced to use voluntary disclosure to a larger extent since a large part of their assets are intangible and cannot be accounted for according to IAS 38. Therefore they need to legitimize their status through voluntary disclosure, as they cannot do it through fixed assets (Whiting & Woodcock, 2011). This thesis shows that these assumptions ring true in a Swedish context as well. Most of the previous studies have also confirmed industry differences to be a significant factor.

The results are in line with previous studies performed by Breuggen et al. 2009; Bukh et al, 2005; Nurunnabi et al. 2011; Rimmel et al. 2009; Whiting & Woodcock, 2011. However, the Swedish study by Broberg et al, (2010) found that research intensive industries such as healthcare and telecommunication disclose less voluntary information. They argue that their results could be explained by the assumption that companies in this field need to shield themselves from competitors and therefore have a reason to disclose less information. The difference of results with Broberg et al, (2010) can be explained by factors such as time difference, there are 8 years between the observations.
The studies use different disclosure items in the scoreboards. This study has 27 items concerning employees while Broberg et al, (2010) have none. Broberg et al, (2010) use a larger sample and also has a larger target population. This study only depicts the situation in Swedish Large Cap and Mid Cap while their study consider all listed firms. Therefore they have a higher amount of smaller and relatively newly incorporated firms in their sample which might have a different disclosure behaviour.

**H2: Age.** The results from the test of listing age are in line with the studies performed by Hossein and Hammami (2009), Prencipe (2004) and White et al. (2007) who also found that older companies disclose more information. That is also coherent with the expectations on the base of Stakeholder Theory and Legitimacy Theory. As corporations need to be perceived as legitimate by society in order to survive (Deegan, 2006), older firms have incorporated this in their culture. Drastic changes in a firm’s disclosure strategy can cause tensions between the firm and its stakeholders (Roberts, 1992). It is more expensive for younger firms to produce information on intellectual capital (Withing and Woodcook, 2011), also older companies have developed their reporting practices over time which might also explain a higher amount of disclosure (Liao et al, 2013).

The results from this study contradict the findings by Bukh et al. (2005) where there was no significant relationship. Also, Rimmel et al. (2009) concluded that younger firms disclosed more. These differences could be explained by the fact that those studies were performed on Initial Public Offerings (IPO’s), which are not yet listed firms. This implies that their sample would all be considered ‘young’ firms with the measurement used in this study, which is listing age. This could also be a reason for the contradicting results. Since the majority of studies performed on listed firms confirm the hypothesis while the opposite is true for IPO studies one can conclude that the disclosure behaviour is different between IPO’s and listed firms. It is also supported by Branswijk and Everaert (2012) who found that companies have a higher amount of voluntary disclosure in their prospectus than in their following annual report.

**H3: Size.** As expected, the results from the ANOVA imply that larger firms have a higher amount of disclosure in accordance with Stakeholder Theory and Agency Theory. Large companies have the resources to disclose more and are also more scrutinized
by the public, since they have a larger impact on society. Large companies also have more intellectual capital to disclose and therefore size can have an explanatory effect (Petty & Cuganesan, 2005). These findings are in line with previous studies done by Watson et al. (2002), Guthrie et al. (2006) and White et al. (2007). As can be seen in table 3-1, the mean value of the market capitalization is 44, which is considerably closer to the lowest value than the highest. This means the market capitalization of most of the companies are closer to the minimum value than the maximum, which can also be seen in the scatter plot in Appendix 6. This may explain that the correlation is not very strong or significant even though the ANOVA shows that size is an influential factor.

Previous studies performed in Sweden has also found company size to be significant. Broberg et al, (2010) found firm size to be strongly correlated with voluntary disclosure. Cooke (1989) also found a significant relationship between company size and voluntary disclosure. These results can be corroborated by this study. Even though the assumption of association between size and voluntary disclosure is relatively strong, there are also studies that did not find size to be significant (Bukh et al., 2005; Rimmel et al., 2009). In these studies the companies’ size were rated based on the amount of employees while market capitalization is used here. Since firms with a small staff can still have a large market capitalization, the different grading of the companies might be a reason for the different results.

