THE ROLE OF BOARDS OF DIRECTORS AND THE RELATIONSHIP WITH ORGANISATIONAL PERFORMANCE:

AN EMPIRICAL INVESTIGATION INTO SMALL AND MEDIUM Sized ENTERPRISES IN ICELAND

A thesis submitted in partial fulfilment for the Degree of Doctor of Business Administration

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January 2008
Abstract

This thesis is an empirical investigation which focuses on the role of the board in small and medium sized enterprises in Iceland and the relationship between boards and organisational performance. The research will support the claim that there are three main roles that boards focus on: Strategic role, Monitoring role and Resource and Advice role. Furthermore the research will indicate there is a positive relationship between boards of directors and organisational performance within the context of the study.

The board of directors has somewhat been the black box of organisations as there has been lack of research exploring the process of the board. Although corporate governance as a research field has grown, the focus has mostly been on the structure of the board rather than the process. Only a handful of studies have collected primary data and there has been a need for studies exploring the process rather than the structure of boards. Furthermore there has been growing interest in studies from another legal context than the Anglo-Saxon dimension. This study responds to these calls as the study collects primary data with focus on the process of the board in SMEs in Iceland. The response rate was 21% from a target group of 560 companies.

It is argued in this thesis that the main problem of corporate governance is to establish there is a positive relationship between the board of directors and organisational performance. The relationship would reject the claim that boards do not have any value as an organ within the organisation, other than being a legal formality. This is the claim of management hegemony theory, which describes the board as a rubber stamp for managerial decisions. Agency theory claims on the contrary that the board can have value as an instrument for monitoring management and stewardship theory claims the board’s role in strategy is what makes the board valuable. Other theories have different claims. This study rejects the management hegemony perspective and supports stewardship theory. Further research is needed to support the results of this thesis in different context.
Acknowledgements

It is true of this thesis as all others that it has been written by standing on the shoulders of giants or on the shoulders of many dwarfs as the progress of science is sometimes better described in many small steps over a long period of time rather than in leaps. The thesis is furthermore written by walking hand in hand with giants as both my supervisors have had immense influence on the science of management in their lifetimes. My greatest debt is to them. Professor Bernard Taylor was a great inspiration and supportive throughout the process. Words cannot describe my gratitude to Professor Patrick Joynt as this thesis would probably never have been finished without his insight and encouragement.

I want furthermore to thank Dr. David Price for his support throughout the doctorate journey and Professor Arthur Money and Professor Phillip Samouel for giving me valuable advice. My fellow travellers on this journey often gave me the hope I needed to keep on going, not at least Eggert Claessen who does not understand the concept of ‘giving up’. I am also grateful for the support of people like Professor Þráinn Eggertsson, Dr. Steve Tanner, Professor Morten Huse, Dr. Sigurður Jóhannesson, Dr. Benedikt Jóhannesson, Professor Guðmundur Magnússon, Dr. Per Olaf Brett, Dr. Caspar Rose, Professor Victor Dulewicz, Dr. Jonas Gabrielsson, Dr. Niels Larsen, Steen Langebæk, Helen Stride, Annibal Drew and Veronica Clarke. Furthermore I am thankful for the support of Þórður Friðjónsson, CEO of the Icelandic Stock Exchange, and the Icelandic Centre for Research - Rannis.

I am also indebted to the respondents to my survey and the people I have interviewed, who have donated their time and expertise to this project. Without their responses and support there would have been no thesis.

Lastly I am thankful for my family and friends, who might not have understood the madness of this venture but supported it with empathy and encouragement.
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Chapter 1. - Introduction

This introduction sets out the background, purpose, and objectives of the thesis. It sets the context, highlights key issues, and answers the ‘why’ and ‘what’ of the research. It introduces the problem at the core of the thesis and discusses approaches for the research. The chapter presents the perception of this researcher of the field of corporate governance, presented in terms of claims and arguments based on interpretation of theories and previous work in the field.

Figure 1.1: The outline of the introduction chapter.

The outline of the chapter is found in figure 1.1. The chapter starts with a general discussion of corporate governance in order to introduce some of the relevant issues for further analysis. It is, in other words, a way to establish common ground between the reader and the writer. The second section describes the problem to be explored in this thesis: the question of the relationship between the board of directors and performance of organisations. The third section discusses the purpose of this thesis in terms of exploring a solution to the problem. The fourth section is a personal reflection of why the researcher has chosen this topic for a doctoral thesis. It is a profile of the rationale and the passion of the researcher, the practical motivation behind this work. The last section outlines the structure of the thesis in terms of a mission plan.
1.1 Common ground

*The beginning is the most important part of the work.*

Plato (427 BC – 347 BC)

This thesis concerns the field of corporate governance, which has gained increased attention in the last few years, especially after the Enron scandal at the start of the 21st century. The roots of the field can be traced back to Berle and Means’ (1932) thesis concerning the problem of separation between control and ownership. Their thesis focuses on the role of the board of directors and the central question of corporate governance: Does the board matter? Does it influence the performance or the value of organisations? This is the common ground, the starting point, and theme of the thesis.

*Figure 1.1.1: The outline of discussions of the common ground.*

This section describes the common ground of the research. It is a lead-in discussion to the description of the central problem of corporate governance and the problem around which the thesis is built. The first part focuses on finding a common definition of corporate governance. The second part describes some of the perspectives of board theories that dominate the literature. The last part summarizes the discussion as a framework for the common ground between the reader and the writer.
1.1.1 Defining corporate governance

Corporate governance has been defined in various ways, but the general view is corporate governance is a system for directing and controlling companies. A few examples from different country codes illustrate the point:

Corporate governance is the system by which companies are directed and controlled (Cadbury Report - Cadbury, 1992, p. 15).

Corporate governance refers to the set of rules applicable to the direction and control of a company (Cardon Report - Cardon, 1998, p. 5).

Corporate governance is the goals, according to which a company is managed, and the major principles and frameworks which regulate the interaction between the company’s managerial bodies, the owners, as well as other parties who are directly influenced by the company’s dispositions and business (in this context jointly referred to as the company’s stakeholders). Stakeholders include employees, creditors, suppliers, customers and the local community (Norby Report - Johansen et al., 2001, p. 3).

Researchers use similar definitions of corporate governance. Demb and Neubauer (1992, p. 187) define corporate governance as “the process by which corporations are made responsive to the rights and wishes of stakeholders.” It can be argued the ‘process’ is what is meant by the concepts of ‘controlling’ and ‘directing’. Another definition emphasizes the shareholder perspective, or a broader financial stakeholder perspective, and is found in the work of Shleifer and Vishny (1997, p. 737). They define corporate governance as “the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment.” Again it can be argued the process is control and direction. Others have offered a more descriptive definition of the process of control and directing. Hilb (2006, p. 9), for example, defines corporate governance as “a system by which companies are strategically directed, integratively managed and holistically controlled in an entrepreneurial and ethical way and in a manner suited to each particular context.” Hilb (2006) emphasises the importance of context. Other definitions are grounded in more specific theories and they emphasise controlling more than direction, as agency theorists tend to do (for example, Jensen and Meckling, 1976; Fama and Jensen, 1983; Cobbaut, 1997 etc.). The conclusion is, however, that a broad
definition of corporate governance defines it as a “system by which companies are controlled and directed” (Cadbury, 2002).

This definition seems simple and straightforward. The concepts encompassed by the definition, e.g. ‘company,’ ‘system,’ ‘control,’ and ‘directing,’ are very well known, but not without problems. Just trying to define an ostensibly simple concept like ‘company’ can lead to contradictions and differing perspectives. Monks and Minnow (2004) take great pains to define ‘company’ in their work.\(^1\) The second concept is ‘system,’ which seems clear enough until an examination of the literature presents different interpretations. The problem seems to concern different understandings of the actors in the system, the context in terms of environment, and what the actors do. Monks and Minow (2004), for example, include the board, management, and shareholders as actors in their interpretation of the system, while others take a much broader perspective associated with stakeholder theory where the actors also include governments, financial institutions, employees, and customers (Donaldson and Preston, 1995; Jones and Wicks, 1999). The context of the system can vary widely, from the board of directors as the research unit, to an entire nation. Hilb (2006, p. 12) claims the system needs to have an external context of national, industrial, and organisational culture. However, agency theorists are more interested in the investor – board – management relationships (Jensen and Meckling, 1976) and often disregard any broader perspectives. Furthermore, the nature of the relationships in terms of functions varies widely, as illustrated by the multitude of theoretical perspectives in the corporate governance literature (eight theories are described in the literature review and others are mentioned). Most researchers have, however, made the board of directors the central actor in their studies (for example Zahra and Pearce, 1989; Stiles and Taylor, 2001; Lorsch and Carter, 2004; Hilb, 2006).

Finally, the question of the interpretation of the concepts of ‘controlling’ and ‘directing’ is very dependent on how the other concepts have been interpreted, as to who is directing and controlling whom, and what is being directed and what is being controlled. Apart from that, the concepts themselves are not clear either.

\(^1\) Further discussion of the definition of ‘company’ is outside the scope of this thesis.
Took Turnbull (1997) has pointed out there seems to be some ambiguity concerning the meaning of ‘control’ in the literature. ‘Control’ was the main focus of Berle and Means (1932), who maintained those who had control of the firm could direct it, implying the existence of power. ‘Control’ is also widely understood to mean ‘to make sure that things are done correctly’. Zahra and Pearce (1989) describe the role of control in terms of monitoring performance. Fama and Jensen (1983) distinguish between ‘decision management’ – the initiation and implementation of decisions – and ‘decision control’ – the signing-off and monitoring of decisions. There is even less agreement on the term ‘directing,’ which can range from being a passive approach as an effect of monitoring, to being a very active approach of setting and even implementing strategy (for example, Stiles and Taylor, 2001; Lorsch and Carter, 2004; Hilb, 2006). There is no reference to the purpose of these functions in the definition of corporate governance. It can also be argued these functions differ somewhat when they are considered as means to achieve certain goals. To ‘control’ and ‘direct’ to secure ownership or elite power would differ if the goal were, for instance, to maximize corporate value. ‘Control’ and ‘direct’ would again vary to ensure stakeholder interests were valued, to secure the survival of the corporation, or strive for growth or knowledge enhancement. Although the concepts are easily understood they may equally become victims of misunderstanding.

The point of this exploration into the meanings of the concepts within a simple definition of corporate governance is to attempt to clarify confusion about what corporate governance is, and what it is about, both within the literature and in general discussion.

The board of directors is the focus of this research, as in most previous theoretical and empirical studies of corporate governance. The board is the central actor in the system, a separate organ, and the unit of analysis. The board is by law the mechanism responsible for governing the company and for controlling and directing it. The functions emphasised in this study are ‘monitoring’ and ‘directing.’ The former indicates a reactive approach and the latter a more proactive approach of the board. The functions are means to the board’s goal of better corporate performance. Therefore the definition of corporate governance within this framework can be
restated as: Corporate governance is a system where the board of directors is the central actor as it monitors and directs organisations for the purpose of better performance.

