Corporate governance disclosure
by Swedish listed corporations

Master’s thesis within Business Administration

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Jönköping March 2005
Master’s Thesis within Business Administration

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Date: 2005-03-10

Subject terms: Disclosure, corporate governance, agency theory

Abstract

The Enron collapse in 2001 has resulted in an increasing attention to corporate governance. Even in Sweden, some scandals have occurred, for example Skandia, ABB, Trustor; a parallel could be drawn, implying that these scandals have resulted in increased attention to corporate governance. Corporate governance concerns the relationship between a corporation’s management, board of directors, shareholders and other stakeholders. The problems with the relationship between managers and shareholders are referred to as the principle-agent problem. The increase in corporate governance disclosure can be seen as a way by the corporations to regain the trust from the shareholders. Can agency theory be used to explain why some corporations disclose more corporate governance information than others?

The purpose with this master thesis is, with starting point in agency theory, to contribute to the understanding of which factors that influence corporations to disclose corporate governance information in the annual reports.

For this thesis, a quantitative research has been performed. Annual reports from corporations listed on the Stockholm Stock Exchange have been examined, to be able to develop a corporate governance disclosure index and to measure 15 characteristics, derived from the agency theory and two control variables. The data was analysed in SPSS, using both linear and multiple regressions.

The analysis showed that role duality actually measured if a corporation had a foreign parent company and corporations listed on the O-list other on Stockholm Stock Exchange served as proxies for smaller corporations. Therefore, it was possible to conclude that corporations were influenced by the origin of the parent company and the size of the corporation to disclose corporate governance information. Another conclusion was that corporate governance characteristics derived from agency theory is not appropriate when trying to find factors that influence corporations to disclose corporate governance information. Nevertheless, this does not mean that it is inappropriate to take the starting point in the agency theory.

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1 Introduction

This chapter begins with a background to the problem discussion of corporate governance disclosure. Thereafter the purpose of the thesis, based on the problem, is defined. We have also made a disposition over the master thesis’ chapters.

1.1 Background

The annual report is a major medium used by corporations to communicate information to outsiders (Botosan, 1997; Lang & Lundholm, 1993), in other words the interested parties. Lang and Lundholm have even found evidence that annual report disclosure is positively correlated with other information communicated via other media. The corporations’ interested parties are usually, according to Thorell (2003), the owners, investors, employees, lenders, suppliers, customers and the public. All who have an interest in the corporation’s success rely upon the information, disclosed by corporations (Percy, 1997), when making different types of decisions (Thorell, 2003). Relevance is an important criterion; therefore, the information must be relevant to users to assist the decision-making (Cooke, 1989b).

Cooke (1989b) claims that since information is crucial in the decision-making about allocation of scarce resources for outsiders, it is important to assess the extent of information provided by a corporation. Since a corporation itself provides much of the information that investors and analysts use to value the corporation, the functioning of the stock market is influenced by information directly provided by the corporation (Williams, Moyes & Park, 1996; Breton & Taffler, 1995).

DiPiazza and Eccles (2002) describe corporations as the people who work in and manage them, whereas the corporation’s board of directors exists to guarantee that the shareholders interests are protected. The capital markets effectiveness depends on public trust; at the same time, trust depends on timely accessibility of complete, relevant and trustworthy information. Even Danielsson, Endre and Engström (1998) claim that, the connection between owners and the management is based on trust. The trust can be crucial for how the corporation shall evolve. The owners of the corporation, who contribute with capital, are the shareholders. However, if they lack in trust in the corporation its development will decrease, competitive advantages will decrease or disappear, and the development will be inferior than around the world. Therefore, it is important for the whole country’s economic development that the culture in the listed corporations is in a way that the shareholders can trust the management.
According to Ljungdahl (2004), there has been a marked increase of corporate governance disclosure in the annual reports of corporations listed on the Stockholm Stock Exchange. OECD\(^2\) (2004) defines corporate governance as a set of relationships between a corporation’s management, its board of directors, its shareholders and other stakeholders. Good corporate governance should result in effective monitoring of the management, by the board of directors, and should give proper incentives for the board of directors and the management to pursue objectives that are in the interests of the corporation and its shareholders.

The worldwide attention to corporate governance is a result of the Enron collapse in 2001, followed by additional scandals and corporate failures in the U.S., for example WorldCom and Tyco (Coombes, 2003), where the corporations, somehow, concealed debts or expenditures. A parallel could be drawn, considering Sweden, that the increased attention to corporate governance information in the annual reports may be an effect of the scandals in Sweden, for example Skandia, ABB and Trustor, where huge bonuses, redundancy payments and/or pensions were not disclosed.

Berle and Means (1932) were among the first who argued that the separation between ownership and control in publicly traded corporations produces an agency problem; how less informed “outside” owners could monitor better informed “inside” managers. Jensen and Meckling examined similar ideas in 1976 and discussed the principal-agent problem; when managers (agents) with private information have incentives to pursue their own interests at the owners’ (principals’) expense. Therefore, Mayer’s (1997) statement that corporate governance traditionally is associated with the principal-agent problem is not so strange.

From the assumption of agency theory, there is a mismatch of interest between the shareholders, who are the owners, and the management, who on the behalf of the shareholders run the corporation. The shareholders appoint a board of directors in order to monitor the management; hence, the board of directors is the link between the shareholders and the management. Therefore, the better the board of directors is at monitoring the management, the more disclosure can be expected (for further information see frame of reference).

There are only a limited number of studies conducted concerning disclosure practices in Sweden and we have not found anyone concerning corporate governance disclosure practices in particular. Moreover, we have not found any studies conducted concerning corporate governance disclosure practices abroad either.

\(^2\) Organisation for Economic Co-operation and Development
The majority of the studies, both in Sweden as well as abroad, have looked at the relationship between the levels of different types of information disclosure and corporate characteristics. Similar characteristics have been used in these studies and most of them have been derived from agency theory and/or legitimacy theory. The results in these prior studies have been contradictory and most of them have been different from others when looking at a specific type of information; hence, different characteristics influence the disclosure practices of different types of information.

Since this study concerns corporate governance disclosure, we intend to use corporate governance characteristics derived from agency theory. We have only found one study, Ho and Wong (2001), which concerns both disclosure practices and corporate governance characteristics. However, since the authors have looked at voluntary disclosure, it is not that interesting to compare our results with theirs, since as mentioned above; different characteristics influence the disclosure practices of different types of information.

1.2 Problem discussion

As mentioned above, in recent years there have been several corporate scandals, mostly in the U.S., but even in Europe, including Sweden. Have these scandals affected the interested parties’ trust in the corporations? What are the corporations doing to maintain the shareholders’ trust for them? The increase of corporate governance disclosure in recent years’ annual reports can be interpreted as a way by the corporations to keep the shareholders’ trust in them; hence, showing them that the management act in the best interest of the shareholders. This may also be due to pressure from the interested parties, due to lack of trust for the business society.

What types of corporations have disclosed more corporate governance information in the annual reports? Corporate governance concerns the relationship between managers and shareholders, which even agency theory do. Theoretically, the implementation of the appropriate corporate governance mechanism should benefit owners financially by enabling them to exercise more control over corporate insiders and management (Eisenhardt, 1989; Fama & Jensen, 1983; Jensen & Meckling, 1976).

According to the agency theory, several corporate governance characteristics in a corporation, for example role duality and the existence of committees, can affect the effectiveness of the board of directors’ monitoring role. Furthermore, corporate governance characteristics can be seen as proxies for independence and the alignment of interest between the management and the shareholders. The discussion and questions above have led us to the following problem:

Can agency theory explain why some corporations disclose more corporate governance information than others do?
Corporate governance is a contemporary subject, since the corporate scandals do not seem to end. The scandals may have led to a lack of trust in today's corporations; therefore, it is important that the corporations disclose information about corporate governance. Since we have not found any studies of corporate governance disclosure, we think it would be of theoretical relevance to examine what influences the corporations to disclose corporate governance information in the annual reports.

Moreover, a study like this can be of practical relevance for the users of annual reports, since they can see trends and get a picture of different types of corporations' disclosure practices. If this study for example shows that large corporations disclose more corporate governance information than smaller ones do, the users of annual reports will be aware of that smaller corporations may not disclose corporate governance information in the annual reports that could be of interest to them. They should therefore search after the information from other sources, for example the corporation's website. They can also see what kinds of corporations that they can pressure or legislate further to disclose more corporate governance information.

1.3 Purpose

The purpose with this master thesis is, with starting point in agency theory, to contribute to the understanding of which factors that influence corporations to disclose corporate governance information in the annual reports.

1.4 Disposition

The introduction chapter begins with a background to the problem discussion of corporate governance disclosure. Thereafter the purpose of the thesis, based on the problem, is defined. We have also made a disposition over the master thesis' chapters.

The frame of reference chapter begins with a description of corporate governance. The chapter continues with a presentation of the agency theory, since others and we have derived corporate governance characteristics from this theory for use in the analysis. Moreover, control variables from prior studies are included.

The method chapter begins with an explanation of what kind of examination we will use in our master thesis. The chapter also contains a description of our examination process in four steps. Reliability and validity is also a part of our method chapter.

The chapter of analysis and results contains descriptive statistics of the dependent variable, followed by analyses of the results of the linear regressions of each independent variable and the corporate governance index. Moreover, a Pearson's multicollinearity test of the independent variables is included; thereafter, the results of the multiple regressions are analysed.

The chapter of conclusions and comments begins with the conclusions drawn from the analysis; thereafter, follows comments and suggestions on further studies.
2 Frame of reference

The frame of reference begins with a description of corporate governance. The chapter continues with a presentation of the agency theory, since others and we have derived corporate governance characteristics from this theory for use in the analysis. Moreover, control variables from prior studies are included.

2.1 What is corporate governance?

There are several definitions of corporate governance; although they are formulated differently but the meaning is the same. We have chosen to use the definition in OECD’s principles from 2004 since it gives a broad description of what the word means. The following definition can be found in OECD’s preamble:

“Corporate governance involves a set of relationships between a company’s management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide proper incentives for the board and management to pursue objectives that are in the interests of the company and its shareholders and should facilitate effective monitoring.”

2.2 Hypothesis development

“Corporate governance has been traditionally associated with the principal-agent relationship problem.” (Mayer, 1997).

Jensen and Meckling (1976) used agency theory as a way to address problems of control between agents and principals, which arise because of information asymmetry. They defined the relationship between principals and agents as a contract under which the principal engages the agent to perform some service on their behalf. The interests and objective of investors and managers differ (Mayer, 1997); therefore, a central element of agency theory is the role of monitoring, which is fully consistent with the view that managerial opportunism is promoted by a situation where ownership is separated from control (Jensen & Meckling, 1976; Daily, Dalton & Cannella, 2003).

According to agency theory, the potential for agency costs exist where there is a separation of control and ownership of a corporation (Hossain, Perera & Rahman, 1995). Because managers accept agency costs (Jensen & Meckling, 1976), they wish to be seen acting in the interest of shareholders (Ness & Mirza, 1991). Agency costs relate to the maintenance of the contractual relationship between the principals and agents (Hossain, Tan & Adams, 1994).

The purpose with this master thesis is, with starting point in agency theory, to contribute to the understanding of which factors that influence corporations to disclose information in the annual reports; therefore, the following hypotheses are motivated with consideration to agency theory.
2.2.1 Corporate governance characteristics from prior studies

The following corporate governance characteristics have been used in prior studies as proxies for effective monitoring and/or alignment of interests.

2.2.1.1 Management ownership

According to Jensen and Meckling (1976), the principal-agent problem between managers and shareholders arises when managers hold little equity in the corporation, which leads managers to engage in non-maximizing behaviour.