**H4: Ownership concentration.** The lack of influence from ownership concentration are not in line with Haniffa and Cooke (2002), Oliveira et al. (2006) and Prencipe (2004) who found that companies with more dispersed shares disclose more information. But the results support the findings of White et al, (2007), Whiting and Woodcock (2011), and Ferreira et al. (2012). These results contradict the expectations and the theoretical assumptions. Agency Theory and Signalling Theory states that there is an interest to disclose more in order to reduce agency costs. It does not seem as important to share information through the annual report even if the shares are dispersed. This might suggest that agency costs are not influenced by ownership concentration, or that companies choose to reduce agency costs by other means. For example, better remuneration practices could be a way of aligning the interest of the agent and the principal (Whiting & Woodcock, 2011). Another conclusion would be that ownership concentration is not
significant in a Swedish context, since the results are in line with Broberg et al, (2010) who neither found a relationship between ownership concentration and voluntary disclosure in Swedish companies.

**H5: Leverage.** Leverage is not a significant influence in voluntary disclosure, which is in line with Whiting and Woodcock (2011), Haniffa and Cooke (2002) and Oliveira et al. (2006). On the other hand the results contradict the results from Broberg et al. (2010), Prencipe (2004), White et al. (2007) and Williams (2001) who found that firms with more debt provided more voluntary disclosure. It is possible that the relationship between the company and its shareholders and debt holders in practice differs from the assumptions in the literature, and therefore the agency costs are not as prominent (Whiting & Woodcock, 2011). Debt holders have other means of receiving information than through the annual reports, such as credit rating (Broberg et al., 2010). Companies can use other channels to supply the debt holders with relevant information. Another explanation could be that the difference between the two groups imply that Agency Theory and Signalling Theory cancel each other out and therefore there is no visible effect. Agency Theory suggests that companies with a higher level of leverage disclose more to reduce agency costs. Signalling Theory stipulates that companies with less debt want to signal their favourable financial situation and therefore disclose more.

**H6: Profitability.** This study did not find profitability to be a significant factor, supporting the findings by Oliveira et al. (2006), Prencipe (2004) and Hossain and Hammami (2009). The results contradict the findings by Ousama et al. (2012), Haniffa and Cooke, (2002) and Broberg et al. (2010) who find profitability to be a significant factor. As the empirical evidence is mixed, there is no strong indication that profitability is an important factor. Agency Theory and Signalling Theory suggest that companies disclose more during times when they are more profitable (Broberg, 2010). They do not influence the amount of voluntary disclosure as much as expected in this case. Prencipe (2004) suggests that competitive costs of disclosure rise when the company is more profitable. Firms do not want to exploit their advantage to competitors and therefore the amount of disclosure could decrease. This means that there are two effects from profitability that works in opposite directions. This could explain why there is no indication of profitability being a factor that influences the amount of voluntary disclosure. Also, the
profitability of a company can vary between years while companies may have a more regular disclosure policy and not change it as frequently as the performance changes. Therefore, profitability may not influence the amount of voluntary disclosure, or at least not be an important factor. In order to make sure a study testing the same company over several years would be needed.

When looking at national differences and the amount of disclosure, a comparison can be made with the previous studies by Bukh et al, (2005), Rimmel et al, (2009) and White et al, (2007), since the same disclosure scoreboard was used. In this study there was an average disclosure of 28% over the whole sample. In the Danish study by Bukh et al, (2005) the average disclosure was 22%. In the study by Rimmel et al, (2009) on Japanese IPO’s the average disclosure was 12.6%. In the Australian study by White et al, (2007) their average disclosure was 15%. The comparison gives an indication that the disclosure rate in Swedish firms is high compared to other countries. The sample from this study has a higher average disclosure rate, even though it is conducted on listed firms, which usually disclose less than IPO’s (Branswijk & Everaert, 2012). The higher disclosure rate is not surprising since Scandinavia historically has been in the forefront when it comes to voluntary disclosure (Holland, 2004; Rimmel et al., 2009; Saleh et al., 2010).
6 Conclusion and Limitations

Form the basis of the previous chapter conclusions can be drawn and presented in this chapter. The conclusions are followed by limitations of this study and suggestions for future research on the topic.