1.1.2 Perspectives of the role of the board

Discussions about the role of boards in companies are often puzzling because the underlying theoretical frameworks differ. In the literature at least eight challenging theories can be found underpinning various perspectives and which may possibly lead to challenging arguments (Zahra and Pearce, 1989; Johnson et al., 1996; Hung, 1998). Some researchers argue a general theory of the board is needed which avoids such confusion (Stiles and Taylor, 2001), as well as an appropriate conceptual framework to adequately reflect the reality of governance (Tricker, 2000). Different perspectives and a vivid theoretical debate are not unusual in a relatively young field of study such as corporate governance (Ulhøi, 2007). Tricker (2000) points out research in corporate governance is merely a few decades old, and the phrase ‘corporate governance’ was seldom used until the 1980s. This is interesting, as boards of directors can be traced back to the nineteenth century (Chandler, 1977) and because The Modern Corporation and Private Property by Berle and Means, published in 1932, is often quoted as the introduction to the field. Therefore, a short exploration into the history of the field follows, to understand its different perspectives.

The corporate governance debate seems to have been driven by corporate scandals (O’Brien, 2005). Although it is not noted in Berle and Means’ (1932) thesis, it is hard to disregard the fact their book was written during one of the most severe recessions in modern times, a recession which had an immense influence on politics and commerce around the world. There are indications waves of interest in corporate governance occur at the break of prosperous times and (irrational) corporate confidence. MacAvoy and Millstein (2003) have, for example, studied the history of corporate governance in parallel with the waves of mergers in the 20th century. This is even more noticeable in the emergence of corporate governance codes. The Cadbury Code of 1992 was a response to a series of scandals in Britain in the 1990s, most notably Coloroll, Polly Peck, Bank of Credit and Commerce
International, and Maxwell enterprise (Cadbury, 2002). At the same time, some legendary corporations like IBM, General Motors and Sears were faltering in the United States, which led to increased pressure from institutional investors, takeover firms, and judicial interpretations of fiduciary duties (MacAvoy and Millstein, 2003). The Sarbanes-Oxley act in the United States was pushed through congress in the aftermath of corporate scandals like Enron, WorldCom, Global Crossing, Lucent, Williams, Dynegy, K-Mart, and HealthSouth (MacAvoy and Millstein, 2003; Coffee, 2006; O’Brien, 2006). This did not come as a surprise. To quote Warren Buffett (Buffett and Clarke, 2006, p. 47): “It’s only when the tide goes out that you learn who’s been swimming naked.”

The effect of this scandal-driven process of discussion of corporate governance was an emphasis on the monitoring duties of the board (MacAvoy and Millstein, 2003). At the same time, interest in the ‘directing’ concepts decreased (Lorsch and Carter, 2004). It is important to acknowledge the Delaware courts in the United States have emphasised both the monitoring and directing functions of the board. As has been made clear in a series of famous cases, e.g. Paramount Communications; Grobow v. Perot; Hanson Trust PLC v. SCM Acquisition; Moran; Smith v. Van Gorkom, “boards could and should determine key strategic decisions, acting independently of management, through a thoughtful and diligent decision-making process” (MacAvoy and Millstein, 2003, p. 23). Furthermore, directors themselves have emphasised the need for increased strategic participation (Demb and Neubauer, 1992; Stiles and Taylor, 2001; Lorsch and Carter, 2004). Therefore, it can be argued the monitoring function has been fed, while the directing function has been starved. A parallel theoretical discussion emphasises a kind of duel between the monitoring function and the directing function. Agency theory, which is often used synonymously with governance theory, emphasises the monitoring function of the board (Jensen and Meckling, 1976; Lubatkin et al., 2007). On the other hand, stewardship theory, a counter theory to agency theory, proposes the main function of the board should be directing (Donaldson, 1990; Donaldson and Davis, 1994). However, agency theory has received the most attention in the literature (Stiles and Taylor, 2001, Lubatkin et al., 2007).
Most discussion on corporate governance is dominated by the Anglo-Saxon perspective (Huse, 2005). Also, most initiatives for governance reform have been initiated in the USA and the UK, the Cadbury code and Sarbanes-Oxley act being the most notable. There is little doubt these Anglo-Saxon initiatives have had a global influence, for better or worse (Bauer et al., 2004; O’Brien, 2004; Ali and Gregoriou, 2006). Although the pressure for change has been the most obvious in the USA and UK, the winds of change have blown all over the world. According to the European Corporate Governance Institute, by 2003 at least 50 countries had introduced a governance code for companies, countries as different as Mauritius, Russia and Switzerland. A governance code was introduced in Iceland early in the year of 2003. There are concerns that although the initiatives of the Anglo-Saxon perspective have been well received, these approaches may not apply or may be less effective when, for example, legal traditions, cultures, institutional structures, and ownership structures differ (Weimer and Pape, 1997; La Porta et al., 1999; Huse, 2005). Therefore, the perspective may need to be broadened when corporate governance is discussed in an international context, although the Anglo-Saxon perspective can be used as a starting point.

There are many different perspectives, and different dimensions of perspectives, in the corporate governance literature, which make it both complex and paradoxical. It is not surprising as theorizing is important in a new field of research (Weick, 1995). By understanding the origin of the different perspectives it is easier to understand the implications and the relevance of those perspectives.

1.1.3 A framework for the thesis
This section so far has focused on the background for the corporate governance discussion and this research. The aim is to establish common ground for the more theoretical and empirical discussions of corporate governance in the literature review found in the next chapter. Our exploration so far concludes there seems to be common agreement the focus of corporate governance is the board of directors and their role in monitoring and directing the company. Because the history of the corporate governance discussion has been largely scandal-driven, the role of the
board as a monitoring device, rather than an organ for directing the course of the organisation, has been the focus of attention. This point is important because this research emphasises both the directing function of the board as well as the monitoring function. Omitting the directing function, as has widely been done in previous work, would undermine the premises of this research. Therefore, the quest for common ground is a quest for a broader view of the role of the board than often implied within some theoretical frameworks, such as agency theory. Once common ground has been established, the central problem of this research can be explored. That is the purpose of the next section.
1.2 Formulating the problem

*The greatest challenge to any thinker is stating the problem in a way that will allow a solution.*

Bertrand Russell (1872 - 1970)

A thesis must be built around a research question, a central problem, which it then tries to solve (Booth et al., 2003, Popper, 2002). It is not an easy task to state the research question in such a manner it is both understandable and testable. It may be over-optimistic to believe a thesis might solve the problem. It is more realistic to seek some answers and indications of what could become the solution. The first step in both processes is to describe the problem and assure that it is a problem. As is argued in the following section, the problem and the focus of this research is the same central problem of the corporate governance literature. It is the question of whether boards have any influence on the performance of companies.

*Figure 1.2.1: The outline of the problem formulation.*

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Based on Booth et al. (2003).

This section is a description of and argument for a problem that needs to be solved. The first part describes and argues for the problem (figure 1.2.1). The second part focuses on the board of directors, and the third part focuses on the concept of performance, the two main variables in the problem. The last part discusses the problem with the problem, its limitations and contradictions, and thus concludes the section.
1.2.1 The problem

Researchers tend to describe the problem of corporate governance in very different terms according to their theoretical, practical, legal, and cultural perspective. However, it may be argued if the focus of corporate governance is concentrated on the board of directors, the implied problem is similar, if not the same, although how the problem is perceived could vastly differ. This is easier to understand if the discussion is turned on its head, in a sense. One could begin with the claim the board of directors should be abandoned and eliminated as an organ from the structure of the organisation because it has no potential value for the company. This claim may seem odd at first, as the board is a legal requirement for most types of companies. It helps, however, to focus the discussion on how to interpret theories as counter-argument or falsification of this claim.

Some arguments and evidence claim although the board of directors may be a legal necessity, it has no practical importance. Such observations were common throughout the 20th century. Berle and Means (1932, p. 245) note their view of the board: “Legally, the proxy is an agent for the shareholder; and necessarily under a duty of fidelity to him. Factually, he is a dummy for the management, and is expected to do as he is told”. Drucker (1954, p. 178) similarly points out in law the board of directors is the only organ of the enterprise. “Legally it is considered the representative of the owners, having all the power and alone having power.” Drucker, however, understood perceptions can be deceptive. He adds at a later date the board of directors is an impotent ceremonial and legal fiction (Drucker, 1974). Mace (1971) concludes in his seminal study directors are like ornaments on a corporate Christmas tree. E. Everett Smith (1958, p. 41) describes the general view of the board as follows:

Unfortunately, however, in most companies the board has become more and more a legal fiction in practice. Its role as a vital organ of the business has deteriorated, and in many cases it has been deposed by operating management. In fact, this trend has gone so far that recently a well-known educator stated in his opinion the board was as dead as a dodo, and that operating management was quite capable of reviewing its own action. Obviously
this is an extremist view, but many experienced observers would go along part of the way with it.

In the words of Drucker (1974, p. 628): “There is one thing all boards have in common ... They do not function”. The term ‘rubber stamp’ has frequently been used to describe these non-functioning boards. Lorsch and MacIver (1989) describe the board as “pawns [rather than] potentates” and Gillies (1992, p. 3) points out: “Boards have been largely irrelevant throughout most of the twentieth century”. MacAvoy and Millstein (2003, p. 7) claim this irrelevance of the board is a recurrent crisis of corporate governance, as both legislators and the public demand in the aftermath of scandal: “Where was the board of directors?” In short, the claim boards could be eliminated has some support in the literature and in reality.

If this claim is used as a starting point for understanding corporate governance, the mission is to find evidence and arguments that disprove or falsify this claim. The problem is to show the board has value or relevance to defend its continuance. This is in fact the central problem of corporate governance literature, as outlined in previous sections of this thesis. If the claim holds true, the board has no value or relevance for the company or, more disturbingly, obstructs gains or destroys value. If in fact the board of directors as an organ within the organisation does more harm than good from the perspective of company value and performance, it could represent one of the biggest structural mistakes in corporate history.

This claim is grounded in the shareholder view the board should exist to serve their interests. Some theories, for example, management hegemony theory and class hegemony theory, may be interpreted to mean the purpose of the board is to serve other interests, for instance management or elites. Theories differ on the role of the board. In the end, however, it can be argued those perspectives are means either to reduce or increase the value of the company. The board can act as a management ‘rubber stamp’ when management interests differ from shareholders,’ and management wants to transfer value from the shareholder to its own pockets. The argument holds shareholders would be better without boards, as they are costly to maintain. In other words, theories imply a different role for the board can be interpreted from the shareholder perspective.
Researchers from different theoretical perspectives have taken on the quest of finding value for the board from the shareholders’ perspective. Consciously or unconsciously, they seek a connection between the board of directors and company performance (figure 1.2.2). The approach and the arguments vary depending on the theoretical and practical position of the researcher.

Figure 1.2.2: Boards of directors and company performance.