However, as management ownership increases, the interests of managers and shareholders are more aligned (Jensen & Meckling, 1976, Leftwich, Watts & Zimmerman, 1981). This alignment reduces conflicts of interest and causes managers to act in the shareholders’ interests (Watts, 1977; Craswell & Taylor, 1992; Leung & Horwitz, 2004) and enhances their incentives to provide more disclosure (Leung & Horwitz). Therefore, high share ownership by managers may result in high levels of information disclosure (Watts; Craswell & Taylor; Leung & Horwitz), which reduces information asymmetry (Leung & Horwitz). Our hypothesis will therefore be as follows:

\[ H_1: \text{There is a positive association between management ownership and the levels of corporate governance disclosures.} \]

2.2.1.2 Non-executive directors

One major role of the board of directors is its control functions (Pound, 1995). For effective control of the management, the board of directors must be independent, in other words, mainly consists of non-executive directors (Gubitta & Gianecchini, 2002). Therefore, non-executive directors are seen as a toll for monitoring and controlling the actions of the managers, due to their opportunistic behaviour, (Jensen & Meckling, 1976; Leftwich et al., 1981; Fama & Jensen, 1983; Rosenstein & Wyatt, 1990; Pettigrew & McNulty, 1995; Mak, 1996; Leung & Horwitz, 2004) and protecting the shareholders’ interests (Leung & Horwitz).

Both Leftwich et al. (1981) and Fama and Jensen (1983) argued that the non-executive directors strengthen the extent to which a board of directors is independent of the management. The larger the proportion of non-executive directors on the board, the more effective it will be in monitoring managerial opportunism; therefore, corporations can be expected to have more disclosure (Leftwich et al.; Fama & Jensen; Haniffa & Cooke, 2002). Our hypothesis is therefore as follows:

\[ H_2: \text{There is a positive association between proportion of non-executive directors and the levels of corporate governance disclosures.} \]
2.2.1.3 Large audit firms

The size of audit firm has been related to the extent of disclosure in several articles and prior studies, which have used the Big-8\(^3\) (e.g. Firth, 1979) or the Big-6\(^4\) audit firms (e.g. Wallace, Naser & Mora, 1994) as a proxy for large audit firms. These have greater expertise and experience and can therefore reduce information asymmetry between shareholders and managers by encouraging managers to disclose more information (Baiman, Evans & Noel, 1987; Baiman, 1990; Wallace et al., 1994).

Large audit firms have also more incentive to encourage their clients to disclose more information since they do not want to be associated with clients who disclose limited information; because of the possible damaging of their reputation (DeAngelo, 1981; Firth, 1979) and because they are associated with higher audit quality (Leung & Horwitz, 2004). Therefore, the clients are recommended to disclose more information (Firth; DeAngelo; Chow, 1982; Ahmed & Nicholls, 1994; Leung & Horwitz).

Furthermore, large audit firms are said to be more likely to influence corporations to disclose additional information, because they play an important role in limiting opportunistic behaviour of management, thereby reducing the agency costs borne by shareholders (Jensen & Meckling, 1976; Watts, 1977; Watts & Zimmerman, 1986). Therefore, our hypothesis is as follows:

\[ \text{H1: There is a positive association between large audit firms and the levels of corporate governance disclosures.} \]

2.2.1.4 Role duality

According to Jensen and Meckling (1976), the need to limit the decision discretion of management and the need for a separate board of directors to oversee that the management acts in the interests of shareholders is well understood from agency theory. Different individuals should hold the positions as CEO\(^5\) and chairman since excessive power concentration in the hands of a single person could favour opportunistic behaviours (Gubitta & Gianecchini, 2002).

To reduce the advantages gained by withholding information (Forker, 1992), the roles of the CEO and the chairman should be separated; thereby providing essential checks and balances of the management (Blackburn, 1994) and enhancing monitoring quality (Forker).

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\(^4\) Arthur Andersen, Coopers and Lybrand, Deloitte Touche Tohmatsu, Ernst and Young, KPMG Peat Marwick and Price Waterhouse (Hossain et al., 1994).

\(^5\) Chief Executive Officer
Moreover, when the position as CEO and chairman is held by the same person, the board of directors’ effectiveness in performing its monitoring function may be compromised, since the CEO will be able to control board meetings, select agenda items, as well as select directors to the board (Blackburn, 1994); thereby protecting own interests to decrease the functions of the board of directors (Patton & Baker, 1987).

Fama and Jensen (1983) believe that the board of directors is ineffective when the decisions of the management cannot be controlled. When CEO duality exists, the CEO needs to monitor its own decisions and activities; therefore, actions in the best interest of the shareholders may not be carried out (Messier, 2000).

According to the Swedish Companies Act (ABL 8:14§), the CEO is not allowed to be the chairman of the board of directors. However, corporations listed on the Stockholm Stock Exchange are not necessarily Swedish; therefore, in some of the corporations, the CEO can also be the chairman. Our hypothesis is therefore as follows:

H4: There is a negative association between role duality and the levels of corporate governance disclosures.

2.2.1.5 Diffuse ownership

The annual report is the main source of information for small shareholders (Raffournier, 1995); therefore, the corporations with diffuse ownership have more incentive to disclose information that can help the shareholders to monitor the managers’ activities (Leftwich et al., 1981; Craswell & Taylor, 1992; McKinnon & Dalimunthe, 1993; Hossain et al., 1994; Raffournier). Our hypothesis is therefore as follows:

H5: There is a positive association between diffuse ownership and the levels of corporate governance disclosures.

2.2.1.6 Audit committee

The audit committee’s functions include guaranteeing the financial accounting and control systems (Collier, 1993). Therefore, the existence of an audit committee may improve internal control and is regarded as an effective monitoring device for reducing managerial opportunism (Braiotta, 2004; McDaniel, Martin & Maines, 2002) and improving disclosure quality (Forker, 1992).

Financial reporting (Hossain et al., 1994), hence the audit committee (DeZoort, 1997; Ho & Wong, 2001) can help the principals to monitor the agents’ activities and also act as a bonding function where the agents can signal their compliance with the principals’ interests (Hossain et al.; DeZoort; Ho & Wong). Therefore, our hypothesis is as follows:

H6: There is a positive association between the existence of an audit committee and the levels of corporate governance disclosures.
2.2.1.7 Board size

Jensen (1993) and Yermack (1996) argue that board of directors are less effective monitors as they grow in size, since the control over management will be reduced. Moreover, a smaller board of directors will more likely take responsibility for monitoring a corporation’s operations than a larger board of directors, according to Vaefas (2000).

Larger board of directors may be slower to react to decisions that require an immediate course of action. Furthermore, as more directors are added, the board of directors loses the ability to be direct and decisive in their operation; therefore, it will be easier for the CEO to control the board of directors. The directors also become less candid in the ability to be critical of one another, which results in less efficient decision-making (Jensen, 1993). Therefore, our hypothesis is as follows:

H7: There is a negative association between board size and the levels of corporate governance disclosures.

2.2.1.8 Number of shareholders

The greater the number of shareholders, the more likely it is that their information needs will be different, which results in a greater need for different information to be disclosed (Cooke, 1989a). Our hypothesis is therefore as follows:

H8: There is a positive association between number of shareholders and the levels of corporate governance disclosures.

2.2.2 Own corporate governance characteristics

The following corporate governance characteristics will also be included in the analysis. We think these also may influence corporations’ disclosure practices, since the starting point for their influence on corporations’ disclosure practices is taken in the corporate governance characteristics from prior studies.

2.2.2.1 Board ownership

As mentioned earlier under heading 2.2.1.1, when managers own shares, their interests are more aligned with the shareholders; therefore, their incentive to provide more disclosure is enhanced. We think the same arguments can be applied when the directors of the board own shares. Therefore, our hypothesis is as follows:

H9: There is a positive association between board ownership and the levels of corporate governance disclosures.
2.2.2.2 Board compensation

We believe that the board of directors will be more motivated to carry out its role as monitors of the management, as the directors’ compensation gets higher. Therefore, as mentioned above under heading 2.2.1.2, corporations can be expected to have more disclosure since it will be more effective in monitoring managerial opportunism. Our hypothesis is therefore as follows:

H10: There is a positive association between board compensation and the levels of corporate governance disclosures.

2.2.2.3 Nomination committee

A nomination committee can be appointed to help monitoring the composition of the board of directors (Braiotta & Summer, 1987). The nomination committee is a sub-committee to the board of directors and consists of directors of the board (Danielsson et al., 1998). As mentioned earlier under heading 2.2.1.2, the board of directors must mainly be composed of non-executive directors, hence even the nomination committee. Therefore, we believe that the existence of a nomination committee can help to assure that the board of directors consist of non-executive directors. Consequently, the non-executive directors of the board help to enhance the monitoring of the management, which may result in more disclosure. Therefore, our hypothesis is as follows:

H11: There is a positive association between the existence of a nomination committee and the levels of corporate governance disclosures.

2.2.2.4 Compensation committee

We believe that if the board of directors appoint a compensation (remuneration, salary) committee, the monitoring over the managers’ compensations, bonuses and other benefits is improved. Therefore, as mentioned above under heading 2.2.1.2, corporations can be expected to have more disclosure, since it will be more effective in monitoring managerial opportunism. Our hypothesis is therefore as follows:

H12: There is a positive association between the existence of a compensation committee and the levels of corporate governance disclosures.

2.2.2.5 Board activity

We believe that as more meetings of the board of directors are held, the more enhanced the board of directors will be at monitoring of the management, hence a stronger control role. Although, the length of the meetings can also be considered since one meeting of two hours and two meetings of one hour gives the board of directors the same amount of time to monitor the management. However, the enhanced monitoring by the board of directors can ensure that the management fulfils the shareholders’ interests and not act in a self-interested way, as mentioned earlier under heading 2.2.1.2. Therefore, our hypothesis is as follows:

H13: There is a positive association between board activity and the levels of corporate governance disclosures.
2.2.3 Control variables

Other variables, which have shown significant relations to disclosure levels in prior studies, are corporation size and multiple listing status (appendix 1). Since the majority of the studies have found the variables to be significant, it does not seem to matter what kind of disclosure these are tested on. Even though, different disclosures have been studied. Therefore, we think that corporation size and multiple listing status may affect the disclosure of corporate governance information as well.

2.2.3.1 Corporation size

Corporation size has been a commonly used variable in prior studies, since it is a general agreement that a positive relationship between the size of a corporation and its extent of disclosure is to be expected. Prior studies and other authors have put forward several reasons to support the idea that larger corporations disclose more information in the annual reports than smaller corporations do.

Political pressure from government agencies is greater on larger corporations (Buzby, 1975; Firth, 1979; Cowen, Ferreri & Parker, 1987); therefore, the corporations’ incentive to disclose more information is enhanced (Patten, 1992), which may lead to a lower pressure from the government (Buzby).

The demand from financial analysts for information is greater on larger corporations (McKinnon & Dalimunthe, 1993; Hossain et al., 1995), since the annual reports are more likely to be examined by financial analysts (Schipper, 1991). Therefore, larger corporations have a greater incentive to disclose more information (Schipper; McKinnon & Dalimunthe; Hossain et al.).

Larger corporations are also more seen by the public (Firth, 1979), which results in greater social pressure (Cowen et al., 1987); therefore, they have greater incentive to disclose more information (Firth; Patten, 1992) since it may improve their reputation and image (Firth).

Larger corporations are more likely to disclose more information than smaller corporations, since it is more probable that smaller corporations feel it will give the corporation competitive disadvantage, when disclosing full information in the annual report (Buzby, 1975; Craswell & Taylor, 1992).

To decrease the agency costs and reduce the information asymmetry between the management and the providers of funds (shareholder), larger corporations will disclose more information since they need more external funds (Giner Inchausti, 1997).

Moreover, larger corporations generally have more products and operate in larger geographical areas; therefore, Buzby (1975) expects the disclosure costs to be lower because the extent of internal data, which also can be used when disclosing information to the public, is larger in these corporations. Our hypothesis is therefore as follows:

\[ H_{14} \text{: There is a positive association between corporation size and the levels of corporate governance disclosures.} \]
2.2.3.2 Multiple listings

Corporations listed beyond their domestic capital market disclose more information because they comply with foreign regulations (Choi & Mueller, 1984; Cooke, 1989b; Gray, Meek & Roberts, 1995) and meet the needs of the capital market to obtain funds on favourable terms (Gray et al.).