6.1 Conclusions

The overall results from this study indicate that there is a significant relationship between the factors industry type, age and size and the amount of voluntary disclosure in Swedish listed firms. For industry type that is expected based on the logic of Stakeholder Theory, Legitimacy Theory and Signalling Theory. Also, the majority of previous studies support that high tech firms provide more voluntary disclosure than low tech firms. Further, the empirical evidence in this study and in several previous studies lends support to the conclusion that age is a significant factor, where older companies have a higher amount of voluntary disclosure. The findings in this study backs the assumptions of Stakeholder Theory and Legitimacy Theory. The results also support the theories and studies that indicated size to be influential factor, where larger firms provide more voluntary information. The findings indicate that there is no relationship between ownership concentration, leverage and profitability and the amount of voluntary disclosure for Swedish listed companies. It shows that the theoretical assumptions are not supported in these areas, even though previous studies have found a relationship with these factors. This could be explained by national differences, different periods analysed and also the use of different methods. From comparison with other studies the conclusion can be drawn that Swedish companies have a high rate of disclosure.

6.2 Limitations and future research

This thesis has been conducted using annual reports for one year only. A longitudinal study that further investigates the influence of company characteristics is needed to make sure the results were not subject to error because of the sampling period of one year. A study over several years would also serve as a better foundation when making generalizations. Especially when looking at the profitability characteristic which can fluctuate significantly between years.
For future research it would be interesting to see how the new directive from 2014 affect the voluntary disclosure in Sweden. The new directive states that companies and groups with over 500 employees have to disclose information on policies, risks and outcomes regarding environmental matters, social and employee-related aspects, respect for human rights, anti-corruption and bribery issues and diversity in their board of directors (Directive 2014/95/EU). An increased mandatory disclosure can have a positive effect on voluntary disclosure (Liao et al., 2013). It was found by (Broberg et al., 2010) that the new IFRS directive 2005 had a positive effect on voluntary disclosure in Sweden. Therefore it is interesting to see if the new directive will have the same effect or if it contradicts the effect that happened after the adoption of IFRS.
List of references


List of references


Appendix 1
List of companies included in the sample.

Italics indicate high tech sector.

AAK
ABB
*Active Bio*
Addtech
Alfa Laval
Assa Abloy
*AstraZeneca*
Autoliv
Axis
B&B Tools
Beijer Alma
Beijer Ref
Bilia
Billerudkornsäss
Boliden
Byggmax
Cavotec
Cloetta
Concentric
Duni
Electrolux
Elekta
Eniro
Enquest PLC
Ericsson
Fenix outdoor
Fingerprint
Getinge
Gunnebo
H&M
Hexagon
Hexpol
Holmen
Husqvarna
Ica gruppen
Industrade
Invido
ITAB
Kappahl
Lagercrantz
Lindab
Loomis
Lundin Pet
*Meda*
Mekonomen
MTG
Munksjö Oyi
Nederman
New wave
*Oasmia Pharmaceutical*
OEM
Orexo
PEAB
SAAB
Sanitec Oyi
SAS
SCA
*Sectra*
Securitas
Skistar
SSAB
Stora Enso
Swedish match
Tele2
TeliaSonera
Transcom
Trelleborg
Unibet
*Vitrolife*
ÅF
Appendix

Appendix 2
List of annual reports retrieved February 19th 2015.