As stated in previous sections theoretical perspectives within the corporate governance field differ. A comparison of agency theory and stewardship theory makes the point. Theoretical arguments for the value of the board of directors also differ. For the sake of clarification, the model of decision process proposed by Fama and Jensen (1983, p. 4) is used here, as follows:

- **Initiation** – generation of proposals for resource utilisation and structuring of contracts;
- **Ratification** – choice of decision initiatives to be implemented;
- **Implementation** – execution of ratified decisions;
- **Monitoring** – measurement of the performance of decision agents and implement rewards.

Agency theorists claim the role of the board is ratification and monitoring (Fama and Jensen, 1983). Stewardship theorists state boards may initiate and even in some cases implement strategy, as well as participate in the ratification and monitoring process (Donaldson, 1990). The role of the board is very different according to these two theories. The potential relationship with corporate performance is also different. In the stewardship perspective, the influence on performance can be seen as direct, as a function of independent decisions of the board and joint decisions with management. In the agency perspective, the relationship is more indirect, as it is the ratification and the monitoring processes that influence managerial decisions.
and performance. In either case, a rubber stamp board has little, if any, value for the corporation. The problem of demonstrating the importance of the board varies according to any given theoretical perspective.

The problem for researchers is therefore not only to test whether there is a relationship between the board of directors and corporate performance, but also to discover the reason for that relationship. It is not clear what to test for, as the theoretical assumptions are fundamentally different. This makes the problem somewhat more complicated. The problem does allow a solution so long as the perspective is to disprove the statement claiming the board has little, if any, value.

1.2.2 The board of directors

The board of directors is the independent variable in establishing whether the board has a positive relationship with corporate performance. Corporate performance is the dependent variable. Although it is theoretically easy to designate the board as independent variable, in fact it is difficult to measure this variable. Zahra and Pearce (1989) describe the board as a bundle of variables: composition, characteristics, structure, process, and roles that are affected by internal and external contingencies. Most researchers, however, have gone for a more simple approach. Basically two approaches have been used. One that focuses on the composition of the board, and another that focuses on the process of the board or the roles of the board.

The focus on composition as a measurement of the function of boards has dominated research efforts in the field of corporate governance (Finkelstein and Mooney, 2003, Sonnenfeld, 2004). This approach has been called the structural based perspective of the board (Daily et al., 2003). The composition variables tend to be the same throughout the studies, and independence of directors, split role of CEO and chairman, and size of boards have been dubbed the ‘usual suspects’ (Finkelstein and Mooney, 2003; Huse, 2005). The argument for this approach is by knowing who is on the board one may estimate performance. Therefore, the aim of these studies has been to show a relationship between the composition of boards and corporate performance (figure 1.2.3).
Zahra and Pearce (1989) emphasise the importance of using intermediate measures that better describe what boards actually do, rather than judging the book by its cover. Several researchers have taken this route to explore the implications of what happens in the black box of the board (for example Carpenter and Westphal, 2001; Hillman and Dalziel, 2003). The claim is the board processes, not just its composition, are important for effective corporate governance (Ward, 2003; Zahra, 2007). The process research most often focuses on the role of the boards in terms of tasks and purpose (Zahra and Pearce, 1989; Johnson et al., 1996; Forbes and Milliken, 1999; Westphal and Carpenter, 2001; Hillman and Dalziel, 2003; Nicholson and Kiel, 2004). The focus of many research models is the relationship between the process of the board and company performance (figure 1.2.4).

The difference between the composition approach and the process approach lies partly in research methodology. Composition of boards can, in most cases, be determined from such secondary data sources as annual accounts and statistical databases. The process of the board is hard to determine without actually asking directors or CEOs for information about what happens within the boardroom (Finkelstein and Mooney, 2003). The process approach therefore employs surveys or qualitative techniques such as interviews, focus groups, case studies, or observation (Huse, 2005).
The purpose of this discussion is to highlight problems in measuring the board as a variable, and the two main approaches which have been used to do so. Chapter 2 shows this is an even more complex task than is indicated here.

1.2.3 The concept of performance

Organisational performance is the dependent variable in the formulation of the problem. Most models in corporate governance literature use corporate performance as a measure. Dalton et al. (1998), in a meta-analysis of 131 samples, note governance structure and financial performance research have relied mostly on accounting-based indicators, although some studies use market-based indicators or both types together. Several researchers claim Tobins Q, the standard approximation of market value, is the leading indicator of performance in corporate governance (for example: McConnell and Servaes, 1990; Yermack, 1996; Carter et al., 2003; Bøhren and Ødegaard, 2003). Dalton et al. (1999) note, however, corporate governance research has relied on many different types of accounting measurement for performance.

Performance measures have received little attention in the corporate governance field. Organisational performance, however, is a major research topic and has been for the last thirty years (Maltz et al., 2003). Organisational performance is considered to be a complex and multidimensional phenomenon (Dess and Robinson, 1984; March and Sutton, 1997). There is some concern simple outcome-based indicators as measures of organisational performance are insufficient (Brett, 2000; Venkatraman and Ramanujam, 1986; Chakravarthy, 1986; Wooldridge and Floyd, 1989). Some claim the trend in research is moving away from the tradition of measuring only financial performance of organisations (Ramanujam and Venkatraman, 1988; Caruana et al., 1995; Brett, 2000; Sandbakken, 2003).

Furthermore, researchers focusing on the process of boards are proposing different approaches to measure the outcome of the board as an intermediate between the board and company performance (for example Nicholson and Kiel, 2004; Huse, 2005). This mediator has been conceptualised as the efficiency or the effectiveness of the board as a board outcome (see figure 1.2.5).
The purpose of this discussion of performance measurement is to indicate there is no simple approach and researchers have employed various methods.

1.2.4 The problem with the problem

The research question or rather the problem statement, which is a theoretical and practical formulation of the research question (Booth et al., 2003; Popper, 2002), which this thesis focuses on, is the following: What is the role of the board and is there a relationship between the board of directors and organisational performance which rejects the claim that the board has no value as an organ in the organisation.

The problem of disproving the proposition the board has little if any value seems simple enough. The problem with the problem, however, is measuring the two concepts, the independent and dependent variables of the equation. An attempt at solving the problem and showing the claim is false necessitates finding an approach for measuring the concepts.

Still, the problem is interesting and important because it lies at the heart of the corporate governance discussion. The solution may offer better understanding of how and why boards have value, rather than just whether or not they affect organisational performance.
1.3 Solving the problem

*We can't solve problems by using the same kind of thinking we used when we created them.*

Albert Einstein (1879 - 1955)

There is truth in the statement alternative thinking is needed for solving problems. If approaches used to solve problems are not working, alternative thinking is indicated. One does not find oil by digging a deeper hole, one has a better chance digging another (DeBono, 1992). In previous corporate governance research much effort has been put into solving the dilemma of the importance of the board by relating composition of boards to corporate performance (Finkelstein and Mooney, 2003; Dalton and Dalton, 2005). Zahra and Pearce (1989) propose a different approach for resolving the dilemma, and it has been used as the model for this research.

*Figure 1.3.1: The outline of the problem-solving discussion.*

Based on Dunleavy (2003).

This section describes what this research is about and how it is related to the problem discussed in last section. The first part describes the aim, focus and objectives of the study. The second part focuses on the research approach. The last part summarises the discussion of this section and outlines the potential contribution it can make.
1.3.1 Aim, focus and objectives

The aim of this research is to investigate if there is a positive relationship between boards and organisational performance. Such a relationship could indicate boards are important and valuable for organisations. The focus of the study is process related, meaning the core emphasis is on the role of the board. The reason for this is theoretical discussion within corporate governance literature is highly associated with the role or roles boards adopt. It is further a response to a call for studies emphasising what boards do, rather than what they look like (Zahra and Pearce, 1989; Stiles and Taylor, 2001; Daily et al., 2003; MacAvoy and Millstein, 2003). In other words, the focus is on process rather than composition, which has been the main emphasis of research efforts to date (Dalton et al., 1999; Daily et al., 2003). This study also includes variables used in research focusing on the composition of boards. Therefore, this study includes both the structural-based and process-based view of the board.

There are many implications of focusing on the process view of the board. First, it calls for a study of the perspectives of CEOs or directors, rather than for a study based on secondary data. This research methodology gives the researcher more freedom to explore the issues, as secondary data research is limited by the quality of the data set. Secondly, a more complex and multi-dimensional discussion is needed to understand the board processes rather than its composition. Thirdly, the theoretical discussion here needs to be based on a multi-theoretical approach, as one theory alone would only partially explore the role of the board (Stiles and Taylor, 2001; Westphal and Carpenter, 2001; Daily et al., 2003). Fourthly, the process view permits a more complicated and multi-dimensional operationalisation of concepts, instead of using single indicator variables as in the structural-based view (Bøhren and Ødegaard, 2003). In fact, operationalisation becomes one of the central tasks of this thesis. This focus on the process-based view calls for a much more complicated piece of work than the structural-based view. However, the result is a potentially richer study than otherwise possible.
This approach includes the independent variable as well as organisational performance, thereby increasing the scope and richness of the study, and applying a much broader measure of performance than used in most previous studies. This broader view of performance is based on subjective perceptual measures, in contrast to objective measures, to better clarify how the board relates to different performance measures.

The aim of this study is to use a broader-based view of board measures and organisational performance measures to disprove there is no relationship between the two concepts. The relationships are tested by rejecting a standard null hypotheses which indicates no relationship between variables. The research methodology used is the survey method. A literature review of previous research using the survey method is also presented.

### 1.3.2 Research approach

As was noted in the beginning of this section, the focus of this study is the relationship between boards and corporate performance. This aim is held in common with the central thrust of most corporate governance literature, which endeavours to demonstrate a relationship between the two, and thus support the importance of boards of directors. Research propositions generally reflect that emphasis. The model appears straightforward, although it will be shown here to be more complex when all items and concepts within each factor are included.

The main research hypothesis is the following: Is there a positive relationship between boards and company performance in SMEs.

This is tested from three perspectives, based on the Zahra and Pearce (1989) model. The composition variable relates to the structural-based view of the board, and the roles and process variables both relate to the process view (figure 1.3.2).

Three main hypotheses have been developed:

H1. There is a positive relationship between the level of role importance and company performance.
H2. There is a positive relationship between the process of boards and company performance.

H3. There is a positive relationship between the composition of boards and company performance.

Figure 1.3.2: The three main hypotheses of the study.

A survey method is used to test the hypotheses. Access is considered the biggest hurdle in research of boards (Stiles and Taylor, 2001), as in research generally (Gummesson, 1991). As Stiles and Taylor (2001) point out, much of the work on boards has been conducted without actual access to the boards: the main issues being composition of the board, executive remuneration, CEO duality, ownership, performance, and similar factors. Most of this work involves, studies of secondary material attempting to show correlations between various variables. Tricker (1994, p. 2) notes such research is “produced without talking to a single director, or anyone else in the corporate governance power base.” Therefore, only a small body of primary research is available from which to draw any methodological insights (Stiles, 2001).