Agency theory suggests that listing status may affect the disclosure of information (Cooke, 1991), since corporations can reduce the shareholders’ monitoring costs by disclosing information (Schipper, 1981; Cooke). Cooke also states that it is possible that multiple listed corporations disclose more information than only domestically listed corporations, in order to raise capital through the markets.

Moreover, multiply listed corporations are more in the public eye (Cooke, 1992). Consequently, there will be additional capital market pressure (Meek, Roberts & Gray, 1995) and more potential conflicts between and across the interested parties (Giner Inchausti, 1997); therefore, corporations may disclose information to reduce the agency costs (Giner Inchausti; Meek et al.). Our hypothesis is therefore as follows:

\[ H_{15} : \text{There is a positive association between multiple listings and the levels of corporate governance disclosures.} \]

2.2.4 Other characteristics

We have decided to include two more characteristics, industry type and domestic listing status, for the reasons stated below.

2.2.4.1 Industry type

Since different studies often have different purposes, it is not interesting to compare the result of the industry characteristic’s relation to disclosure between studies.

According to Cooke (1991), historical reasons why corporations in some industries disclose more information than others could be that a firm with high level of disclosure is dominant in an industry. Therefore, this could have an effect on the disclosure levels in other corporations in the same industry since they may follow them. For this reason, our hypothesis is as follows:

\[ H_{16} : \text{There is association between industry type and the levels of corporate governance disclosures.} \]
2.2.4.2 Domestic listing status

We even believe that similar reasons, as for the industry characteristic, can be applied to the domestic listing status characteristic.

Moreover, since the corporations in our sample are randomly selected in proportion to the total number of corporations on each of the Stockholm Stock Exchange’s four lists, the inclusion of this characteristic makes it possible to draw general conclusions about the listed corporations in Sweden.

However, the characteristic can even serve as a proxy for corporation size, since larger corporations tend to be on the Stockholm Stock Exchange’s A-list. Therefore, to rule out the possibility of this proxy, our hypothesis is as follows:

$H_{17}$: There is association between domestic listing status and the levels of corporate governance disclosures.
Method

3 Method

The method chapter begins with an explanation of what kind of examination we will use in our master thesis. The chapter also contains a description of our examination process in four steps. Reliability and validity is also a part of our method chapter.

The method chapter is a description of the procedure to achieve the purpose. Therefore, we repeat the purpose of this thesis here: the purpose with this master thesis is, with starting point in agency theory, to contribute to the understanding of which factors that influence corporations to disclose corporate governance information in the annual reports. What kind of examination has been conducted and which method have been used, to achieve the purpose of this master thesis?

3.1 Examination

According to Artsberg (2003), a descriptive study tells how something is. We are going to use corporate governance characteristics, control variables and an index when examining which factors that influence corporations to disclose information in the annual reports. In this way, we try to find causes and effects when putting the data into SPSS. Since corporate governance disclosure is a relatively new subject, we have used plenty of variables, not only derived from agency theory and prior studies, but also characteristics of our own.

There are different procedures to collect accounting knowledge, but generally, the collection of knowledge can be classified in the deductive and the inductive procedure (Artsberg, 2003).

With deductive theory, the starting-point is taken in an existing theory and the purpose is to test or increase the theory. Scientifically, this method is also called hypothetical/deductive where it also attempt to explain or predict the reality (Artsberg, 2003). In our case, the starting point for this thesis is taken in agency theory, since we will use it to derive corporate governance characteristics.

With inductive theory, the starting-point is taken from the empiricism and the purpose is to build up a new theory, more specifically, a new knowledge (Artsberg, 2003). The development of the corporate governance disclosure index (see 3.2.3) is on the other hand inductive, since we will develop it while going through the annual reports.
3.2 The research process

The research process with phases and examination steps by Lundahl and Skärvad (1999) can be divided into three phases and four examination steps. According to this model, we are going to present the procedure to our master thesis.

![Diagram of the research process](image)

In the planning phase, hypotheses are formulated and the examination is planned. The data collection phase means that essential data is collected. The last phase, the analyze phase, concerns the processing and analyzing of the data.

3.2.1 Step 1 - Hypothesis formulation

The first step in the quantitative examination is to specify the hypotheses that are going to be tested. Our hypothesis formulation follows Lundahl and Skärvad’s figure below.

![Diagram of the hypothesis formulation](image)

Figure 2 The procedure of the hypothesis formulation (Lundahl & Skärvad, 1999, p. 95)

3.2.1.1 Problem formulation

We think corporate governance is an interesting subject since it receives increased attention because of the corporate scandals, primary in the U.S. for example the Enron scandal. Corporate scandals have also appeared here in Sweden, for example Skandia; consequently, increased attention to corporate governance has been seen in the annual reports of listed corporations in Sweden (Ljungdahl, 2004).
3.2.1.2 Literature exposition

We first searched on the website of the library at Jönköping University and used words and different combinations of words such as corporate governance, corporate governance disclosure, disclosure, mandatory disclosure, voluntary disclosure, annual reports, non-financial disclosure, annual report, agency theory. Here we found plenty of books, articles, essays and websites. Through LIBRIS, a national library data system in Sweden, we borrowed literature and articles from other universities and libraries in Sweden. We also searched for articles in several journals, as can be seen in the reference list, and databases, such as ABI/Inform Global and ArtikelSök.

When we started to read the books and articles, we realized that most of them only described what corporate governance is and there were nothing about disclosure practices. Therefore, another search was conducted to find even more articles about the subject. We did not find any articles concerning corporate governance disclosure in particular, neither in Sweden nor abroad. The only authors, who used corporate governance characteristics in their study of disclosure practices, were Ho and Wong (2001). We have also searched information on agency theory; most of the articles we found have used this theory to derive variables. Although, only a few of the authors of the articles have examined disclosure practices, and neither has looked at corporate governance disclosure. Therefore, we only had use of the articles when deriving the characteristics.

When going through the articles about disclosure practices, we found that several of them contained correlation analyses. The authors tried to see if the levels of disclosure in annual reports were related to different corporate characteristics. We became interested to examine if corporate governance characteristics derived from agency theory can explain why some corporations listed on the Stockholm Stock Exchange disclose more corporate governance information than others do.

3.2.1.3 Development of theoretical starting point

The following step is to compose the frame of reference. After the literature review, we had formed us a good understanding of corporate governance and the agency theory. The motivations for how most of the corporate governance characteristics are related to disclosure practices were gathered from the literature. Moreover, we motivated the characteristics that have not been used before, by our own, from the agency theory perspective. However, even characteristics that have been found to have a relationship with disclosure practices, in most of the prior studies (appendix 1), were included as control variables. We also included two characteristics, industry type and domestic listing status, since the corporations in our sample are classified into different industries and listed on different lists on the Stockholm Stock Exchange.
3.2.1.4 Hypothesis formulation

The last step in Lundahl and Skärvad’s (1999) model is the hypothesis formulation. A hypothesis can take form in many different ways, through for example real discoveries. In most practical situations, it can be suitable to have some linear guidelines to what a good hypothesis is for example:

- the hypothesis shall be able to be a possible solution to the problem that the study is based on,
- the hypothesis shall be able to be tested, and
- the hypothesis shall be reasonable, that is based on arguments.

We have developed our hypotheses from the motivations to each of the characteristics in the frame of reference; therefore, we think the hypotheses can provide possible explanations, can be tested and are reasonable. Below follows a disposition of our hypotheses:

H1: There is a positive association between management ownership and the levels of corporate governance disclosures.

H2: There is a positive association between proportion of non-executive directors and the levels of corporate governance disclosures.

H3: There is a positive association between larger audit firms and the levels of corporate governance disclosures.

H4: There is a negative association between role duality and the levels of corporate governance disclosures.

H5: There is a positive association between diffuse ownership and the levels of corporate governance disclosures.

H6: There is a positive association between the existence of an audit committee and the levels of corporate governance disclosures.

H7: There is a negative association between board size and the levels of corporate governance disclosures.

H8: There is a positive association between number of shareholders and the levels of corporate governance disclosures.

H9: There is a positive association between board ownership and the levels of corporate governance disclosures.

H10: There is a positive association between board compensation and the levels of corporate governance disclosures.

H11: There is a positive association between the existence of a nomination committee and the levels of corporate governance disclosures.
Method

H12: There is a positive association between the existence of a compensation committee and the levels of corporate governance disclosures.

H13: There is a positive association between board activity and the levels of corporate governance disclosures.

H14: There is a positive association between corporation size and the levels of corporate governance disclosures.

H15: There is a positive association between multiple listings and the levels of corporate governance disclosures.

H16: There is association between industry type and the levels of corporate governance disclosures.

H17: There is association between domestic listing status and the levels of corporate governance disclosures.

3.2.1.5 Step 2 - Examination plan

The second step concerns how the examination shall be designed. This is made by choosing source of knowledge, methods for data collection and drawing a sample.

The corporate scandals, as earlier mentioned in the background, have concerned listed corporations; therefore, our sample of corporations is based on listed corporations on the Stockholm Stock Exchange. Because of the short time we have on writing this master thesis and since there were 274 corporations listed on the Stockholm Stock Exchange (autumn, 2004), we chose to draw a sample of 20% of the corporations. To draw a random sample, we used Excel, so all of the corporation would have the same chance of being included. Since we have worked with Excel before in the course Business Statistics, we were aware of that some corporations were going to be duplicated when drawing the sample. Therefore, we decided to take a sample of 22%, resulting in 60 corporations where six of them were duplicates. Therefore, our final sample was 54 corporations, which is almost 20% of all the listed corporations in Sweden.

However, to be able to draw general conclusions about the corporations listed on the Stockholm Stock Exchange, the proportion of corporations from each list in our sample must approximately be the same as on the Stockholm Stock Exchange. When looking at the sample, we noticed that the proportion of corporations from each of the Stockholm Stock Exchange’s lists approximately were the same in our sample.

All the corporations, which are included in our sample, have a website where specific information can be found fast and easy. Unfortunately, since we do not know how often the websites are updated or how old the information is, we wanted to be consequent with all the corporations; therefore, we have decided to use the annual reports because the information is in printed form and cannot be changed.
Method

We e-mailed the National Statistics Office of Sweden (September, 2004) to get information on how much it would cost to order the annual reports from them; the answer was 80 Swedish kronor, excluding postage. As we still are students and cannot afford to pay at least 80 Swedish kronor for each of the 54 annual reports, we quickly decided to change our strategy for the gathering of the annual reports.

Instead, we e-mailed the corporations and asked if it was possible for them to send us the annual reports from 2003. Some of them answered back and some of them ignored the e-mail. The first week, we received 29 annual reports. Since, the time was getting on, we sent a new e-mail, one week later, to the corporations we had not received the annual report from. The effect of the second e-mail was that another 17 annual reports were sent to us. Since the last eight corporations in our sample did not send us the annual report, we printed out the annual reports from the corporation’s website, so all corporations in our sample could be included. The annual reports we printed were from Borås Wäfveri, Diamyd Medical, Fagerhult, Micronic, Senea, Sigma, Strålfors and Tripep.

We also wrote, in both e-mails we sent to the corporations, that it was of importance for us to receive the annual report in English, since we wanted to avoid misunderstandings in the translations; furthermore, because this master thesis was going to be written in English. Even though, only 27 of the annual reports were in English and the rest in Swedish. The annual reports we printed out were available in English, except from Borås Wäfveri and Senea, which only were available in Swedish.

During the time we were going through the annual reports, we faced some problems that forced us to change or angle some decisions we have already made. For instance, we excluded twelve corporations (Carnegie, FöreningsSparbanken, Hagströmer & Qviberg, Hufvudstafen, Investor, JM, Klövern, Latour, Ljungbergsgruppen, NeoNet, Novesta, Skandia) from our sample since they were, according to the Stockholm Stock Exchange (2005), in the financial industry. These corporations do not for example sell any products, which makes it impossible for us to include them in our sample since we have used sales as a proxy for corporation size.