Italics indicate high tech sector

AAK [http://feed.ne.cision.com/wpyfs/00/00/00/00/25/49/3F/wkr0006.pdf](http://feed.ne.cision.com/wpyfs/00/00/00/00/25/49/3F/wkr0006.pdf)


Appendix

ITAB

Kappahl

Lagercrantz

Lindab

Loomis
http://www.loomis.com/PageFiles/7094/Loomis%20%C3%85R%202013_en_index.pdf

Lundin Petroleum

Meda
http://www.meda.se/fileadmin/user_upload/Dokument/PDF/MEDA_AR13_ENG_FINAL_indexerad___.pdf

Mekonomen

MTG

Munksjö Oiy

Nederman
http://www.nederman.com/investors/financial-reports/~/media/ExtranetDocuments/PublishedAnnualReport/Nederman_Annual_Report_2013.ashx

New wave
http://www.nwg.se/en/reports-and-presentations/annual-reports.html

Oasmia Pharmaceutical

OEM

Orexo

PEAB

SAAB

Sanitec Oyi
Appendix


SSAB http://mb.cision.com/Main/980/9555836/223475.pdf


Tele 2 http://www.tele2.com/Global/TL2_AR13_hel_ENG_140327_HIGH.pdf


Transcom https://www.transcom.com/Documents/Pressmeddelanden/1581328.pdf

Trelleborg http://mb.cision.com/Main/584/9554029/222207.pdf


Appendix 3
List of search words

**Employees**
- Key Employee
- Key Staff
- Key Personnel
- Turnover
- Sales
- Expense
- Education
- Work environment
- Training
- Health, Safety
- HRM, HR, human resource
- Policy/Policies
- Incentive
- Knowledge
- Absence
- Sick leave
- Insurance
- Career
- Interview
- Value added

**Customers**
- Customer
- Key Customer
- Communication
- Knowledge, information

**IT**
- Software
- IT facilities
- IT systems

**IT investment**
**IT expense**

**Processes**
- Environment
- Communication
- Knowledge
- Information
- Failure
- Accidents
- Benefit
- Social programme

**R&D**
- R&D
- Research
- Patent

**Strategic statements**
- Alliance
- Partnership
- Joint operations
- Supplier
- Brand
- Corporate Culture
- Best practice
- Environment
- Community
- CSR, social responsibility
- Contract
- Contract issues
Appendix 4
Disclosure Scoreboard

Employees (27 items)

1. Staff breakdown by age
2. Staff breakdown by seniority
3. Staff breakdown by gender
4. Staff breakdown by nationality
5. Staff breakdown by department
6. Staff breakdown by job function
7. Staff breakdown by level of education
8. Rate of staff turnover
9. Comments on changes in number of employees
10. Staff health and safety
11. Education and training expenses/number of employees
12. Staff interview
13. Statements of policy on competence development
14. Description of competence development program and activities
15. Education and training expenses
16. Absence
17. Employee expenses/number of employees
18. Recruitment policies
19. HRM department, division or function
20. Job rotation opportunities
21. Career opportunities
22. Remuneration and incentive systems
23. Pensions
24. Insurance policies
25. Statements of dependence on key personnel
26. Revenues/employee
27. Value added/employee

Customers (14 items)

1. Number of customers
2. Sales breakdown by customer
3. Annual sales per segment or product
4. Average customer size
5. Dependence on key customers
6. Description of customer involvement
7. Description of customer relations
8. Education/training of customers
9. Customers/employees
10. Value added per customer or segment
11. Market share (per cent)
12. Relative market share
13. Market share, breakdown by country/segment/product
14. Repurchase

IT (five items)
Appendix

1. Description and reason for investments in IT
2. IT systems
3. Software assets
4. Description of IT facilities
5. IT expenses

Processes (eight items)

1. Efforts related to the working environment
2. Information and communication within the company
3. Working from home
4. Internal sharing of knowledge and information
5. Measure of internal or external failures
6. External sharing of knowledge and information
7. Fringe benefits and company social programs
8. Environmental approvals and statements/policies

Research and development (nine items)

1. Statements of policy, strategy and/or objectives of: R&D activities
2. R&D expenses
3. R&D expenses/sales
4. R&D invested in basic research
5. R&D invested in product design/development
6. Future prospects regarding R&D
7. Details of company patents
8. Number of patents and licenses, etc.
9. Patents pending

Strategic statements (15 items)

1. Description of new production technology
2. Statements of corporate quality performance
3. Strategic alliances
4. Objectives and reason for strategic alliances
5. Comments on the effects of the strategic alliances
6. Description of the network of suppliers and distributors
7. Statements of image and brand
8. Corporate culture statements
9. Best practice
10. Organizational structure
11. Utilization of energy, raw materials and other input goods
12. Investment in the environment
13. Description of community involvement
14. Information on corporate social responsibility and objective
15. Description of employee contracts/contractual issues
Appendix

Appendix 5
Detailed results from SPSS

ANOVA

H0. There are no significant differences between the groups’ mean scores.