The survey here was sent out to 560 SMEs in Iceland, and 21% of the companies responded to the survey. Iceland was chosen primarily to solve the problem of access (Fidler, 1981; Hill, 1995; Stiles, 1998; Stiles and Taylor, 2001). The Icelandic Stock Exchange was the main sponsor of the survey, which lent more credibility. Most companies in Iceland fall into the category of small and medium-

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2 The words ‘proposition’ and ‘hypothesis’ are used synonymously in this thesis. ‘Proposition’ is regarded as the language of realism (Easterby-Smith et al., 2002) and ‘hypothesis’ is the language of the survey method (Churchill, 1995).
sized enterprises, however, this was not considered a limitation to the research. SMEs are a very interesting subject for study in this context, as will be discussed in more detail in Chapter 2.

Researchers in corporate governance have used triangulation models in their study to overcome the shortcomings of the single method approach (Snow and Thomas, 1994; Stiles and Taylor, 2001). Lorsch and MacIver (1989) and Stiles (2001) for example, used interviews, case studies, and questionnaires in their studies. This research uses open-ended questions and focus groups to verify and discuss the results of the questionnaire.

1.3.3 Potential contribution

The potential contributions of this study can be described both in terms of academic contributions and practical implications. The first indicates originality of the research and the contribution to the body of knowledge (Remenyi et al., 2002). It is, however, not clear what this implies (Dunleavy, 2003, p. 27):

All good universities in either the classical or the taught PhD models still demand that the thesis or dissertation should be novel research making some form of distinctive contribution to the development of knowledge in a discipline. What kind of work meets this criterion is famously difficult to pin down. Most European universities’ doctoral rules (or rubrics) are almost silent on how originality is to be determined.

Remenyi et al. (2002, p. 20) suggest a contribution to the body of knowledge should include one or more of the following: extending our ability to understand phenomena, new ways of applying existing science or theories, creating new theories, rejecting invalid theories, and providing unifying explanations for events and circumstances. Dunleavy (2003) notes ‘originality’ is expressed either in the form of ‘discovery of new facts’ or by displaying ‘independent critical power,’ or both.

A potential academic contribution by this study might therefore be ‘discovery of new facts,’ as this is an original study which may increase understanding of the phenomena and relevance of underlying theories. If the goal of showing a
relationship between the board and organisational performance is realised, this may represent an important contribution to corporate governance literature. The practical implication of this study may be CEOs and directors, as well as other stakeholders, better understand the role of the board, and the value of the board for the company.
1.4 Practical motivation

Science is organized knowledge. Wisdom is organized life.

Immanuel Kant (1724 - 1804)

Often it is the vision and the engagement of individuals, more than the details and the techniques of the approach that inspire and evoke interest. The passion and the goals of the researcher are the true starting point of any research project. This thesis is the result of a four-year project completed outside normal working hours, as the DBA program is a part-time doctoral program. Such a challenge demands passion and persistence. This section provides a personal rationale for undertaking this journey. It is a discussion continued at the end of this thesis in a more reflective way.

Figure 1.4.1: The outline of the discussion of practical motivation.

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This section focuses on personal reasons for doing this research and taking on the challenge of the doctorate journey. It introduces the man, not just the mission. It may provide a better understanding of why this project has been selected and the approach chosen. The first part focuses on the choice of corporate governance as a research field. The second part describes some personal goals for the doctoral journey. The last part describes passion as a conclusion to the practical motivation section.
1.4.1 Choosing the challenge

The process of choosing a problem to solve is time consuming and hard work. It is an important part of the process, which defines the challenge that the doctorate thesis is going to be all about. The previous sections in this introduction have to some degree described:

a) The narrow field of study: corporate governance.
b) The broad topic: the role of the board in organisations.
c) The narrow topic: the contribution of boards on performance of small and medium-sized companies.

The previous sections have, however, not at any length described:
d) The personal perspective.
e) The applied perspective.

The personal perspective is important both as motivation for the research and developing the research question, as well as applying the results to practical problems (Booth et al., 2003). My first real exposure to corporate governance as an interesting research area and the boards of directors as a topic was in 1999 when I was asked to review the OECD corporate governance recommendations (OECD, 1999; 2004) in regards to the Icelandic situation. That review became a series of articles exploring the recommendations section by section and published in a journal of which I was the editor at the time. It occurred to me boards as organs within organisations were run usually in a highly ineffective manner. This observation at the time evoked my curiosity. A better understanding of corporate governance might help resolve contradiction about the issue in media, books, and research articles. However, I became discouraged as I found it too confusing the more I read about it, and soon I ventured into different fields. When I decided to do a doctorate, my original plan was to study the field of entrepreneurship, where I had done most of my writing, and not corporate governance. A series of coincidences changed my mind and led me to corporate governance. A very influential coincidence was the discovery one of the authors of my favourite book on corporate governance (Stiles and Taylor, 2001) was a professor at Henley Management
College, Professor Bernard Taylor, who later became my supervisor. It became evident to me the College was better known for its reputation within the field of corporate governance than entrepreneurship. Although I had written several articles about corporate governance issues, I did not consider it to be one of my fields of specialisation. The challenge of learning more about it and making it into my field of speciality intrigued me, especially the question of how to make the board into a more effective organ within the organisation.

DBA research is by definition applied, rather than pure research, as the research problems do as a rule emphasise practical consequences. The applied perspective of this research is to explore the importance of the role of the board. It is based on the belief boards need to realise what their role is, what role fits the situation, and the context. My hope is this research on boards, and whether they relate to company performance, may lead to practical propositions regarding the strategy and structure of boards. By understanding what can be described as effective boards, this thesis may help guide small companies and start-ups just beginning to function. All too often boards have been regarded as a mere formality to ‘rubber stamp’ management decisions. It is my belief a better understanding of the value of the board and its different functions may ensure more time and effort is spent on designing boards, training them, and developing them as an important organ within the organisation.

Doctoral research should make an academic contribution so as to add to the body of knowledge. The potential academic contribution has been described in the preceding sections and will, as the personal and applied rationality, be discussed in more detail in the concluding chapter of this thesis. The three perspectives, that is personal, practical, and academic, are both related and complementary. It is the aim of this thesis to satisfy the objectives of all three perspectives.

1.4.2 Personal goals
As part of the CDP programme (Competence Development Programme), which forms a part of the DBA programme, I made some clear goals for the doctoral journey. The idea was the doctoral journey was more than a means to the goal of gaining a degree and finishing a thesis, it was also a turning point. I expected the
journey to lead to improvements for me on both a personal and professional level. I hoped to see those improvements in the progressive growth of sets of skills I thought would be important for me in the future. The following were personal goals set at the beginning of the journey:

- **Researcher** – As an editor and writer of hundreds of journal articles, the author of one book and two masters’ theses, I have gained some understanding of the role of the researcher. I hoped the DBA would impart a more profound understanding of the research process, and give me confidence to plan and complete research projects important to business and society.

- **Consultant** – I have been a consultant on a part-time basis for the past ten years, mostly for Icelandic companies. I hoped the DBA would give me more skills as a consultant and be a doorway into more challenging international opportunities.

- **Educator** – I have limited experience in teaching and designing educational programmes. I hoped the DBA would give me possibilities to design new programmes and opportunities to teach part-time in universities in different countries.

- **Writer** – I am an experienced business and economics writer in Icelandic. I hoped the DBA would give me the confidence and the opportunity to write books and articles in English.

- **Entrepreneur** – One of my main research fields is entrepreneurship. I have written a book on the subject and nearly a hundred articles, taught it, designed programmes, and helped people start their own companies. What I have not done is start my own company. Even though the DBA programme is not directly associated with entrepreneurship, I hoped to develop my skills in this field and gain the confidence to start my own companies.

- **Student** – Learning has become one of the most important aspects of my life. One of the reasons that I have been an editor for the last five years is it allows the opportunity to learn while working, because I wrote about different issues for specialists every week. I hoped the DBA would give me the tools, techniques, and the confidence, to be a lifelong student.
• **Network** – One of the greatest opportunities of an international program like the Henley DBA program, is the possibility of establishing an international network. I lacked the international network to open doors to opportunities. I hoped the DBA could be a first step in establishing a wide network of partners and friends all around the world.

• **A new research area** – My main research areas have been entrepreneurship, internationalisation of companies, and business strategy. I hoped the DBA would give me a new specialisation, upon which I could build and profit in the future.

• **International life** – I wanted the opportunity to establish myself and make a very good living wherever in the world I chose to be. I hoped the DBA would strengthen the foundations of that dream by expanding professional opportunities and giving me the confidence and the skills to take on challenges at an international level.

Although these goals or hopes are not part of the CDP programme, or the broader DBA programme, they are relevant for me and important factors in the project. The reason for stating these goals here is testimony of the passion for the project. These goals are reflected throughout the thesis in the choices I have made as a researcher. In the end, in my mind, these goals test the success of the doctoral journey. In short, the DBA programme represents a new turning point in my life.

### 1.4.3 The passion

This section has described the personal reasons for the research. It is a short description of the rationale and the passion of the researcher for taking on the challenge. In retrospect, this thesis would never have been completed without a clear vision. The personal goals played a huge role in staying the course, although they were also at times distracting and the reason for taking less travelled roads when a more straightforward approach would have been satisfactory from an academic perspective. The personal perspective and the goals are revisited at the end of this thesis where the results are explored and estimated.
1.5 The mission plan

Order is, at one and the same time, that which is given in things as their inner law, the hidden network that determines the way they confront one another, and also that which has no existence except in the grid created by a glance, an examination, a language.

Michel Foucault (1926 – 1984)

Complicated work can be made more clear and easier to understand by organising it in a systemic way. Order implies relationship between different parts. In a thesis such as this, it is usually a story line or a red thread the reader can follow. It provides a prescription of how pieces fit together. This last section of the introduction explains the structure of the thesis. The basic outline of the thesis can be seen in figure 1.5.1.

Figure 1.5.1: The basic outline of the thesis.
The structure of the thesis is based on the classical five-chapter framework commonly used in universities in the UK (Dunleavy, 2003). The main chapters and underlying sections are listed in figure 1.5.1. It is a big book thesis of 80 to 100 thousand words (Dunleavy, 2003). The framework indicates a logical process, used to a large extent in this thesis. Following are the main structural points of each chapter.

Chapter 1 – Introduction: The structure of the chapter is based on Booth et al. (2003), and is intended to introduce the problem and how and why it is to be solved.

Chapter 2 – Literature review: The structure of the chapter is based on the problem formulation and the methodological discussion of Silverman (2005), taking the discussion from theories to concepts. The research framework is introduced at the end of this chapter.

Chapter 3 – Methodology: The structure of the chapter is based on the methodological discussions of Silverman (2005), Churchill (1995) and Hair et al. (2006) intended to bridge the gap between theorisation and instrumentalism. It outlines how the research is done, focusing on the survey method.

Chapter 4 – Results and analysis: The structure follows steps suggested by Hair et al. (2006) for analysing results from a questionnaire. This is the longest chapter of the thesis. It is largely a technical chapter, although the latter half discusses results reflected against the literature reviewed in Chapter 2.