We came across another problem with our sample since we used the annual report from the fiscal year 2003, because the annual reports from 2004 were not finished yet. Therefore, we excluded one corporation (NOTE) from our sample, which were not registered on the Stockholm Stock Exchange in 2003. NOTE registered on the Stockholm Stock Exchange in 2004; therefore, we decided to exclude this corporation from this study. After excluding the corporations from the financial industry and NOTE, the total number of corporations in our sample ended up at 41 (appendix 2).

Since the attention to corporate governance is increasing continuously, we decided to use the annual reports from 2002/2003 for the corporations with a broken fiscal year. We believe that these corporations have had more time to notice the increased attention to corporate governance, and therefore may have included more corporate governance disclosure in the annual reports from 2003/2004. In our sample Addtech, Bergman & Beving, Diamyd Medical and Retail & Brands had a broken fiscal year.
3.2.2 Step 3 - Data collection

The data collection was divided into two parts, first the characteristics for each corporation were measured and thereafter the levels of corporate governance disclosure in the annual reports of the corporations were measured.

3.2.2.1 Corporate governance characteristics and control variables

While going through the annual reports, we encountered some problems to find some of the corporate governance characteristics in the annual reports. Therefore, some of the corporations have been contacted via e-mail or telephone to help us gather the needed information or clarify some questions. Below follows a description of how we have defined or measured the characteristics.

3.2.2.1.1 Management ownership

The corporate governance characteristic management ownership measures the proportion of how many shares the management group owned to the total amount of outstanding shares (less repurchased shares) in the corporation. Since not all corporations had disclosed the same information in the annual reports, we had to change the way of measuring this characteristic. To be consequent, we excluded all the members in the management group except the CEO, since all corporations had disclosed the amount of shares that the CEO held. Some of the corporations have not separated the CEO’s private holdings from holdings via corporations; therefore, we have included shares owned both privately and via corporations. Some corporations had a new CEO from 2004 and did not disclose information about the former CEO’s share holdings; therefore, the former CEO’s holdings were looked up in the annual report from 2002 on the corporation’s website (e.g. Borås Wäfveri, Senea).

3.2.2.1.2 Non-executive directors

This characteristic measures the proportion of non-executive directors on the board. This was done by dividing the number of independent directors with the total number of directors on the board. Since not all of the corporations had disclosed if the employee representatives of the board are actual employees or not, we have considered them as executive directors. Even if the directors or their corporations have had other assignments earlier in the corporation, they were considered as executive directors (e.g. Johnson Pump, Ortivus).

Moreover, we considered the CEO, the founder of the corporation (CashGuard and Tripep), other managers (e.g. Consilium), even those who were employed in the subsidiaries (e.g. Svedbergs) and directors who have been managers and received a salary during the fiscal year 2003, as executive directors.
In Pergo’s case, where the chairman is a lawyer and remuneration has been paid to the lawyer’s office, we have considered the chairman as a non-executive director, since it is not disclosed in the annual report if the chairman has been involved in cases concerning the corporation or not. In Micronic, the chairman of the board has received salary, but the corporation had not disclosed if the chairman was employed or not; therefore, we telephoned the corporation, which confirmed that the chairman has not been an employee, hence non-executive.

3.2.2.1.3 Large audit firms
We have used the Big 4 audit firms as a proxy for large audit firms. All corporations in our sample have disclosed the name of their audit firms. Some of the corporations had several audit firms; this was not a problem if all of their auditors were one of the Big 4 audit firms or if they had disclosed which auditor or audit firm that was the head auditor. We contacted Höganäs and Technology Nexus via telephone since it was not clear which of their auditors that was the head auditor.

3.2.2.1.4 Role duality
If the corporation had not disclosed information about the CEO’s involvement in the board of directors, we had to compare the names of the CEO and the chairman to know if both positions were held by the same person.

3.2.2.1.5 Diffuse ownership
From the beginning, we were going to measure the diffuse ownership by looking at how much the ten largest shareholders held, since the first annual reports we examined had disclosed the ten largest shareholders’ percentage of the capital. However, during the examination of the annual reports, we soon realised that not all of the corporations disclosed the same information. Some of them only disclosed the three largest shareholders; therefore, we had to change our way of measuring the diffuse ownership. Since ABB were the corporation that had disclosed the least information about the largest shareholders, we had to accommodate our measure after the disclosed information in ABB’s annual report; hence, the shareholders who owned 5% or more. Thereafter, we subtracted the sum of the shareholders who owned 5% or more from 100%.

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Öhrlings-PricewaterhouseCoopers, Deloitte & Touche, KPMG (Bohlin), Ernest & Young (Artsberg, 2003)
3.2.2.1.6 Audit, nomination and compensation committee
Some of the corporations had a separate heading for corporate governance, which made it easier to determine if the board of directors had committees. Nevertheless, most of the corporations only wrote about the board of directors and its committees in the board of directors’ report, if at all. However, some of the corporations had disclosed information similar to other corporations, but had not actually written that they had a committee, so we assumed that the corporation did not have that committee.

3.2.2.1.7 Board size
When determining the size of the board of directors, we excluded the deputy directors since they mostly attend meetings when necessary; hence, when an ordinary director is absent. Moreover, some of the corporations had disclosed information about honorary directors, but since they are not mentioned in the information about the number of directors elected by the Annual General Meeting and the number of employee representatives and deputies, we excluded them from the size of the board of directors. The size of the board of directors includes the directors elected by the Annual General Meeting and the employee representatives, since they normally attend the meetings of the board of directors.

3.2.2.1.8 Number of shareholders
Most of the corporations had disclosed, not only in the text but also in a table, the exact number of shareholders; however, ABB and Technology Nexus had only disclosed the approximate number of shareholders. Moreover, Poolia was the only corporation that had not disclosed any information about its number of shareholders; therefore, we telephoned the corporation for that information.

3.2.2.1.9 Board ownership
Board ownership was measured by dividing the total number of shares owned by the board of directors with the corporation’s outstanding shares (less repurchased shares). We have included the employee representatives since they are included in most of the corporations’ descriptions of the board of directors. All of the corporations had disclosed the directors’ holdings in the corporation; however, one of Rottneros’ directors has deceased and there was no information about the director’s holdings. We did not contact the corporation for the information because of the circumstances.
Method

3.2.2.1.10 Board compensation
The compensation to the board of directors was found in the notes of the annual reports. Sometimes, there was only one sum for both the CEO and the board of directors; it was not always clear how much the CEO and the board of directors received in compensation. Therefore, we several times had to calculate by our own how much the compensation was with help of the tables and the comments to the note.

Since NeoNet had disclosed board compensation for both the fiscal years 2002/2003 and 2003/2004, there was no other way to calculate the compensation for 2003, than taking an average of the two years.

3.2.2.1.11 Board activity
When we were about to search for information concerning board activity, we did not know what information the corporations had disclosed about the meetings of the board of directors, for example number of meetings or even the length of the meetings. Soon, we realised that ABB was the only corporation, which had disclosed both number of meetings and the average time, whereas the rest of the corporations only had disclosed number of meetings. Therefore, board activity was measured as the number of meetings for the board of directors.

3.2.2.1.12 Corporation size
In this case, the corporations’ sales, hence turnover, served as a proxy for corporation size. Since ABB disclosed the financial information in Dollars, we converted the sales to Swedish kronor, according to the course on the 31st of December 2003, which we found in ABB’s annual report.

3.2.2.1.13 Multiple listings
Most of the corporations had a separate section with disclosed information about its share(s), but some of the corporations had not disclosed any information about which Stock Exchanges the share(s) was(were) listed on. However, sometimes it was clearly disclosed in the text. Although, there were occasions where the corporation only had disclosed information about one of its shares; therefore, we contacted the corporation to be sure that the other share was not listed at all.

3.2.2.1.14 Industry
Since we studied corporations on the Stockholm Stock Exchange, we decided to categorize the different corporations according to the Stockholm Stock Exchange. Since we had forgotten to write the reference and the categorization on the Stockholm Stock Exchange’s website was updated on the 1st of March 2005, the industry classification of the corporations in our sample was checked again. The Stockholm Stock Exchange has used 10 categories for industry, but our sample only contains corporations from seven of these categories.
Method

3.2.2.1.15 Domestic listing status
As stated earlier, our sample is taken from the corporations listed on the Stockholm Stock Exchange, which has four major lists; A-list most frequently traded, A-list other, Attract 40 (O-list most frequently traded) and O-list other.

3.2.2.2 The corporate governance disclosure index
To be able to measure the level of corporate governance disclosure, we have calculated an index for each corporation. We developed a list of items, over the disclosed information concerning corporate governance, during the time we were going through the annual reports (appendix 4).

The disclosed corporate governance information can mostly be found under a separate heading for corporate governance or in the board of directors’ report. The information about for example the compensation to the board of directors, principles for salary, pension, the actual salary to managers was normally disclosed in the notes, as was the information about the fee to the auditors. Almost all corporations had pictures of the directors of the board and the management; it was common to find information about them under the pictures, such as age, positions in other corporations, other board assignments and holdings in the corporation.

At the beginning, it was difficult to decide how detailed the list should be; therefore, as we went through the annual reports we added new items to the list. Consequently, we looked in several annual reports twice to be sure if the new items were disclosed in them or not. The new items were mostly found in the annual reports that had a separate heading for corporate governance. However, most of the corporations disclosed the same information in the board of directors’ report, but not so detailed.

We used a dichotomous procedure when scoring the corporations, which means that the corporation received 1 for each disclosed item on the list and 0 for each item that was not disclosed. For example, if the corporation had disclosed that the board of directors did not have any committee(s) it received 1. Moreover, it was not relevant for the corporation to disclose information about committee(s) that the board of directors did not have.

Another example is ABB, where the CEO and chairman was the same person; therefore, it was not relevant for the corporation to disclose the same information for each position. ABB also had a finance and audit committee unlike some other corporations that had one finance and one audit committee. We thought it was not right to give the corporation 1 on both committees neither 0 on one of them; therefore, we considered one of the committees as not relevant.

When we had gone through all the annual reports, the items that were not relevant for each corporation was subtracted from the total number of items on the list. The total score for each corporation was then divided with the relevant number of items on the list for each corporation (appendix 5).
Method

The dichotomous procedure is referred to as an unweighted index, which is, according to Cooke (1989a), a suitable research instrument in disclosure studies when the focus of the research is directed to all users of annual reports rather than any specific user group. This means that each item on our list is equally important.

It was difficult to think right when scoring the corporations, since we looked up the corporate characteristics first. During the time we were doing that, we could telephone the corporation or find the information to the characteristics elsewhere, but here the purpose was to see if the corporation had disclosed a certain item. An example is the committees; it was easy to give the corporation 0 if the board of directors did not have a committee, but this was not the point. Here, the corporation only received 0 if it had not mentioned that the board of directors did not have any committee(s); whereas, if the corporation had disclosed that the board of directors did not have a committee it received 1.

3.2.3 Step 4 - Processing and analyze of data

After collecting the data from the annual reports from 2003, it was now time to put the data into SPSS version 11.5, to be able to analyse our empirical data.

According to Norusis (2002), a dependent variable is thought to be influenced by another variable, an independent variable. Since other researchers and we think that the level of any kind of disclosure is influenced by different corporate characteristics, the corporate governance disclosure index will be our dependent variable and the corporate characteristics our independent variables. When trying to establish if a relationship exists between a dependent variable and independent variables, linear and multiple regression analyses will be used.

The scales on which the variables are measured must always be considered, because not all variables are suitable in all kinds of analyses. Variables whose values cannot be meaningfully ranked from smallest to largest are said to be measured on a nominal scale. Variables on an ordinal scale can however indicate order or rank. The values of variables that can tell how much larger or smaller one value is compared with another is said to be measured on a ratio scale. The last scale, the interval scale, is just like a ratio scale except that it does not have an absolute zero, but the distinction between them is seldom important in statistical analyses (Norusis, 2002).