HA. There is a significant difference between the groups’ mean scores.

Not significant p > 0.05

Old N 16 years and above = (38)

H1. Industry differences

Mann Whitney U

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a. Grouping Variable: high_low

Conclusion: Since our p-value is smaller than .05, there is a significant relationship between high tech and voluntary disclosure.
Appendix

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**H2. AGE**

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**ANOVA**

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**Descriptives**

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<td>20,1429</td>
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Pearson’s r:

**H2. Older companies disclose more information than younger companies.**

**Correlations**

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<td>N</td>
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</table>

**. Correlation is significant at the 0.01 level (2-tailed).**

Conclusion: Since our p-value is smaller than .05, there is a significant relationship between age and voluntary disclosure, $r(68) = 0.362$, $p=0.002$

Positive correlation of $+0.362$. 
H3. Size

Descriptives

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ANOVA

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Robust Tests of Equality of Means

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a. Asymptotically F distributed.

PEARSON’s R:

H3: Larger companies disclose more information than smaller companies.

Correlations

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<th>Market_cap</th>
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Appendix

### Correlations

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Conclusion: Since our p-value is greater than .05, there is not a significant relationship between market capitalization and voluntary disclosure, $r (68) = 0.178$, $p=0.140$

![Graph showing correlation between Market_cap and Score_H3]

### H4. Ownership Concentration

#### Descriptives

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<th>Std. Error</th>
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Appendix

**Test of Homogeneity of Variances**

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**ANOVA**

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**Robust Tests of Equality of Means**

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a. Asymptotically F distributed.

H4. Companies with more dispersed shares disclose more information than companies with less dispersed shares.

**Correlations**

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<tr>
<td>N</td>
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Conclusion: Since our p-value is greater than .05, there is not a significant relationship between ownership concentration and voluntary disclosure, $r (68) = 0.006, p=0.961$
H5. Leverage

Descriptives

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<td>,82590</td>
<td>18,4952</td>
<td>21,7905</td>
<td>6,00</td>
</tr>
</tbody>
</table>

Test of Homogeneity of Variances

<table>
<thead>
<tr>
<th>Score</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2.775</td>
<td>1</td>
<td>68</td>
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ANOVA

<table>
<thead>
<tr>
<th>Score</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>66,057</td>
<td>1</td>
<td>66,057</td>
<td>1,391</td>
<td>,242</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3228,514</td>
<td>68</td>
<td>47,478</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3294,571</td>
<td>69</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Appendix

Robust Tests of Equality of Means

<table>
<thead>
<tr>
<th></th>
<th>Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welch</td>
<td>1,391</td>
<td>1</td>
<td>62,659</td>
<td>.243</td>
</tr>
<tr>
<td>Brown-Forsythe</td>
<td>1,391</td>
<td>1</td>
<td>62,659</td>
<td>.243</td>
</tr>
</tbody>
</table>

a. Asymptotically F distributed.

H5. Firms that are more leveraged disclose more information than less leveraged firms.