Chapter 5 – Conclusions: The structure is based on the triad of academic, practical, and personal implications introduced in Chapter 1. It is designed to reflect on the questions and issues raised in the first chapter.

Each chapter is concluded with a summary snapshot of the chapter, and a bridge to the next chapter.
Summary of Chapter 1. - Introduction

This introductory chapter sets the stage for the thesis in terms of background, purpose, and objectives. It argues to establish common ground for understanding the concepts of the thesis, describes the problem or proposition, and proposes an approach to the research. The main objective of the thesis is to make an academic contribution, however, it is hoped it may also make both a practical and a personal contribution.

The main points from this chapter are:

- Corporate governance is defined: Corporate governance is a system where the board of directors is the central actor as it monitors and directs organisations for the purpose of better performance.
- The common ground: the focus of corporate governance research is the board of directors and their role in monitoring and directing the company.
- The problem/proposition: to establish whether there is a relationship between the board of directors and organisational performance, and to define that relationship.
- There are two approaches to the measurement of board effectiveness, the structural-based and the process-based view. This thesis focuses on the process-based view of the board.
- Organisational performance has been measured with accounting measures in previous studies. This thesis takes a broader view of performance measures.
- Three propositions are tested in this research, the relationship between composition, roles, and process to organisational performance.
- A survey method is used. A questionnaire was sent to 560 Icelandic SMEs, supported by focus groups and open-ended questions.
- The personal perspective is to gain understanding of corporate governance as a field of science, as well as use the doctoral process to achieve goals that reflect a turning point in the life of a research apprentice.

The next chapter reviews the literature of corporate governance and focuses on the what and why intended in this research study.
Chapter 2 – Literature review

This chapter provides an overview of the literature concerning boards of directors and organisational performance. The purpose of the chapter is to build foundations for the research. The discussions explain why a single theoretical perspective is not a plausible approach for knowledge-creation on corporate governance, and how a pluralistic theoretical approach is more likely to provide insight. The chapter leads to a discussion of the research focus and methodology.

*Figure 2.1: The outline of the literature review.*

The chapter is divided into eight sections (figure 2.1). First, board role theories presented in the literature are described and explored. The theoretical review then focuses on a more practical approach to research, outlining some descriptive models influential during the last fifteen years. In sections 3 to 5 the discussion is focused towards concepts developed for boards, as attributes and roles of boards, and the concept of organisational performance. In the sixth section the implications of context are reviewed. The seventh section presents a critique of previous work in the field. Finally, concluding remarks and the proposed agenda for the research are presented.
2.1 Theories of the board

If human life were long enough to find the ultimate theory, everything would have been solved by previous generations. Nothing would be left to be discovered.

Stephen Hawking (1942 - )

This section is about theories of corporate governance. The ultimate theory regarding roles of boards and corporate governance in general is yet to be discovered (Pettigrew, 1992; Stiles and Taylor, 2001; Ulhøi, 2007). Instead, several challenging and complementary theories are found in the literature, although agency theory is often considered synonymous with governance theory (Lubatkin, 2007). However, there has been a call for a general unambiguous theory of the board (Stiles and Taylor, 2001), and an appropriate conceptual framework to adequately reflect the reality of governance (Tricker, 2000).

Figure 2.1.1: The overview of board theories.

This section describes the theoretical background of boards, in part one in terms of typology (figure 2.1.1). The second part describes their content. Part three compares theories, and the section concludes with a discussion of the importance of a multi-theoretical perspective.
2.1.1. Typology of theories
Several theories have been used as a framework for research on boards of directors, although agency theory has been the most notable, both as a theoretical perspective and in empirical research (Dalton et al., 2003). Gabrielsson and Huse (2004) support this claim in a review of 127 empirical articles on boards and governance, in six leading academic journals from 1990 to 2002. They found in more than half the studies agency theory was employed as a main theoretical perspective. Resource dependency theory and social network perspectives were each used in roughly 15% of cases. Several other theories were also employed. Even more interesting is the fact 18% of the articles did not rely on any one theory, but used arguments from the literature and empirical results. The results of this overview crystallise the theoretical fragmentation of corporate governance research, and indicate the primacy of agency theory.

Figure 2.1.2: A typology of theories.

Adapted from Hung (1998, p. 105).
Although researchers are aware of the fruitful use of theories in corporate governance research, few have tried to categorise different theories. Hung (1998) offers a typology based on the board involvement in the decision-making process. Several theories other than agency theory are identified (figure 2.1.1), e.g. resource-dependency theory, stakeholder theory, stewardship theory, institutional theory and managerial hegemony theory. The basis for the typology is the contingency perspective on one hand, and the institutional perspective on the other, where each perspective is considered from both an internal and an external focus.

Using prominent theoretical perspectives, the contingency perspective and the institutional perspective, to categorise board functions, is an interesting and important approach to classification (Judge and Zeithaml, 1992). Gupta, Dirsmith and Fogarty (1994) argue the two approaches take almost opposite positions regarding development of formal structures. The institutional perspective, or the intrinsic influence perspective, describes how and why organisational structures and processes have evolved as a result of socialisation and institutionalisation. The governing body, therefore, needs to perform in accordance with institutional expectations of traditional practices (Hung, 1998). The contingency perspective or the extrinsic influence perspective, on the other hand, emphasises governing boards are shaped by the task environment and organisational structure (Hung, 1998).

2.1.1.1 The institutional perspective

Institutional theory is considered to have originated in the writings of Max Weber (Weber, 1978) and has since been developed by others (for example, Meyer and Rowan, 1977, DiMaggio and Powell, 1983; Fligstein, 1985, Meyer et al., 1987). Institutional isomorphism describes the progressive convergence of institutions through imitation. There are mainly three types of isomorphism: coercive, mimetic and normative (Mintzberg et al., 1998). Coercive isomorphism describes the pressure to conform, exerted through standards and regulations; mimetic isomorphism describes the borrowing and imitation of successful competitors and industry leaders, often based on best-practice ideology; while normative isomorphism results from the strong influence of professional expertise.
The institutional perspective claims organisations are institutionalised through internal and external pressures (Hung, 1998). Tolbert and Zucker (1983) argue the governing board can only act to maintain the relationship between the organisation and the environment. It is therefore called a maintenance role. The environment in institutional theory is the repository of two types of resources: economic and symbolic (Mintzberg et al., 1998). The role of the board is to maintain the status quo in the face of pressure from outside the board. These pressures restrict and limit what the board can do, as it is constrained by social rules and taken-for-granted conventions (Ingram and Simons, 1995). Hung (1998, p.107) uses Selznick’s (1957) argument to emphasise the link to institutional theory. By instilling value, institutionalisation promotes organisational stability and persistence of the organisational structure over time.

Internal institutional pressures are described from the instrumental view of directors in the Hung (1998) classification. Mace (1971) observed boards are a management tool to support decisions of professional managers, and hence the label support role. This is commonly known as the ‘rubber stamp’ in managerial hegemony theory, a term also used by Mace (1971). This is in essence what Berle and Means (1932) thesis was about, the power of managers, although they were only employees, not owners, had been institutionalised. This is the perspective of institutional economics, where top and senior managers design the governance structure, with the ultimate aim of reducing transaction costs (Williamson, 1975; 1979; 1984).

2.1.1.2 The contingency perspective

The contingency perspective was initiated in opposition to the view there is ‘one best way’ to run an organisation (Mintzberg et al., 1998). The perspective is usually traced back to Lawrence and Lorch (1967), as they characterise environment by the complexity and uncertainty it poses to organisations. Contingency theory has two main assumptions: (1) there is no best way of organising, and (2) different ways of organising are not equally effective (Galbraith, 1973). The argument is organisations must fit their structure and processes to their environment. First, companies should align their structure with environmental uncertainty. A mechanical approach to structural fit can work in a stable environment, but a more
organic approach is needed in an unstable environment. Secondly, companies need to align their structure to the overall environment, meaning companies in a more complex environment require a more complex structure to cope with it (Hedman and Kalling, 2002). Galbraith (1973; 1977) suggests organisations should minimise environmental uncertainty by processing information to better handle the complexity of the task and the uncertainty posed by the environment. He offered two strategies: (1) to reduce information processing needs, and (2) to increase capacity to handle more information. Strategic contingency theory emphasises the importance of choice, different interests and goals, and the role of power in determining organisational structure (Child, 1984; Pfeffer, 1982).

Huse (2005) states, based on contingency theory, there is no best way of designing a board or a corporate governance system for accountability. There are two sets of factors that influence the design, the internal and external environment (Hung, 1998). The external arm of the contingency part of the typology is based on the need for external control, where control is independent of the management, and the board is the manifestation of control, as it is control of external coalition that matters (Mintzberg, 1983). On one hand, there is the pluralism of stakeholder theory, where the role of the board is to coordinate different perspectives of stakeholders (Donaldson and Preston, 1995). Hung (1998) labels this the coordinating role. On the other hand, there is the phenomenon of networking, or interlocking directorates, where the role of the board is a linking role, and directors sitting on two boards or more act as links between those boards (Hung, 1998). Pfeffer and Salancik (1987) argue interlocking directorates are important for obtaining valuable resources, and at the same time for controlling other organisations through manipulation of the available resources. This can be further explained by resource dependency theory, which assumes corporations depend upon one another for access to valuable resources, and try to establish links to regulate their interdependence (Hung, 1998).

The internal arm of the contingency part of the above typology is what has dominated discussion and research in the last decade, as it is linked to agency theory and stewardship theory. Tricker (1994) describes the internal environment as
conformance and performance functions, where conformance relates to the past and performance to the future. These functions represent the control role and the strategic role. The control role becomes the role of the board in agency theory, as it is concerned with resolving problems in the contract between the principal and the agent, a mechanism which limits the opportunism of the agent (Fama and Jensen, 1983). Stewardship theory emphasises the importance of the performance function, or the strategic role of the board. According to this theory there is no need for control in the relationship of principal and the agent as they have a mutual goal, which means the board is responsible mainly for setting strategy (Donaldson, 1990).

2.1.1.3 Hung’s Typology

Typology, by definition, implies ideal types or illustrative endpoints, rather than a complete and discrete set of categories (Patton, 2002). Hung’s (1998) typology offers an interesting way to explore the different theories in context, as well as in content. It highlights different theoretical perspectives and how they aim to research various aspects of corporate governance. Furthermore, it emphasises the reason for different theories in the literature, as they represent categorically opposing viewpoints on what the role of the board should be and why. Such a typology, as Patton (2002) put it, is an important building block for a deeper understanding of the subject, and it helps to disentangle the forest of ideas sprouting up in corporate governance literature.