Variables on a nominal scale can be included in a regression model, but they have to be coded using 1 and 0; this is called a dummy variable (Norusis, 2002). The variables for large audit firm, role duality, multiple listings and the committees were coded, as we were going through the annual reports. The corporation received 1 if it had a Big 4 audit firm serving as a proxy for large audit firms, 1 if role duality existed, 1 if it was listed on several stock exchanges and 1 on each of the audit, nomination and compensation committee that the corporation’s board of directors had, but otherwise 0.
Method

When transforming the industry type and domestic listing status variables into dummy variables in SPSS, we shortened the names; table 1 is a disposition over this. Whereas the other variables; management ownership, non-executive directors, diffuse ownership, board size, number of shareholders, board ownership, board compensation, board activity and corporation size, are on a ratio scale.

Table 1 Disposition of industry type and domestic listing status as dummy variables

<table>
<thead>
<tr>
<th>Industry type</th>
<th>Domestic listing status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>A-list most frequently traded</td>
</tr>
<tr>
<td>Industrials</td>
<td>A-list other</td>
</tr>
<tr>
<td>Materials</td>
<td>Attract 40</td>
</tr>
<tr>
<td>Health Care</td>
<td>O-list other</td>
</tr>
<tr>
<td>Consumer discretionary</td>
<td></td>
</tr>
<tr>
<td>Information technology</td>
<td></td>
</tr>
<tr>
<td>Consumer staples</td>
<td></td>
</tr>
</tbody>
</table>

To be able to know which of the independent variables that were significantly related to the dependent variable at a 5% significance level, we first ran a linear regression for each of the independent variables (appendix 6). This showed that nine independent variables were significantly related to the corporate governance disclosure index; since these variables' significance levels were lower than 0.05. The independent variables that showed a significant relationship with the corporate governance index were going to be included in a multiple regression.

The partial regression coefficient for a variable, labelled $B^7$ in a regression model, tells how much the value of the dependent variable will change when the value of the independent variable increases by one and the values of the other independent variables are unchanged. Moreover, by looking at $R$ square, it is possible to see how much of the variability in the dependent variable which is explained by the independent variables (Norusis, 2002).

When examining relationships with a multiple regression model, the conclusions about independent variables must be drawn carefully. It is possible that some of the independent variables are correlated with each other, this is called multicollinearity. The strength of the possible multicollinearity is called tolerance. If some of the independent variables have a high tolerance, the coefficients of the other variables are affected, therefore it is important to examine if multicollinearity exists between the independent variables (Norusis, 2002).

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$^7$ Henceforth, we will label it $B$ coefficient.
Method

A Pearson correlation coefficient matrix was produced to examine if multicollinearity existed and how high the tolerance was (see table 4). In prior studies, for example Ho and Wong (2001), Hossain et al. (1995), and Roberts (1992), a tolerance level lower than 0.8 or 0.9 have been considered not to be harmful to the multiple regression model. If tolerance levels of at least 0.8 exist, the multiple regression analysis can be run with the variables that are highly correlated at the same time.

Now it was time to run the multiple regressions. We chose to run a stepwise multiple regression for each combination of the independent variables, due to the multicollinearity problem. As a result, we received five different multiple regressions (appendix 7).

After using these three steps, linear regression, multicollinearity and multiple regressions, we analysed the data and draw conclusions.

3.3 Reliability and validity

Reliability means that the measuring instrument will provide reliable and stable results, hence that it is free from systematic errors. To gain high reliability the method should be independent of examiner and examined units. Validity can be defined as the measuring instruments capability to measure what was intended to be measured (Eriksson & Wiedersheim-Paul, 2001).

Eriksson and Wiedersheim-Paul (2001) have arranged the following checklist on different critical matters in an examination concerning the reliability and validity.

3.3.1 Interpretation errors

Interpretation errors arise when examining a sample and drawing conclusions about the population and having one of the following defects in the examination method:

- Sampling errors: a unit can be missing or a unit that has been wrongly classified can be included.

To minimize the risk of sampling errors, the list of corporations on the Stockholm Stock Exchange was obtained from the Swedish stock exchange’s website since we think it is a reliable source.

- Non-response problems: the results are distorted, if answers are not received from everyone and if the answers from those who have not answered would have been different from the received answers.

As mentioned earlier, we e-mailed the corporations twice and asked for the annual reports from 2003. The annual reports that were not obtained from the corporations were printed out from the corporation’s website, in this way we did not have any non-response problems.
3.3.2 Measurement process errors

A process error occurs when the data material is processed in a way that makes it possible to draw wrong conclusions from it. It can be due to:

- Handling errors: errors in the transfer process from the source to workable data, for example coding errors and punching errors.

As mentioned earlier, we made several decisions when measuring the characteristics and the corporate governance disclosure index, which may have affected the results of this study. Since we developed the corporate governance index together, we think that the risk of including disclosure that does not concern corporate governance and the risk of scoring a corporation wrong was lower than if we had divided the development of the index and the scoring process of the corporation.

- Analyzing errors: miscalculations, misinterpretation or inappropriate analyze methods can give inaccuracies.

Before analysing the data in SPSS, we had a discussion with J. Klaesson, who is a Research Fellow and a Doctor of Philosophy in Economics at Jönköping International Business School (personal communication, 2004-12-15); to make sure that the chosen analyses were appropriate.
4 Analysis and results

The chapter of analysis and results contains descriptive statistics of the dependent variable, followed by analyses of the results of the linear regressions of each independent variable and the corporate governance index. Moreover, a Pearson’s multicollinearity test of the independent variables is included; thereafter, the results of the multiple regressions are analysed.

Table 2 shows the descriptive statistics for the dependent variable, the corporate governance index. The average corporate governance disclosure index was 0.2944, with a range between 0.16 (BioPhausia) and 0.55 (ABB), which also can be seen in appendix 5. ABB was the corporation that had disclosed the most information about corporate governance, but only received an index of 0.55, due to the great variation of corporate governance information in the annual reports of the corporations in our sample. Therefore, BioPhausia’s index of 0.16 seems very low.

Table 2 Descriptive statistics of the corporate governance index

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>N</strong></td>
<td><strong>41</strong></td>
</tr>
<tr>
<td><strong>Valid</strong></td>
<td><strong>41</strong></td>
</tr>
<tr>
<td><strong>Missing</strong></td>
<td><strong>0</strong></td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td><strong>0.2944</strong></td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td><strong>0.16</strong></td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td><strong>0.55</strong></td>
</tr>
</tbody>
</table>

4.1 Linear regressions

To be able to examine which or what combination of the independent variables that have a significant relationship with the dependent variable, which is done through a multiple regression; a linear regression for each of the variables have to be conducted first.

4.1.1 Management ownership

Agency theory claims that the level of corporate governance disclosure increases as the management ownership increases, since the managers’ interest is more aligned with the interests of the shareholders (see 2.2.1.1). Therefore, we hypothesised:

**H1:** There is a positive association between management ownership and the levels of corporate governance disclosures.
Since the linear regression of this independent variable and the dependent variable shows a positive association (B coefficient: 0.179) with a significance level of 0.579, in other words, an insignificant positive association (appendix 6); therefore we reject the hypothesis. This does not necessarily mean that the theory is wrong, since only six of our corporations had managers that owned more than 1% of the outstanding shares and only three of them owned more than 10% (appendix 3). This might not be sufficiently high to align the interest between the managers and shareholders; therefore, the corporate governance disclosure level is not significantly affected by the managers’ level of ownership.

4.1.2 Non-executive directors

The larger the proportion of non-executive directors on the board, the more effective it will be in monitoring managerial opportunism, since non-executive directors are seen as a toll for monitoring and controlling the actions of the managers; therefore, corporations can be expected to have more disclosure (see 2.2.1.2). Our hypothesis is therefore as follows:

H: There is a positive association between proportion of non-executive directors and the levels of corporate governance disclosures.

As can be seen in appendix 6, the linear regression of this independent variable and the dependent variable shows an insignificant positive association (Significance level: 0.503; B coefficient: 0.062); therefore, we reject the hypothesis. Since most of the corporations in our sample mostly had non-executive directors (appendix 3), the theory that this will lead to more corporate governance disclosure is incorrect.

However, when measuring the independent variables we noticed that the majority of directors, both dependent and independent, also are members in board of directors in several other corporations. This might affect the independence of the directors since they, in some cases, are likely to be members of the same board of directors, making the directors of listed corporations well acquainted and their membership in different board of directors merely becomes a routine.

4.1.3 Large audit firms

Large audit firms have greater expertise, experience and more incentive to encourage their clients to disclose more information since they can reduce information asymmetry between shareholders and managers, by encouraging managers to disclose more information. At the same time, they do not want to be associated with clients who disclose limited information, because of the possible damaging of their reputation (see 2.2.1.3). Therefore, our hypothesis is as follows:

H: There is a positive association between large audit firms and the levels of corporate governance disclosures.
We reject the hypothesis, since the linear regression between this independent variable and the dependent variable shows an insignificant negative association, with a B coefficient of -0.002 and a significance level of 0.957 (appendix 6). It was not surprising that the association was insignificant, we suspected this since only three corporations did not use a large audit firm, a Big-4 audit firm (appendix 3), and the corporate governance disclosure index of the corporations that use large audit firms varied a lot.

However, it was surprising that the association was negative. In the boxplot below, it is possible to see that this is because the corporate governance indexes for the corporations that do not use a large audit firm are closer to each other than the indexes for the corporations that use a large audit firm. Since ABB’s value of 0.55 is considered as an outlier; hence not included, the mean is lower than for the corporations that do not use a large audit firm.

This does not necessarily indicate that the theory is incorrect. Therefore, large audit firms may encourage the clients to disclose more corporate governance information, to reduce the information asymmetry between the managers and the shareholders and to protect the audit firm’s reputation.

![Figure 3 Boxplot of CG index and Large audit firms](image)

**4.1.4 Role duality**

The board of directors is ineffective when the decisions of the management cannot be controlled. When CEO duality exists, the CEO needs to monitor own decisions and activities; therefore, actions in the best interest of the shareholders may not be carried out; thereby protecting own interest to decrease the functions of the board of directors (see 2.2.1.4). Our hypothesis is therefore as follows:

\[ H_0: \] There is a negative association between role duality and the levels of corporate governance disclosures.
Analysis and results

The hypothesis cannot be rejected since the linear regression between this independent variable and the dependent variable shows a significant level of 0.000 (appendix 6). However, the B coefficient is positive, 0.262; in figure 4 below, it is obvious that this is because ABB is the only corporation with role duality (appendix 3) and the corporation with the highest corporate governance index. The hypothesis will be included in a multiple regression since it cannot be rejected.

![Boxplot of CG index and Role duality](image)

Figure 4 Boxplot of CG index and Role duality

### 4.1.5 Diffuse ownership

The corporations with diffuse ownership have more incentive to disclose information in the annual report, which can help the shareholders to monitor the managers' activities, since the annual report is the main source of information for small shareholders (see 2.2.1.5). Our hypothesis is therefore as follows:

\[ H_5: \text{There is a positive association between diffuse ownership and the levels of corporate governance disclosures.} \]

The linear regression of this independent variable and the dependent variable shows a positive B coefficient of 0.097 and a significance level of 0.099 (appendix 6), in other words significant at a 10% significance level. However, we look at a 5% significance level, as mentioned earlier in the method chapter, and therefore we reject this hypothesis. The result shows that the theory is wrong; the corporations with high diffuse ownership do not necessarily disclose more corporate governance information in the annual reports than corporations with low diffuse ownership. This might be the case since corporations nowadays spread the information to smaller shareholders in other ways, for example through the website.
4.1.6 Audit committee

The audit committee is regarded as an effective monitoring device for reducing managerial opportunism. Financial reporting, hence the audit committee, can help the principals to monitor the agents’ activities and act as a bonding function where the agents can signal their compliance with the principals’ interests (see 2.2.1.6). Therefore, our hypothesis is as follows:

\[ \text{H}_6: \text{There is a positive association between the existence of an audit committee and the levels of corporate governance disclosures.} \]

The linear regression of this independent variable and the dependent variable shows a positive association (B coefficient: 0.053) and a significance level of 0.038 (appendix 6), as we hypothesised. Consequently, the hypothesis cannot be rejected. This indicates that the theory is not wrong; hence, the existence of an audit committee has a positive effect on the monitoring of the management. Moreover, through financial reporting, the management can signal that they meet the shareholders’ interests, which can result in increased trust in the corporation. The hypothesis will be included in a multiple regression, since it shows a significant association with the corporate governance index.