Correlations

<table>
<thead>
<tr>
<th></th>
<th>Leverage</th>
<th>Score_H5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.134</td>
</tr>
<tr>
<td>Leverage Sig. (2-tailed)</td>
<td></td>
<td>.270</td>
</tr>
<tr>
<td>N</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.134</td>
<td>1</td>
</tr>
<tr>
<td>Score_H5 Sig. (2-tailed)</td>
<td></td>
<td>.270</td>
</tr>
<tr>
<td>N</td>
<td>70</td>
<td>70</td>
</tr>
</tbody>
</table>

Conclusion: Since our p-value is greater than .05, there is not a significant relationship between ownership concentration and voluntary disclosure, r (68) = 0.134, p=0.270.
H6. Profitability

Descriptives

<table>
<thead>
<tr>
<th>Score</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Upper Bound</td>
<td></td>
<td></td>
</tr>
<tr>
<td>high</td>
<td>35</td>
<td>19,6571</td>
<td>7,00396</td>
<td>1,18389</td>
<td>17,2512</td>
<td>6,00</td>
<td>33,00</td>
</tr>
<tr>
<td>low</td>
<td>35</td>
<td>20,6286</td>
<td>6,88171</td>
<td>1,16322</td>
<td>18,2646</td>
<td>10,00</td>
<td>39,00</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>20,1429</td>
<td>6,90995</td>
<td>.82590</td>
<td>18,4952</td>
<td>6,00</td>
<td>39,00</td>
</tr>
</tbody>
</table>

Test of Homogeneity of Variances

<table>
<thead>
<tr>
<th>Score</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
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<td>.091</td>
<td>1</td>
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ANOVA

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<th>df</th>
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<th>F</th>
<th>Sig.</th>
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</thead>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>16,514</td>
<td>1</td>
<td>16,514</td>
<td>.343</td>
<td>.560</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3278,057</td>
<td>68</td>
<td>48,207</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>3294,571</td>
<td>69</td>
<td></td>
<td></td>
<td></td>
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</table>

Robust Tests of Equality of Means

<table>
<thead>
<tr>
<th>Score</th>
<th>Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Welch</td>
<td>.343</td>
<td>1</td>
<td>67,979</td>
<td>.560</td>
</tr>
<tr>
<td>Brown-Forsythe</td>
<td>.343</td>
<td>1</td>
<td>67,979</td>
<td>.560</td>
</tr>
</tbody>
</table>

a. Asymptotically F distributed.
H6. Companies that are more profitable disclose more information than less profitable firms.

<table>
<thead>
<tr>
<th></th>
<th>Profit</th>
<th>Score_H6</th>
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</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>-0.205</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.089</td>
</tr>
<tr>
<td>N</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-0.205</td>
<td>1</td>
</tr>
<tr>
<td>Score_H6 Sig. (2-tailed)</td>
<td></td>
<td>0.089</td>
</tr>
<tr>
<td>N</td>
<td>70</td>
<td>70</td>
</tr>
</tbody>
</table>

Conclusion: Since our p-value is greater than .05, there is not a significant relationship between ownership concentration and voluntary disclosure, $r(68) = -0.205$, $p=0.089$.
Appendix

Appendix 6
Scatterplot market capitalization and voluntary disclosure

With all companies:

The three largest companies excluded:

Descriptive Statistics
### Market_cap

<table>
<thead>
<tr>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>26165293299,8</td>
<td>46966615783,3</td>
<td>67</td>
</tr>
<tr>
<td>209</td>
<td>4426</td>
<td></td>
</tr>
</tbody>
</table>

### Score_H3

<table>
<thead>
<tr>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,1642</td>
<td>7,02937</td>
<td>67</td>
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</tbody>
</table>

### Correlations

<table>
<thead>
<tr>
<th></th>
<th>Market_cap</th>
<th>Score_H3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.407**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>1</td>
</tr>
<tr>
<td>Sum of Squares and Cross-products</td>
<td>1455869578772</td>
<td>8873511885280</td>
</tr>
<tr>
<td>Covariance</td>
<td>58620000000,0</td>
<td>.973</td>
</tr>
<tr>
<td></td>
<td>2205862998140</td>
<td>134447149776,</td>
</tr>
<tr>
<td>N</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.407**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>1</td>
</tr>
<tr>
<td>Sum of Squares and Cross-products</td>
<td>8873511885280</td>
<td>3261,194</td>
</tr>
<tr>
<td>Covariance</td>
<td>134447149776,</td>
<td>49,412</td>
</tr>
<tr>
<td>N</td>
<td>67</td>
<td>67</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).