However, it can be argued Hung’s typology is not waterproof. Many researchers consider agency theory, for example, more an advocate of institutional theory than contingency theory (Fama and Jensen, 1985; Jensen and Meckling, 1976; Lubatkin, 2007; Ulhøi, 2007), as it originated in new institutional economics (Fama, 1980; Eggertsson, 1990). Furthermore, strictly speaking, none of the above theories represent contingency theory as initiated by Lawrence and Lorch (1967), as different organisational responses are, for example, functions of environmental dynamics, complexity, market diversity, and hostility (Mintzberg et al., 1998). This is more in line with the argument for lack of contingencies in governance research (Huse, 2005). It seems, however, the labels used in Hung’s (1998) typology are not

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3 More about classification in Section 3.1.
to be taken so literally. Contingencies have been discussed in a much broader sense in the literature. Zahra and Pearch (1989), for example, use external and internal contingencies in their model. Furthermore, it is logical to consider agency theory as a response to internal contingencies, although usually not described as such. Agency theory has been interpreted in many ways, according to the author’s disciplinary tradition (Gomez-Mejia and Wiseman, 2007), as discussed in the review of the theory (Eisenhardt, 1989; Gomez-Mejia et al., 2000). Another problem with Hung’s (1998) typology is there is no clear distinction between institutional perspective and institutional theory, although managerial hegemony theory becomes a subset of the former but not the latter. In this discussion the institutional perspective and theory are treated as one and the same.

The logic of introducing Hung’s (1998) typology is it describes an interesting method of categorising the most popular theories within corporate governance literature, which is more helpful than describing them mechanistically. The typology is intended to give a broad overview of theories used in corporate governance, although the context may be debated. In the next subsection a more detailed description of the theories (except contingency theory and institutional theory which were discussed in this section) will be provided for a better understanding of the background of board role theory.

2.1.2 Description of theories
There is no shortage of theoretical perspectives in corporate governance literature. The number of perspectives, considered theories within the discipline, depends on the definition of ‘theory’ (see section 3.1 for a discussion of definitions of theories). Hung (1998) identifies six theories that could be categorised as typology. Furthermore, Zahra and Pearce (1989) described a legalistic perspective and a class hegemony theory. This makes eight challenging and complementary theories (table 2.1.2), in essence the same theories on which other reviewers have focused (Fried et al., 1998; Dalton et al., 1999, 2003; Hillman and Dalziel, 2003; Lynall et al., 2003). The purpose is to give a richer picture, although only a sketch, of the theoretical background of different roles of board.
2.1.2.1 Agency theory

Agency theory (and transaction-cost theories) is usually described as part of organisational economics (Barney and Ouchi, 1986; Donaldson and Preston, 1995) or new institutional economics (Eggertsson, 1990). As originated in the study of Berle and Means (1932), the use of new institutional economics in relation to corporate governance has primarily focused on the relationship between shareholders and managers of large public companies (Ulhoi, 2007). There are serious doubts as to whether the theory is applicable in other settings, or even whether it was ever intended for any other settings (Ulhoi, 2007; Lubatkin, 2007).

As observed by Gabrielsson and Huse (2004), agency theory is the most common approach in empirical research within the governance field. It has been considered the dominant theoretical perspective in corporate governance (Shleifer and Vishny, 1997; Dalton et al., 2003). Furthermore, it is often used synonymously with governance theory (Lubatkin, 2007).

Agency theory is based on the master-servant metaphor that can be traced back to Roman law, where slaves were perceived as practical extensions of their masters (Ulhoi, 2007). The theory is concerned with the problems arising when one party (the principal) contracts with another (the agent) to make decisions on behalf of the principals (Fama and Jensen, 1983). Three factors play a key role in this problem and capture the nature of the principal-agent relationship: (1) information asymmetry between principals and agents, (2) bounded rationality by both principals and agents, and (3) potential goal conflict (Gomez-Mejia and Wiseman, 2007). The separation of ownership and control gives rise to conflicts of interests between shareholders and managers, their agents, because of the opportunism of managers (Lubatkin, 2007).

Williamson (1975, 1984, and 1992) and Fama and Jensen (1983) argue the role of the board of directors, and more generally of the corporate governance system, is to harmonise agency conflicts. The board is principally an instrument by which managers control other managers (Williamson, 1984). It is an instrument of control with the primarily role of monitoring management activities in order to minimise agency costs, and thereby protect shareholder interests (Stiles and Taylor, 2001).
can therefore be argued agency theory is at least partially, if not completely, about control (Mace, 1971; Boyd, 1990; Zahra and Pearce, 1992) and power (Finkelstein and Hambrick, 1996; Pettigrew and McNulty, 1998). The contractual relationship of the principal and the agent is related to potential moral hazard and adverse selection problems (Gomes-Mejia and Wiseman, 2007). Moral hazard arises when agents shirk their responsibilities, as they believe their behaviour is unobservable (Arrow, 1962). Adverse selection arises when one party has information the other party in the contract cannot obtain without some cost (Akerlof, 1970). Moral hazard and adverse selection create the need for a governance mechanism (Gomes-Mejia and Wiseman, 2007). As information asymmetries increase, it becomes harder for the principal to know whether the agent is fulfilling his contract (Balkin, Markman and Gomez-Mejia, 2000).

The main assumptions of agency theory are still being debated, as recent publications demonstrate (Lubatkin, 2007, Ulhøi, 2007, Gomez-Mejia and Wiseman, 2007, Zahra, 2007). It is argued some researchers emphasise the opportunism of managers too heavily, as the main premise is not distrust (Ulhøi, 2007), but rather insurance or protective measures. In other words ‘it is better to be safe than sorry.’ There is, however, little debate whether ‘monitoring’ and ‘control’ are the main theoretical areas for board role research.

2.1.2.2 Stewardship theory

Stewardship theory takes a different view from new institutional economics of the relationship between management and the board of directors. It can be described as a counter theory to agency theory. Managers are considered good stewards of corporate assets, rather than opportunistic and self-interested actors as within agency theory (Donaldson, 1990). It originates from organisational psychology and sociology, claiming executives are generally trustworthy (Herzberg et al., 1959; Argyris, 1964; Donladson and Davis, 1991; Muth and Donaldson, 1998). Davis et al. (1997) compare the two theories and point out the limits and boundaries of the two theories rest in their definition of behaviour, or the model of man. While both theories concentrate on the relationship between the board (or shareholders) and management, they view that relationship in totally different fashions. According to
agency theory, managers are self-serving individualists focused on the short term, while stewardship focuses on managers who serve the collective and are long-term orientated (Davis et al, 1997). The psychological differences can be noted in table 2.1.1.

<table>
<thead>
<tr>
<th>Psychological Mechanisms</th>
<th>Agency theory</th>
<th>Stewardship theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>Low order/economic needs (physiological, security, economical)</td>
<td>Higher order needs (growth, achievement, self-actualisation)</td>
</tr>
<tr>
<td></td>
<td>Extrinsic</td>
<td>Intrinsic</td>
</tr>
<tr>
<td>Social Comparison</td>
<td>Other managers</td>
<td>Principal</td>
</tr>
<tr>
<td>Identification</td>
<td>Low value commitment</td>
<td>High value commitment</td>
</tr>
<tr>
<td>Power</td>
<td>Institutional (legitimate, coercive, reward)</td>
<td>Personal (expert, referent)</td>
</tr>
</tbody>
</table>

Adapted from Davis et al. (1997, p. 37)

Stewardship theory and agency theory are described in terms of Theory of X and Theory Y (Gay, 2001), originating from McGregor (1960). From the Y perspective, from which stewardship theory draws its insight, individuals need development and achievement (Davis et al., 1997). Furthermore, shareholder interests and executive interest are often naturally aligned (Davis et al., 1997; Lane et al, 1998; Daily et al., 2003) and reputations and careers are naturally interwoven (Baysinger and Hoskinson, 1990).

In this sense monitoring is less important as a function for the board (Donaldson and Davis, 1994), although some researchers argue for the need to review strategies formulated and implemented by management (Andrews, 1980). The role of boards
within this theory is defined by its activity and involvement in guiding management to achieve the corporate mission and objectives (Hung, 1998). Directors and executives seek to become a team for governing the company, thereby creating value for shareholders (Zahra and Pearce, 1991; Sundaramurthy and Lewis, 2003; Davis et al., 1997). This may be considered an argument for combining the role of the chief executive and chairman (Stiles and Taylor, 2001).

2.1.2.3 Resource-dependency theory

The main claim of resource-dependency theory is the board serves as a ‘co-optive’ mechanism to link the company to the external environment, to secure resources and protecting against adversity (Stiles and Taylor, 2001). The board is a linking instrument between the organisation and the external environment (Hung, 1998; Kiel and Nicholson, 2003). The board focuses on resource exchange between companies and the external environment, essential for survival and effective performance (Pfeffer and Salancik, 1978; Pearce and Zahra, 1992). However, as the theory stems from interest in distribution of power in the firm (Zahra and Pearce, 1989) and the market, it uses interlocking directorates to facilitate and obtain valuable resources (Zeitlin, 1974; Pfeffer and Salancik, 1978). In companies where executives lack experience, non-executive directors provide skill and knowledge about the external environment (Pfeffer and Salancik, 1978; Castaldi and Wortmann, 1984; Borch and Huse, 1993; Carpenter and Westphal, 2001).

Resource-dependency theory focuses on the importance of human and social capital (Kiel and Nicholson, 2004a). Human capital consists of experience, expertise, and reputation, while social capital consists of networks, status, and goodwill (Nahapiet and Ghoshal, 1998; Hillman and Dalziel, 2003). Social capital, described as a network of individuals, is used to leverage information, influence, and solidarity, as well as talent and external information (Adler and Knoeber, 2002, Rosenstein et al., 1993, Davis, 1991; Haunschild, 1993).

Carpenter and Westphal (2001) suggest networks of directors through appointments to other boards are important in determining whether boards have the appropriate strategic knowledge and perspective to monitor and advise management. Socio-
cognitive perspective indicates experience on other boards can either enhance or diminish directors’ ability to contribute to strategy by focusing their attention on relevant strategic issues. The theory suggests individuals cope with complex decision-making tasks by relying upon the schemata or ‘knowledge structures’ they have developed about their environment (Kiesler and Sproull, 1982; Walsh, 1995). In the absence of more complete information, or given uncertainty regarding the relevance of different pieces of information, individuals tend to follow a top-down or theory-driven approach to decision-making, rather than a bottom-up or data-driven approach based on current information (Abelson and Black, 1986; Nisbett and Ross, 1980; Ocasio, 1997). This is important given the extreme information complexity facing directors evaluating strategic decisions (Lorsch and MacIver, 1989). This perspective is based on the assumption knowledge structures individuals use to cope with information processing demands, are developed from experience in similar roles (Dearborn and Simon, 1958; Walsh, 1995). Useem (1982) notes executives use their board appointments as a way to scan the environment for timely and pertinent information. Directors treat experience on other boards as a vehicle for learning (Useem, 1982) and to observe consequences of management decisions (Haunchild, 1993). Information acquired from fellow directors may be particularly influential, because it often comes from a trusted source (Davis, 1991; Useem, 1982; Weick, 1995b).