4.1.7 Board size

Board of directors are less effective monitors as they grow in size, since the control over management will be reduced. As more directors are added, the board of directors loses the ability to be direct and decisive in their operation; therefore, it will be easier for the CEO to control the board of directors (see 2.2.1.7). Therefore, our hypothesis is as follows:

\[ \text{H}_7: \text{There is a negative association between board size and the levels of corporate governance disclosures.} \]

A linear regression shows a significance level of 0.163 and a positive association (B coefficient: 0.008) between this variable and the dependent variable (appendix 6). The result shows the opposite of what we have hypothesised and the hypothesis is therefore rejected. This result shows that the theory is wrong; more directors may be less effective monitors, but this does not necessarily mean that their monitoring is of poorer quality. As can be seen in figure 5 below, BioPhausia (point 5) is one of the corporations with the lowest number of directors (appendix 3) and the corporation with the lowest corporate governance index (0.16). Therefore, it may be the case, that it is easier for the CEO to control the board of directors if it consists of few directors.
Analysis and results

4.1.8 Number of shareholders

It is more likely that the shareholders information needs will be different the greater the number of shareholders is; this results in a greater need for different information to be disclosed (see 2.2.1.8). Our hypothesis is therefore as follows:

H8: There is a positive association between number of shareholders and the levels of corporate governance disclosures.

A positive significant association, with a B coefficient of $1.725\times10^{-8}$ and a significance level of 0.020, is the result from a linear regression of this independent variable and the dependent variable (appendix 6). The result is in accordance with our hypothesis; therefore, the hypothesis cannot be rejected. This indicates that the managers disclose more corporate governance information when the number of shareholders is large, since it is expected that their demand for information differ greatly. The hypothesis will be included in a multiple regression, since it shows a significant association with the corporate governance index.

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The partial regression coefficient, in this case, is extremely small; $1.725\times10^{-8}$ is the same as 0.000 000 000 1725. Henceforth, we will write out the whole value.
4.1.9 Board ownership

When directors of the board own shares, their incentive to provide more disclosure is enhanced, since their interests are more aligned with the shareholders (see 2.2.2.1). Therefore, our hypothesis is as follows:

\[ \text{H}_0: \text{ There is a positive association between board ownership and the levels of corporate governance disclosures.} \]

The result in the linear regression between this variable and the dependent variable shows a significance level of 0.094 and a B coefficient of -0.100 (appendix 6). This insignificant negative association is the opposite of what we hypothesised, based on the theory, and the hypothesis is therefore rejected. This can be the case since the directors with high ownership do not have enhanced incentives to provide more disclosure, since the corporate governance information is obvious for them. This can be supported by the scatterplot below, where the majority of the corporations, with directors owning more than 1%, have a lower corporate governance index.

![Figure 6 Scatterplot of CG index and Board ownership](image)

4.1.10 Board Compensation

As the directors’ compensation gets higher, the board of directors will be more motivated to carry out its role as monitors of the management. The board of directors will be more effective in monitoring managerial opportunism; therefore, the corporations can be expected to have more disclosure (see 2.2.2.2). Our hypothesis is therefore as follows:

\[ \text{H}_1: \text{ There is a positive association between board compensation and the levels of corporate governance disclosures.} \]
The result in the linear regression between this variable and the dependent variable shows a significance level of 0.001 and a B coefficient of 0.000 000 010 31 (appendix 6). This significant positive association is in correspondence with our hypothesis; consequently, the hypothesis cannot be rejected. This indicates that the board of directors’ motivation, to monitor the managers, increases as they receive larger compensation. Consequently, more corporate governance disclosure can be expected. The hypothesis will be included in a multiple regression, since it shows a significant association with the corporate governance index.

### 4.1.11 Nomination committee

The existence of a nomination committee can help to assure that the board of directors consist of non-executive directors, since the committee consists of directors of the board. Moreover, the board of directors must mainly be composed of non-executive directors, hence even the nomination committee. Therefore, the corporations with a nomination committee may disclose more information since the non-executive directors on the board of directors help to enhance the monitoring of the management (see 2.2.2.3). Therefore, our hypothesis is as follows:

\[ H_{11}: \text{There is a positive association between the existence of a nomination committee and the levels of corporate governance disclosures.} \]

As can be seen in appendix 6, the linear regression of this independent variable and the dependent variable shows a highly insignificant association (significance level: 0.980), and a low positive association (B coefficient: 0.001). The direction of the association is in accordance with our hypothesis, but the existence of a nomination committee hardly affects the level of corporate governance disclosure.

The theory states that the nomination committee consists of directors of the board; however, when reading the annual reports we noticed that the nomination committee, in most cases, consists of one director of the board and large shareholder representatives. It might be the case that the representatives nominate individuals that are well known in the business society and already have other board assignments. This may be an explanation to why the existence of a nomination committee do not have the effect on corporate governance disclosure that we hypothesised, since it may lead to poorer monitoring of the managers, given that the directors in listed corporations becomes well acquainted and their membership in different board of directors becomes a routine.

### 4.1.12 Compensation committee

The monitoring over the managers’ compensations, bonuses and other benefits is improved, if the board of directors appoint a compensation committee. Since it will be more effective in monitoring managerial opportunism, corporations can be expected to have more disclosure (see 2.2.2.4). Our hypothesis is therefore as follows:

\[ H_{12}: \text{There is a positive association between the existence of a compensation committee and the levels of corporate governance disclosures.} \]
Analysis and results

The result from the linear regression of this independent variable and the dependent variable is in correspondence with our hypothesis. The B coefficient is 0.057 and the significance level is 0.013 (appendix 6), in other words, a positive significant association. Consequently, the hypothesis cannot be rejected. This indicates that the existence of a compensation committee increases the monitoring of managerial opportunism, hence more corporate governance disclosure can be expected. The hypothesis will be included in a multiple regression, since it shows a significant association with the corporate governance index.

4.1.13 Board activity

Enhanced monitoring of the management, hence a stronger control role, can be a result of more meetings of the board of directors. The enhanced monitoring by the board of directors can ensure that the management fulfils the shareholders’ interests and not act in a self-interested way (see 2.2.2.5). Therefore, our hypothesis is as follows:

$$H_{13}: \text{There is a positive association between board activity and the levels of corporate governance disclosures.}$$

A positive association (B coefficient: 0.003) is the result of the linear regression of this independent variable and the dependent variable, which is in accordance with our hypothesis. However, the significance level is 0.395, in other words insignificant (appendix 6), so the hypothesis is rejected. As can be seen in figure 7 below, ABB (point 1), which has the highest corporate governance index (0.55) has only had six meetings, whereas Pergo (point 23) with a corporate governance index of 0.27 has had 23 meetings (appendix 3 & 5).

Figure 7 Scatterplot of CG index and Board activity
Analysis and results

However, if ABB and Pergo are excluded from the linear regression (see table 3), the board activity variable is positively associated with the dependent variable (B coefficient: 0.008) and the association is significant (significance level: 0.020). This indicates that these corporations affect the result from the first linear regression, with ABB and Pergo included, and that our theory is not wrong; hence, the number of meetings enhances the monitoring of the management.

Table 3 Linear regression of CG index and Board activity, with ABB and Pergo excluded

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>.213</td>
<td>.033</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Board activity</td>
<td>.008</td>
<td>.003</td>
<td>.372</td>
</tr>
</tbody>
</table>

a Dependent Variable: CG index

4.1.14 Corporation size

It is a general agreement that a positive relationship between the size of a corporation and its extent of disclosure is to be expected. Larger corporations tend to have larger pressure and demand of information from government agencies, financial analysts and the public; therefore, larger corporations will disclose more information to lower the pressure and to improve their reputation and image. In addition, more disclosure reduces the information asymmetry between the managers and the fund providers (shareholders); therefore, larger corporations can be expected to disclose more information since they need more external funds. Furthermore, the disclosure costs for larger corporations tend to be lower since they have more internal data, because they generally operate in larger geographical areas and have more products (see 2.2.3.1). Our hypothesis is therefore as follows:

H14: There is a positive association between corporation size and the levels of corporate governance disclosures.

As can be seen in appendix 6, the result from the linear regression of this independent variable and the dependent variable is significant and in accordance with our hypothesis (B coefficient: 0.000 000 000 000 899 7; significance level: 0.002). Therefore, the hypothesis cannot be rejected. This indicates that larger corporations disclose more corporate governance information, since the corporations want to lower the pressure from government agencies, financial analysts and the public; at the same time, the corporations’ reputation and image are improved; hence, increase the shareholders’ trust in the corporation.
Moreover, larger corporations require more external funds and can therefore be expected to disclose more corporate governance information, since this decreases the information asymmetry between the managers and the shareholder, which are the providers of the external funds, and can increase the shareholders’ trust in the corporation. In addition, the disclosure costs for larger corporations are lower since the corporations tend to have more products and operate in larger geographical areas, hence have more internal data; therefore, larger corporations are expected to disclose more corporate governance information. The hypothesis will be included in a multiple regression, since it shows a significant association with the corporate governance index.

### 4.1.15 Multiple listings

Since corporations, which are listed beyond their domestic capital market, have to meet and comply with the needs of the capital market and the foreign regulations, they can be expected to disclose more information. These corporations are also more in the public eye, hence additional capital market pressure and more potential conflict between and across the interested parties; therefore, corporations may disclose information to reduce the agency costs (see 2.2.3.2). Our hypothesis is therefore as follows:

\[ H_{15}: \text{There is a positive association between multiple listings and the levels of corporate governance disclosures.} \]

The result of the linear regression of this independent variable and the dependent variable is significant (significance level: 0.002) and in accordance with our hypothesis (B coefficient: 0.136), as can be seen in appendix 6. Consequently, the hypothesis cannot be rejected. This indicates that corporations, which are listed on several stock exchanges, are expected to have more corporate governance disclosure, since they have to meet and comply with the needs of the capital market and the foreign regulations, as well as domestic.

Moreover, these corporations also tend to be more in the public eye; therefore, more disclosure can be expected to lower the pressure and lessen the conflict between and across the interested parties. More disclosure can also be expected, since the foreign and domestic regulations may not include the same requirements of corporate governance information. The hypothesis will be included in a multiple regression, since it shows a significant association with the corporate governance index.

### 4.1.16 Industry type

There are historical reasons why corporations in some industries disclose more information than others do; it could be that the corporation in an industry follows a dominant corporation, which discloses a higher level of information (see 2.2.4.1). For this reason, our hypothesis is as follows:

\[ H_{16}: \text{There is association between industry type and the levels of corporate governance disclosures.} \]
The results from the linear regressions of the seven industry type variables and the dependent variable shows that no industry type is significantly associated with the level of corporate governance disclosure, not positively nor negatively (appendix 6); as a result, the hypothesis is rejected. The reason for this may be that we used a too general classification of the industry types and therefore the difference between the corporations in our sample cannot be shown. For example, both Volvo and Poolia are classified as industrials; however, there is a big difference in what these corporations do, Volvo produces cars and trucks while Poolia hire out and recruit staff to corporations.

### 4.1.17 Domestic listing status

The inclusion of this variable makes it possible to draw general conclusions about the listed corporations in Sweden, since the corporations in our sample are randomly selected in proportion to the total number of corporations on each of the Stockholm Stock Exchange’s four lists. However, since larger corporations tend to be on the Stockholm Stock Exchange’s A-list, this variable can serve as a proxy for corporation size (see 2.2.4.2). Therefore, to rule out the possibility of this proxy, our hypothesis is as follows:

**H17:** There is association between domestic listing status and the levels of corporate governance disclosures.

As can be seen in appendix 6, there is a significant association between the dependent variable and the independent variables of A-list most frequently traded (DAmostfr) and O-list other (DOother). The B coefficient for A-list most frequently traded is positive, while it is negative for O-list other. The variables of A-list most frequently traded and O-list other will be included in a multiple regression, since they show a significant association with the corporate governance index.

### 4.1.18 Summary of the linear regressions

Of all the 17 variables we have examined, there were only nine that were significantly related to the dependent variable, in other words the corporate governance index. We will therefore include the following variables in the multiple regression; role duality, audit committee, number of shareholders, board compensation, compensation committee, corporation size, multiple listings, A-list most frequently traded and O-list others.
4.2 Multicollinearity

Before running the multiple regressions, the independent variables have to be examined and checked to see if there is multicollinearity between them. Multicollinearity between the independent variables is not a problem until it exceeds the limit of 0.8, as mentioned in the method chapter. Table 4 shows high multicollinearity between board compensation and number of shareholders, board compensation and multiple listings, corporation size and multiple listings, corporation size and DAmostfr and finally between multiple listings and DAmostfr.

Table 4 Pearson’s multicollinearity test

<table>
<thead>
<tr>
<th>Role duality</th>
<th>Audit committee</th>
<th>Number of shareholders</th>
<th>Board compensation</th>
<th>Compensation committee</th>
<th>Corporation size</th>
<th>Multiple listings</th>
<th>DAmostfr</th>
<th>DOother</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role duality</td>
<td>Pearson Correlation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audit committee</td>
<td>Pearson Correlation</td>
<td>,246 (<strong>),344 (*),804 (</strong>)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of shareholders</td>
<td>Pearson Correlation</td>
<td>,232 (**)</td>
<td>,344 (*)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board compensation</td>
<td>Pearson Correlation</td>
<td>,708 (**)</td>
<td>,399 (**)</td>
<td>,804 (**)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation committee</td>
<td>Pearson Correlation</td>
<td>,140 (**)</td>
<td>,461 (**)</td>
<td>,235 (**)</td>
<td>,234 (**)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporation size</td>
<td>Pearson Correlation</td>
<td>,499 (**)</td>
<td>,247 (**)</td>
<td>,678 (**)</td>
<td>,789 (**)</td>
<td>,291 (**)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Multiple listings</td>
<td>Pearson Correlation</td>
<td>,563 (**)</td>
<td>,437 (**)</td>
<td>,787 (**)</td>
<td>,879 (**)</td>
<td>,291 (**)</td>
<td>,962 (**)</td>
<td>1</td>
</tr>
<tr>
<td>DAmostfr</td>
<td>Pearson Correlation</td>
<td>,481 (**)</td>
<td>,511 (**)</td>
<td>,687 (**)</td>
<td>,798 (**)</td>
<td>,291 (**)</td>
<td>,921 (**)</td>
<td>,855 (**)</td>
</tr>
<tr>
<td>DOother</td>
<td>Pearson Correlation</td>
<td>,208 (**)</td>
<td>,515 (**)</td>
<td>,352 (**)</td>
<td>,365 (**)</td>
<td>,570 (**)</td>
<td>,432 (**)</td>
<td>,370 (**)</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Because there were multicollinearity between some of the nine independent variables, we have constructed a table of possible multiple regressions, where the correlated independent variables were not included in the same multiple regression. The result, as can be seen in table 5, is five different multiple regressions, where the independent variables with an X are included and the ones with a – are not.

Table 5 Combinations of related variables in the multiple regressions

<table>
<thead>
<tr>
<th>Bard compensation</th>
<th>Multiple listing status</th>
<th>Number of shareholders</th>
<th>Corporation size</th>
<th>A-list most frequently traded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>
4.3 Multiple regression

As can be seen in appendix 7, it does not matter which one of the regression models we use since the results are the same in all of them. Since, R square is larger in model 2 than in model 1, our final multiple regression model is model 2 in table 6. The model explains 41.2% of the variability in the corporate governance index.

Table 6 Final multiple regression models

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.547(a)</td>
<td>.299</td>
<td>.282</td>
<td>.0638</td>
</tr>
<tr>
<td>2</td>
<td>.642(b)</td>
<td>.412</td>
<td>.381</td>
<td>.0583</td>
</tr>
</tbody>
</table>

a Predictors: (Constant), Role duality
b Predictors: (Constant), Role duality, DOother

We only included the independent variables that had a significant association with the dependent variable in a linear regression; however, in a multiple regression the results are different. Role duality and DOother are the only independent variables that show a significant association with the corporate governance index in the multiple regression, hence we cannot reject the hypotheses.

Whereas, Audit committee, Compensation committee, Board compensation, Corporation size, Number of shareholders, Multiple listings and DAmostfr no longer are significantly associated with the corporate governance index, hence the hypotheses are rejected. This difference occurs since the independent variables are correlated with each other, even though we have checked and considered for high values of multicollinearity between the independent variables.
4.3.1 Role duality

Table 6 shows that role duality has the largest significant relationship with the corporate governance index, since it is the first one that is entered in the model. However, our hypothesis for role duality was:

$$H_4: \text{There is a negative association between role duality and the levels of corporate governance disclosures.}$$

As can be seen, the result in the multiple regression is the opposite from our hypothesis, the B coefficient is positive (0.228), which means that the level of corporate governance disclosure increases if there is role duality in a corporation. This indicates that the theory is wrong, since it states that the CEO’s power and controlling role gets too large. It gets harder for the board of directors to monitor the CEO, since the CEO also is the chairman. Therefore, it is easier for the CEO to protect own interests instead of handling in the interest of the shareholders.

However, this opposite result is probably because we actually measured if the corporation had foreign owners, since we noticed that ABB was the only corporation with role duality (appendix 3) and foreign owners. This positive association with the corporate governance index can be a result of that a foreign corporation need to follow several laws and regulations, since it has to follow both domestic laws and regulation(s) for the stock exchange(s) that it is listed on. However, this is one of the arguments for why a positive association is hypothesised in the multiple listings characteristic. On the other hand, it may be that Switzerland, where ABB’s parent company is located, has exhaustive laws and regulations concerning corporate governance disclosure.

4.3.2 O-list other

DOother, O-list other, was the second and last significant independent variable that was entered in the multiple regression model (table 6). The domestic listing status variables were entered since the corporations in our sample were drawn from all of the lists on the Stockholm Stock Exchange. Therefore, we did not include the direction of the association in the hypothesis:

$$H_{17}: \text{There is association between domestic listing status and the levels of corporate governance disclosures.}$$

However, we stated in the frame of reference that these variables could serve as proxies for corporation size, since larger corporation tend to be listed on the Stockholm Stock Exchange’s A-list. We believe that the domestic listing status variables serves as proxies for corporation size, since the DOother variable is negatively associated, B coefficient of -0.053, with the corporate governance index (table 6), while the DA-mostfr variable was positively associated, B coefficient of 0.120, with the corporate governance index (appendix 6), even though the later association was not significant. Hence, smaller corporations disclose less information than larger corporations do and vice versa.
5 Conclusions and comments

The chapter of conclusions and comments begins with the conclusions drawn from the analysis; thereafter, follows comments and suggestions on further studies.

5.1 Conclusions

The purpose with this master thesis was, with starting point in agency theory, to contribute to the understanding of which factors that influence corporations to disclose corporate governance information in the annual reports. Given that corporate scandals have continued to occur in recent years, at the same time, the interest for corporate governance has increased, which clearly can be seen in the annual reports.

From the analysis it is possible to conclude that the following factors influence corporations to disclose corporate governance information; role duality, the existence of an audit committee, number of shareholders, board compensation, the existence of a compensation committee, corporation size, multiple listings, A-list most frequently traded and O-list others, when analysing the association between the corporate governance index and the independent variables in linear regressions.

Moreover, it is possible to conclude that the following factors do not influence the corporations to disclose corporate governance information; management ownership, the proportion of non-executive directors, larger audit firms, diffuse ownership, board size, board ownership, the existence of a nomination committee, board activity, industry type, A-list other, Attract 40, when analysing the association between the corporate governance index and the independent variables in linear regressions.

However, it is possible to conclude that the following factors do not influence the corporations to disclose corporate governance information, when analysing the variables in a multiple regression; the existence of an audit committee, number of shareholders, board compensation, the existence of a compensation committee, corporation size, multiple listings and A-list most frequently traded.

Moreover, role duality actually measured if a corporation had a foreign parent company and corporations listed on the O-list other on Stockholm Stock Exchange served as proxies for smaller corporations. Therefore, from the analysis of the multiple regressions of the corporate governance index and the significant variables from the linear regression, it is possible to conclude that corporations are influenced by the origin of the parent company and the size of the corporation to disclose corporate governance information.

Another conclusion is that corporate governance characteristics derived from agency theory is not appropriate when trying to find factors that influence corporations to disclose corporate governance information. Nevertheless, this does not mean that it is inappropriate to take the starting point in the agency theory.
5.2 Comments

During the time we were writing this master thesis, we faced some problems. Time was one problem that never followed what we planned, consequently because we examined 41 corporations and our index contained 285 items. If we today want to change how we planned and thought, it will be to minimize the number of corporations and at the same time the list of items. Considering that the time that we are aloud to write the master thesis is 10 weeks, it has taken us almost seven months. We think it depends on that our frame of reference consists of authors who have written articles and examined countries around the world, maybe during a longer period than seven months. It is now we realize that we have taken on a bigger study than we could handle in 10 weeks. At the same time, it has been difficult since, as we have mentioned earlier, we have not found any studies concerning corporate governance disclosure in Sweden nor abroad.

Since we used many corporate characteristics, compared to similar prior studies, and relatively many corporations, we had problems to follow our time plan and dead line for the master thesis. The difficulty was to find where the characteristics were in the annual reports. As we mentioned earlier, sometimes we had to contact the corporation we studied to find out some characteristics, our questions could not always be answered by the person we contacted; sometimes, we had to call other employees, on different hours or several days later. This was something that we had not considered in our plan, but were forced to check, since we wanted answers on everything from all of the corporations.

The analysis in SPSS also caused some problems. Last year, we worked a little with SPSS within the course Statistical methods, but in the course the variables entered in analysis were stated; therefore, we had problems when making the multiple regression. In some articles with similar studies, that we have seen, there have only been made a stepwise multiple regression. Since we had 17 variables, it is not suitable to make a stepwise multiple regression with all variables at one. Therefore, we first had to make linear regressions between the corporate governance disclosure index and each of the variables, to see which of them that were significantly related, which also took longer time than we had planned.

It has been easy to look at how the authors of the articles concerning disclosure practices have done their research and written their articles, but since this study is not an article but a master thesis, we have had some problems with the design since there are different demands on a master thesis.
5.3 Further studies

We used 15 corporate governance characteristics, derived from agency theory, and two control variables when conducting this study. Since only two were significantly related to the corporate governance disclosure index, we think it would be interesting to study this problem with other characteristics derived from agency theory or other theories.

A code group\(^9\) with Eric Åsbrink, the former minister of finance in Sweden, as chairman, have made a Swedish Code of corporate governance, which will come into affect on the 1\(^{st}\) of January, 2005. It will mainly be a guide for the corporations of what they should include in the annual reports about corporate governance. Since the annual reports for the fiscal year 2004 are going to be published during the spring 2005, we think it would be interesting to examine if the corporations have complied with the Swedish code or not. Moreover, if the corporations have not followed the code, how come?

Since we have used an unweighted index, maybe the results would be different if a weighted index would be used. A weighted index takes the disclosed items’ importance, of a specific group of users, into account.

Another way to encounter this problem is to make a qualitative study, in other words, interview the corporations about influencing factors and their motives for corporate governance disclosure.