2.1.2.4 Class hegemony theory
Zahra and Pearce (1989) describe class hegemony theory as one of four leading theoretical perspectives. However, it is omitted in Hung’s (1998) typology. Gay (2001) draws a comparison between class hegemony theory and resource-dependency theory, as class hegemony theory focuses on the relationship between companies and their origin in organisational theory and sociology. The theory is based on an elitist paradigm in which boards of directors perpetuate the power and control of the ruling capitalist class over social and economic institutions, hence wealth (Zahra and Pearce, 1989). They envision the task of the board as coordinating actions by the firms they serve and ensuring capitalist control of societal institutions.
Class hegemony theory is different from management hegemony theory. Managerial hegemony theory sees the board as a “rubber stamp” for managerial decisions (Mace, 1971; Nader, 1984; Perham, 1983). In managerial hegemony theory, boards are seen as lackeys of the CEO who, as joint chairman and CEO, can pick and choose members of his board (Patton and Baker, 1987). Class hegemony theory proposes a different spin on this ineffectiveness of boards, where they are described as a tool of the ruling capitalist elite (Zahra and Pearce, 1989). The main thesis of Berle and Means (1932) was ownership had become so dispersed nobody actually owned big corporations any more, and therefore it was the CEO, not the owners, who controlled the company. In class hegemony theory the CEO represents the capitalist elite, and the role of the board is highly influenced by concentration of ownership and CEO power and style (Zahra and Pearce, 1989). Therefore, interests of the “establishment,” rather than management, set the agenda.

2.1.2.5 Stakeholder theory

Stakeholder theory stresses corporations and boards must accept responsibility for stakeholders such as customers, suppliers, employees, and the community, rather than just shareholders (Lorsch and Carter, 2004). The theory challenges the predominance of shareholders as the only real stakeholders, and assumes interests of all stakeholder groups have intrinsic value (Jones and Wicks, 1999). In agency theory and stewardship theory, companies are run for their owners, the shareholders, based on a simple profit-maximising perspective. The stakeholder approach to the role of the governing board implies negotiation and compromise with stakeholder interests (Hung, 1998). Stakeholder theory takes the broad view companies are not just profit maximising entities, but rather need to consider all stakeholders of the company. It can be argued this approach has at least two implications for the role of the board and its functions: (1) monitoring, as an example for ethical standards or environmental standards not directly linked with shareholder interests, and (2) negotiations and compromise, where the board acts as a link and coordinator between management and shareholder interests on one hand, and other stakeholder interests on the other.
The role of the board is to satisfy multiple stakeholder interests, rather than to monitor conventional economic and financial factors (Donaldson and Preston, 1995). The focus of the theory is not just shareholder-board-management interaction and goals. It becomes stakeholder-board-management interaction and goals. The model of the firm changed from a simple input-output model to a more interactive stakeholder model, as portrayed by Donaldson and Preston (1995; p. 68). The comparison of the input-output model and the stakeholder model provided by Donaldson and Preston (1995) indicates how much more complicated the stakeholder model is, in comparison with the shareholder model.

*Figure 2.1.3: The Input-Output Model and the Stakeholder Model.*

Adapted from Donaldson and Preston (1995; p. 68).
The stakeholder theory differs from resource dependency theory, although it too focuses on the external environment. Resource dependency theory, like agency theory and stewardship theory, focuses on the shareholder perspective. The two theories can be contrasted in another way. While stakeholder theory focuses on the role of board in establishing long-term relationships between the firm and the stakeholders (Freeman, 1984; Freman and Evan, 1990; Blair, 1995), resource dependency theory focuses on the board as an instrument to facilitate access to resources critical to the firm’s success (Johnson et al., 1996), both in the short and long term.

2.1.2.6 Managerial-hegemony theory

In managerial-hegemony theory, the board is, in effect, a legal fiction dominated by management control (Berle and Means, 1932; Mace, 1971; Kosnik, 1987). The power lies in the hands of management (Finkelstein, 1992; Hill, 1995). The ensuing weakness of shareholder control is likely to lead to self-serving management behaviour, where they pursue objectives of their own choosing (Parkinson, 1993). The board, therefore, adopts the role of ‘rubber stamp’ (Herman, 1981, Mace, 1971; Vance, 1983; Kosnik, 1987). The board cannot monitor effectively without authority. The board exists to comply with legal requirements, with no function other than to agree with what management says and thinks. The board is only involved with strategic decision-making when faced with a crisis (Mace, 1971).

The CEO is responsible for strategy and the key link between the board and the managerial hierarchy, with influence over the flow of information in both directions (Aram and Cowan, 1983; Hill, 1995). Within this context, the CEO is the power broker (Zahra and Pearce, 1989), inviting only friends and protégées to serve on the board (Rosenstein, 1987; Pearce and Zahra, 1992; Westphal and Zajac, 1995) and dismissing viable successor candidates (Cannella and Shen, 2001). The power of the CEO is drawn from a variety of sources (Shen, 2003): control over board nominations (Mace, 1971; Foster, 1982; Goodrich, 1987; Kosnik, 1987; Patton and Baker, 1987; Wade et al., 1990; Westphal and Zajac, 1995), control over remuneration (Aram and Cowan, 1983; Geneen, 1984), the limited time allocated by non-executive directors (Patton and Baker, 1987), superior executive expertise,
prestige and status (Finkelstein, 1992), equity ownership (Cannella and Shen, 2001), the merged role of CEO and chairman (Daily and Dalton, 1994) and the culture of the boardroom, which has the potential to stifle independent voices (Mace, 1971; Herman, 1981; Lorsch and MacIver, 1989; Hill, 1995; Pettigrew and McNulty, 1995). The main point being, it is the CEO who controls what the board is and does.

2.1.2.7 Legalistic perspective

Zahra and Pearce (1989) develop another “theory,” which may be labelled the legalistic perspective, mandating boards contribute to performance by carrying out their legal responsibilities. It views the board responsible for selecting and replacing the CEO, representing the interests of shareholders, providing advice and counsel to top management, and serving as a control mechanism by monitoring managerial and company performance. However, Taylor and Stiles (2001) point out how the role of the board is to be interpreted from a legal standpoint, and what kind of power is delegated to the executive, differs a great deal among companies. Although it can be argued the legalistic perspective may fit into Hung’s (1998) typology as part of institutional theory, it is important to view it separately, because of increased initiatives of the legal body to mould the role of the board, and its dominance in practice. Dulewicz and Herbert (1997) found, in their study of listed UK companies, boards do focus on the importance and effort of fulfilling their legal and fiduciary duties.

There is a somewhat vague difference between the legalistic perspective and agency theory. Both perspectives are emphasised by Johnson et al. (1996). One of the fundamental differences between the two perspectives is in the source of power of directors. In agency theory, this power comes from the shareholders, and in legal theory, power emanates from state law (Budnitz, 1990). Legal theory is therefore less specific in identifying board duties to shareholders than agency theory (Budnitz, 1990). Johnson et al. (1996) point out there are more similarities between the theories than differences, as both focus on control and monitoring. The difference has been emphasised with reference to research on bankruptcies, where creditors take priority over equity interest (Markell, 1991). It is important to state
initiatives for change in board practices in the last few years have come from institutional changes in law, or ‘comply or explain’ regulation, rather than from shareholders. On the other hand, agency theory initiatives regarding management incentives are not supported by legal theory.

Legal theory can be described as a subject of the institutional perspective, rather than contingency theory, in Hung’s (1998) typology, as board-mandated responsibilities emanate from law and regulation (Zahra and Pearce, 1989). Legal obligations are, therefore, an example of external institutional pressure. The legal theory differs from institutional theory, as law and regulation are the sole motivation. In institutional theory the pressure is more pluralistic, as social pressure and convention structure the behaviour of the board. It may be argued legal theory stands for more formal institutional pressure, while institutional theory focuses on more informal external pressure.

2.1.2.8 Theoretical forest
A range of other theories has been explored in the context of corporate governance: for example, strategic leadership theory, justice theory, and team theory (Fried et al., 1998; Dalton et al., 1999, 2003; Hillman and Dalziel, 2003; Lynall et al., 2003, Long, 2005). An overview provides an outline of the different theories and their emphasis, although boundaries between theories are not clear. A further description of the eight theories discussed in this chapter can be found in table 2.1.2, which is a bundle of three literature surveys exploring those theories.

2.1.3 Multi-theoretical perspective
The discussion in this section has shown there is no ultimate board role theory, but rather different perspectives with different emphases. Referring to the Hawkins quote at the beginning of the section, it may be just as well there is no ultimate theory, because that means something remains to be discovered within the field. The bundling of theories has been enlightening, as, for example, Zahra and Pearce (1989) use that approach to develop their integrative model of board roles and attributes. This is why more and more researchers recognise the importance of a multi-theoretical perspective to research the role of boards, rather than a single
theoretical approach (Johnson et al., 1996; Stiles and Taylor, 2001; Huse, 2005). A multi-theoretical approach to corporate governance is essential to investigate the many mechanisms and structures that might reasonably enhance organisational functioning (Dalton et al., 2003).

This section has focused on theories within the corporate governance literature. Hung’s (1998) typology and the intergraded view of Zahra and Pearce (1989) have guided the discussion. In conclusion, a combination of theories is more likely to describe what boards of directors do, how they do it, and why. The next section focuses on how theories have been translated into research models.
Table 2.1.2: Summary of corporate governance theories.

<table>
<thead>
<tr>
<th>Theoretical origins</th>
<th>Representative studies</th>
<th>Empirical support</th>
<th>Performance criteria</th>
<th>Agency theory</th>
<th>Stewardship theory</th>
<th>Resource Dependence theory</th>
<th>Stakeholder theory</th>
<th>Institutional theory</th>
<th>Managerial Hegemony theory</th>
<th>Class Hegemony theory</th>
<th>Legislatist theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics &amp; Finance</td>
<td>Baysinger &amp; Butler (1985)</td>
<td>Moderate</td>
<td>Survival</td>
<td>Low operating cost, Profitability</td>
<td>Profitability, Organizational performance</td>
<td>Growth in resources, Goal achievement, Relative market position</td>
<td>Corporate social performance, Corporate social responsibility, Profitability</td>
<td>Survival, Profitability</td>
<td>Profitability</td>
<td>Oligopolistic market power, Profitability</td>
<td>Survival, Growth, Profitability</td>
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<tr>
<td>Psychology &amp; Sociology</td>
<td>Donahue &amp; Davis (1994)</td>
<td>Limited</td>
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<tr>
<td>Organisation theory &amp; Sociology</td>
<td>Donahue &amp; Muths (1998)</td>
<td>Strong</td>
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<tr>
<td>Politics, Law and Management theory</td>
<td>Pfeffer (1972)</td>
<td>Moderate</td>
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<tr>
<td>Organisational theory</td>
<td>Pfeffer (1973)</td>
<td>Limited</td>
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<tr>
<td>Marxist sociology</td>
<td>Blair (1995)</td>
<td>Moderate</td>
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<tr>
<td>Mills (1956)</td>
<td>Rate (1980)</td>
<td>Limited</td>
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</table>

2.2 Models of board attributes and roles

The sciences do not try to explain, they hardly even try to interpret, they mainly make models. By a model is meant a mathematical construct which, with the addition of certain verbal interpretations, describes observed phenomena. The justification of such a mathematical construct is solely and precisely that it is expected to work.