References


References


References


References


References


Appendix 1 – Variables in prior studies

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## Appendices

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Appendices

Appendix 2 – Sample of Swedish listed corporations

ABB
Addtech
Bergman&Beving
Billerud
BioPhausia
Borås Wäfveri
CashGuard
Concordia
Consilium
Diamyd Medical
Ericsson
Fagerhult
Feelgood
Höganäs
Itab
Johnson Pump
Karolin Machine Tool
Micronic
MultiQ
Munters
Ortivus

PartnerTech
Pergo
Poolia
Retail and Brands
Rottneros
Rörvik Timber
Sardus
Scania
Scibona
SecoTools
Senea
Sigma
Strålfors
Svedbergs
Technology Nexus
Teleca
Trio
Tripep
Westergyllen
Volvo
### Appendix 3 – Sample with independent variables

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<th>Corporation</th>
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<th>Non-executive directors</th>
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Appendices

Appendix 4 – List of items

1 Information about Extraordinary General Meeting

Board of directors

2 principles for composition
3 composition
4 other (smaller) shareholder’s involvement in the nominating processes
5 re-election possible
6 who the board of directors has been elected by
7 mandate length
8 who new members replace
9 who the chairman has been elected by
10 laws & recommendations etc the board of directors follows
11 responsibilities & tasks
12 the chairman's responsibilities
13 information about rules of procedure for the board
14 the board has developed instructions for the CEO
15 location of the board
16 convener
17 number of meetings
18 discussed issues on the meetings
19 average duration of the meetings
20 average attendance at the meetings
21 other people beside the members who are aloud to attend the meetings
22 evaluation of the board
23 evaluation of the CEO
24 evaluation of the importance of the committees
25 evaluation of the stakeholders' view and attitude towards the corp.
26 cross-involvement
27 received training sessions about corporation matters & made site visits
28 received training sessions by the Stockholm Stock Exchange
29 received introduction, education & training
30 lead director
31 lead director's tasks
32 when the position of lead director will cease to exist
33 principles for board compensation

34 the decider of board compensation
35 total board compensation
36 salary & compensation to the board, CEO & management
37 salary & compensation to the board & CEO(s)
38 salary & compensation to the board & other employees
39 salary, compensation & social security costs to the board & CEO(s)
40 social security costs to the board & CEO(s)
41 social security costs to the board
42 pension costs & social security costs to the board & CEO
43 pension costs & social security costs to the board, CEO & management
44 pension costs to the board, CEO & management
45 pension costs to the board(s) & CEO(s)
46 loans to the board, CEO or managers

The members of the board

47 pictures
48 member in the committee(s)
49 age
50 city and/or country
51 gender
52 main education
53 employment year
54 work experience
55 position in the corporation
56 the year the member was elected
57 board member in other corporations
58 holdings in the corporation
59 relationship to larger shareholders in the corporation
60 relationship to firm(s) the corporation have business relations with
61 relationship to firm(s) the corporation have relations with
62 independent in relation to the corporation & the management
63 what the independent relation is appointed from
64 fee & other compensations to members
65 salary to members
66 principles of pension to other members
Appendences

67  information about personnel discount to members of the board
68  fee & other compensations to the chairman
69  decider of the salary for the chairman
70  salary and/or other compensation to the chairman
71  principles of pension to the chairman
72  pension to the chairman
73  terms of employment for chairman
74  principles of severance payments to chairman
75  servance payment to chairman
76  refers to the website for further information

The board's secretary

77  name
78  age
79  holdings in the corporation
80  position in the corporation
81  employment year in the corporation
82  education
83  election year
84  work experience
85  board assignments in other corporations

No committee(s)

86  who the members of the board are nominated by
87  who the auditor(s) are nominated by
88  who board fees are suggested by

89  Nomination committee
90  when it was formed
91  who the tasks are decided by
92  responsibilities & tasks
93  who the members are elected by
94  mandate length
95  composition
96  chairman of the committee

97  how to contact the committee/chairman
98  the name of the owners the members represent
99  line of work for the representatives
100  convener
101  secretary
102  number of meetings
103  average duration of the meetings
104  average attendance at the meetings
105  other people beside the members who are aloud to attend the meetings
106  committee fee
107  information about communication with the board
108  Compensation committee
109  when it was formed
110  who the tasks are decided by
111  responsibilities & tasks
112  who the members are elected by
113  mandate length
114  composition
115  chairman of the committee
116  secretary
117  number of meetings
118  average duration of the meetings
119  average attendance at the meetings
120  other people beside the members who are aloud to attend the meetings
121  committee fee
122  information about who reports to the committee
123  information about communication with the board
124  Audit Committee
125  when it was formed
126  who the tasks are decided by
127  responsibilities & tasks
128  who the members are elected by
129  composition
Appendences

130 chairman of the committee
131 secretary
132 number of meetings
133 average duration of the meetings
134 average attendance at the meetings
135 other people beside the members who are aloud to attend the meetings
136 committee fee
137 information about communication with the board

138 Strategy Committee
139 when it was formed
140 responsibilities & tasks
141 composition
142 chairman of the committee
143 secretary
144 number of meetings
145 average duration of the meetings
146 average attendance at the meetings
147 committee fee
148 information about communication with the board

149 Finance Committee
150 who the tasks are decided by
151 responsibilities & tasks
152 who the members are elected by
153 composition
154 chairman of the committee
155 number of meetings
156 committee fee
157 information about the communication with board and/or chairman

158 "Ownership structure" Committee
159 responsibilities & tasks
160 who appoints the members
161 composition

161 information about communication with the board

163 Acquisition Committee
164 composition
165 number of meetings
166 other people beside the members who are aloud to attend the meetings
167 committee fee

168 Disclosure Committee
169 responsibilities & tasks
170 who appoints the members

171 Patent Group
172 responsibilities & tasks
173 composition

174 Working Committee
175 responsibilities & tasks
176 composition

177 Currency Committee
178 committee fees

179 Human Resource Committee
180 responsibilities & tasks

Management (excl. CEO)
181 responsibilities and tasks
182 who the management is appointed by
183 composition
184 pictures
185 age
186 city and/or country
187 gender
188 position in the corporation
Appendices

189 employment year
190 ending year of employment
191 main education
192 work experience
193 membership in the corporation’s board
194 when the member was elected into the board
195 secretary to the board
196 board member in other corporations
197 holdings in the corporation
198 description of option/warrant programs (incl CEO & working chairman)
199 relationship to firm(s) the corporation have business relations with
200 information about leadership development program
201 refers to the website for further information
202 how often the management have meetings
203 who the managers gets reports from
204 the decider of terms of employment
205 principles of terms of employment
206 employees that the principles of terms of employment concern
207 servance payment
208 proposes the principles of salary, bonus & other compensation
209 the decider of the salary
210 principles of salary, bonus & other compensation
211 employees that the principles of salary etc. concern
212 salary, bonus & other compensation
213 salary, bonus & other compensation (incl CEO(s))
214 principles of pension
215 employees that the principles of pension concern
216 pension
217 social security fee
218 servance payment to former managers (incl CEO)
219 principles for salary to former managers (incl CEO)
220 salary and other compensations to former managers (incl CEO)
221 salary and servance payments to former managers (incl CEO)
222 principles of pensions to former managers (incl CEO)
223 pensions to former managers (incl CEO)
224 pensions and social security fees to former managers (incl CEO)

CEO
225 responsibilities & tasks
226 who the CEO is appointed by
227 picture
228 other positions in the corp.
229 age
230 city and/or country
231 gender
232 employment year
233 main education
234 work experience
235 member of the corporation’s board
236 essential assignments in other companies & corporations
237 holdings in the corporation
238 relationship to firm(s) the corporation have business relations with
239 when the CEO reports to the board of directors
240 what the CEO reports to the board of directors
241 who the CEO gets reports from
242 the decider of terms of employment
243 principles of terms of employment
244 servance payment
245 proposes the principles of salary, bonuses & other remunerations
246 principles of salary, bonus & other compensation
247 the decider of the salary
248 salary, bonus & other compensation
249 principles of pension
250 pension
251 social security fee

Auditors
252 responsibilities & tasks
253 non-audit services
254 statement for how the evaluation of the auditing has been accomplished
Appendences

- Information about the audit plan
- Audit firm
- City of the audit firm
- Which year the audit firm was elected
- Who the auditors are elected by
- Mandate length
- Mandate length of the deputies
- Pictures
- Name of the auditors
- Age
- City and/or country
- Assignments in other corporations
- Which year the (head) auditors were elected
- Employment year in the audit firm
- Holdings in the corporation
- Audit fees
- Fees for non-audit services
- Information about the invoicing to the auditors
- Information about the communication with the board/committee

Other information

- Report to the Stock Exchange(s)
- Submits the annual report to the Stock Exchange’s supervision authority
- Languages the information is available in
- Publish date of coming reports
- Refers to the website for reports from the corporation
- Provides address, etc. for ordering of reports
- Investor relations team
- Investor relations team’s tasks
- How to contact investor relations
- Definition of corporate governance
- Goals for corporate governance in the corporation
- Refers to the website for further information about corporate governance
Appendix 5 – The disclosure index for each corporation

<table>
<thead>
<tr>
<th>ABB</th>
<th>Addtech</th>
<th>B&amp;B</th>
<th>Billerud</th>
<th>BioP</th>
<th>BorÅsW. CashG.</th>
<th>Concordia</th>
<th>Consilium</th>
<th>DiamydM.</th>
<th>Ericsson</th>
<th>Fagerhult</th>
<th>Feelgood</th>
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<td>Sum of the total item for each corporation</td>
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<td>86</td>
<td>105</td>
<td>46</td>
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<td>75</td>
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<td>5</td>
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<th>J.P</th>
<th>K.M.T</th>
<th>Micronic</th>
<th>MultiQ</th>
<th>Munters</th>
<th>Orivus</th>
<th>PartnerT.</th>
<th>Pergo</th>
<th>Poolia</th>
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<td>7</td>
<td>19</td>
<td>7</td>
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<th>Svedbergs</th>
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## Appendix 6 – Model summary for linear regressions

### Coefficients(a)

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a Dependent Variable: CG index

### Coefficients(a)

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a Dependent Variable: CG index

### Coefficients(a)

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a Dependent Variable: CG index

### Coefficients(a)

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a Dependent Variable: CG index
### Appendences

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a Dependent Variable: CG index

#### Coefficients(a)

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a Dependent Variable: CG index

#### Coefficients(a)

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a Dependent Variable: CG index

#### Coefficients(a)

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a Dependent Variable: CG index

#### Coefficients(a)

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a Dependent Variable: CG index
### Appendices

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* a Dependent Variable: CG index

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#### Coefficients(a)

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a  Dependent Variable: CG index

### Coefficients(a)

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a  Dependent Variable: CG index

### Coefficients(a)

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a  Dependent Variable: CG index

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a  Dependent Variable: CG index

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a  Dependent Variable: CG index
### Coefficients(a)

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* Dependent Variable: CG index

### Coefficients(a)

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* Dependent Variable: CG index
Appendices

Appendix 7 – Multiple regressions

Combination 1

Model Summary

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a Predictors: (Constant), Role duality
b Predictors: (Constant), Role duality, DOother

Coefficients(a)

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a Dependent Variable: CG index

Combination 2

Model Summary

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a Predictors: (Constant), Role duality
b Predictors: (Constant), Role duality, DOother

Coefficients(a)

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a Dependent Variable: CG index
### Combination 3

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a Predictors: (Constant), Role duality  
b Predictors: (Constant), Role duality, DOother

**Coefficients(a)**

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a Dependent Variable: CG index

### Combination 4

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a Predictors: (Constant), Role duality  
b Predictors: (Constant), Role duality, DOother

**Coefficients(a)**

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a Dependent Variable: CG index
### Combination 5

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a Predictors: (Constant), Role duality  
b Predictors: (Constant), Role duality, DOother

#### Coefficients(a)

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