Johann Von Neumann (1903 - 1957)

This section discusses some of the research models used or suggested in the literature. Most of the models introduced in corporate governance research can be described as simple input-process-output models, with or without contextual contingencies. There is little agreement about what should be included in each box, although most models can be traced back to an article by Zahra and Pearce (1989).

Figure 2.2.1: Outline of the board models section.

This section focuses on models developed to research the role of boards. The first part describes the integrated model constructed by Zhara and Pearce (1989). The next four parts focus on four other models. The section concludes with a comparison of the models.
2.2.1 The ‘usual suspects’ model

The ‘usual suspects’ are variables that have become classic in corporate governance, where research has focused on simple input-output models (Finkelstein and Mooney, 2003). The relationship between the usual suspects and corporate financial performance, as shown in figure 2.2.2, has driven board and governance research for almost two decades now (Huse, 2005). The usual suspects are: (1) number of board members, (2) insider/outsider ratio, (3) CEO duality, and (4) director shareholdings. In other words, the usual suspects are composition characteristics of boards (Zahra and Pearce, 1989).

Figure 2.2.2: The ‘usual suspects’ model.

Based on Zahra and Pearce (1989).

The focus on composition has been called the structural-based perspective of the board (Daily and Cannella, 2003). Focault (2002, p. 147) describes the term ‘structure’ by quoting a botanist: “By structure of a plant’s parts, we mean the composition and arrangement of the pieces that make up its body.” That is in essence what is reflected in the structural-based perspective. It refers to the ‘body’ of the board. Several researchers argue research from the structural-based perspective has not proven fruitful, and has been inconclusive and misleading (for example, Zahra and Pearce, 1989; Pettigrew, 1992; Dalton et al., 1998; Dalton et al., 1999; Bøhren and Ødegaard, 2003; Dalton and Dalton, 2005).

The leap from composition input variables to the output variables of organisational performance by structural-based research has been criticised for leaving out everything in between the two sets of variables (Zahra and Pearce, 1989; Pettigrew, 1992). The missing element is what is commonly known as ‘process’ in the classical input-process-output format of models. Pfeffer (1983) and others argue the study of such intervening processes is not necessary, as the beliefs and behaviour of executives and directors can be inferred successfully from demographic characteristics. The parsimony is as long as research can explain ‘what’ the group
or organisation-level impact of demography is, there is no necessity to determine ‘why’ demography operates in the observed way (Forbes and Milliken, 1999). Forbes and Milliken (1999) offer three arguments as to why this perspective is flawed. First, the literature has failed to lead to any clear consensus as to which demographic characteristics lead to which outcomes (Daily and Schwenk, 1996; Johnson et al., 1996; Zahra and Pearce, 1989). “This conclusion suggests that the influence of board demography on firm performance may not be simple and direct, as many past studies presume, but, rather, complex and indirect” (Forbes and Millken, 1999; p. 490). Secondly, the assumptions behind demography-performance theories have been shown unreliable (Lawrence, 1997; Walsh, 1988; Melone, 1994). Thirdly, studies of process constructs have demonstrated the potential to expand and refine understanding of group dynamics (Smith et al., 1994; Amason and Sapienza, 1997). Furthermore, recent debate has emphasised the importance of understanding processes, not just composition, in relation to boards of directors (Zahra, 2007).

The following section discusses other models with slightly different perspectives for empirical research. They all address the ‘process’ in the classical input-process-output model.4

**2.2.2 The integrated model**

Zahra and Pearce (1989) developed an integrated model from four theoretical perspectives: the legalistic, agency, class-hegemony, and resource dependency theories. The model (figure 2.2.3) consists of four interrelated attributes, composition, characteristics, structure, and process, which in essence define the role of the board, and in effect how they influence corporate financial performance. These four attributes are affected by internal and external contingencies.

With regard to the four other theories not mentioned by Zahra and Pearce (1989), (stakeholder, stewardship, institutional, and managerial hegemony theory) the model basically stands the test of time, although stakeholder theorists prefer to use measurements other than financial performance.

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4 There is more background discussion of theory building in section 3.1.
Some researchers have used the integrated model (Zahra and Pearce, 1989) as a starting point for model building, sometimes changing one or two variables. Hillman and Dalziel (2003), for example, use the Resource role, which is part of the Service role in the integrated model (Zahra and Pearce, 1989). Furthermore, Hillman and Dalziel (2003) use ‘board capital,’ a measure of the human capital of the board, but which relates closely to attributes in the integrated model (figure 2.2.4).


Adapted from Zahra and Pearce (1989, p. 305).\(^5\)

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\(^5\) The relationship between Composition and Board roles is missing in the original drawing, but described in the text accompanying the figure (Zahra and Pearce, 1989).
2.2.3 The Henley Model

Another interesting model was developed by Henley Management College as a result of extensive research published by Dulewicz et al. (1995; 1995b) and by the Institute of Directors. It is described as a simple input-process-output model, although it includes many variables (figure 2.2.5). The input part, “personal competences and knowledge,” consists of 38 separately-defined competences grouped under six headings: strategic perception and decision-making, analytical understanding, communication, interaction with others, board management, and achieving results. Process is described under four headings: clarification of board and management responsibilities, board composition and organisation, planning and managing board meetings, and improving board effectiveness. The output part consists of 16 tasks described under four headings: establishing vision, mission and values, setting strategy and structure, delegation to management, exercising responsibility to shareholders and other interested parties. Output is further defined as “indicators of good practice” and is, therefore, a different measurement than the financial performance measure in the integrated model (Zahra and Pearce, 1989).

While the Henley model does not offer the broad scope of the intergraded model (Zahra and Pearce, 1989) with its contextual contingencies, it does define the
competence, process, and tasks of the board in a more detailed fashion. Therefore, it
gives a much richer picture of what boards do, and even how they do it. However,
internal and external contingencies can better clarify understanding of why and
when boards act as they act. The answer to these questions may lead to a better
understanding of the role of the board.

Figure 2.2.5: The Henley model.

Adapted from Dulewicz, MacMillan and Herbert (1995).

2.2.4 The Intellectual Capital Framework

Another input-process-output model has been developed by Nicholson and Kiel
(2004), in which the transformational process is fitted between the intellectual
board as a dynamic and open social system, in a framework describing the
relationship between the board and corporate performance as a set of interrelated
elements.

Figure 2.2.6: Simple board transformation framework.

A more detailed version of the Nicholson and Kiel model (2004) shows the inputs consist of organisation type, legal framework, constitution, history, and strategy (figure 2.2.7). The board’s intellectual capital is a dynamic relationship between the team’s social capital and structural capital, and individual human, social, and cultural capital. The board’s roles are control, advice, and access to resources, affected by the internal and external environments. The output is board effectiveness, meaning team and individual effectiveness, which affects organisational performance. The framework draws upon Stewart’s (1997) and Bontis’ (1999) conceptualisation of intellectual capital, as well as the intergraded model by Zahra and Pearce (1989), and the review of Johnson et al. (1996).

Figure 2.2.7: The board intellectual capital framework.

Another version of the intellectual capital model by Nicholson and Kiel (2004b) more closely resembles the original model of Zahra and Pearce (1989). Furthermore, it is more focused towards research hypotheses, rather than being “just” descriptive, as the correlation or causal links are more evident, although it is a very complex model (figure 2.2.8).
2.2.5 Board as a decision-making group

Some researchers have looked at boards as decision-making groups (Forbes and Milliken, 1999; Carpenter and Westphal, 2001), although with a different emphasis. Forbes and Milliken (1999) introduced a model based (figure 2.2.9) on the literature of small decision-making groups, the work of Bettenhausen (1991), Cohen and Bailey (1997) and Gist et al. (1987).

Figure 2.2.9: Board as a decision-making group.

Adapted from Forbes and Milliken (1999, p. 498).
It is a model of board processes, defined as the effort each individual on the board puts into a task, the cognitive conflict of board members, and use of their own knowledge and skills. The measures of effectiveness of the boards are task performance (Control and Service roles), and the board’s ability to continue working together, measured as the cohesiveness of the group. Board cohesiveness is defined as the degree of attractiveness and longevity of board members. Board-level outcomes are then associated with firm-level outcomes.

2.2.6 The Board behaviour model

Some researchers argue for a different kind of framework to explore board behaviour (Roberts et al., 2005; Huse, 2005). Huse (2005) offers a framework that focuses on role expectations, board task performance, actors, context, interactions and influencing processes, formal and informal structures and norms, and board decision-making culture (figure 2.2.10).

Figure 2.2.10: The board behaviour model.

Adapted from Huse (2005, p. 67).
The model is based on critiques of previous models, not the least the work of Zahra and Pearce (1989), Pettigrew (1992), Johnson et al. (1996) and Forbes and Milliken (1999). The point is only very few studies have been published in leading journals about board behaviour. Gabrielsson and Huse (2004) found thirteen articles within the period of 1990-2002. Huse’s (2005) framework consists of four main areas: (a) splitting the link between board composition and corporate financial performance in intermediate steps through mid-range theories, as Zahra and Pearce (1989) suggested, (b) using a pluralistic approach to board role theories (Zahra and Pearce, 1989; Johnson et al., 1996; Stiles and Taylor, 2001), (c) applying theories from group and cognitive psychology to understand board decision-making culture, as Forbes and Milliken (1999) have emphasised, and (d) understanding the board as an open interactive system with various influence and power relationships among internal and external actors, as Pettigrew (1992) suggested. Thus the board behaviour model involves a complicated set of relationships.

2.2.7 Comparison of Models

The above models add dimension to the input-output equation of the ‘usual suspects’ model. The input part of the models demonstrates variables other than composition may be considered. These models provide a different method to measure the implications of corporate governance, as they focus on the processes of the board, not just the structure. Therefore, this perspective is called the process-based view of the board.

It is helpful to analyse these models in terms of inputs, outputs, processes, and contingencies. However, the distinction between different boxes is not always clear when the models are compared. The five models, the intergraded model of roles and attributes (Zahra and Pearce, 1989), the Henley model (Dulewicz et al., 1995), the decision-group model (Forbes and Milliken, 1999), the board intellectual capital framework (Nicholson and Kiel, 2004), and the integrated board behaviour model (Huse, 2005) offer a detailed picture of board roles and attributes. The process part of the models shows researchers are considering different influences and elements that drive board performance. Furthermore, it is interesting to note an effort is made to measure board performance, not just corporate performance. The tasks of the
board become part of the process in some of the models (Zahra and Pearce, 1989; Hillman and Dalziel, 2003; Nicholson and Kiel, 2004, Nicholson and Kiel, 2004b), while remaining an outcome in other models (Dulewicz et al, 1995, Dulewicz et al., 1995b; Forbes and Milliken, 1999). The Henley Management College model designates ‘indicators of good practice’ as the ultimate outcome measure, and not firm performance (Dulewicz et al., 1995).

The above discussion of the process-based view of the board shows efforts are being made to build more comprehensive models of what boards do and how that affects the organisation. The approaches are different, although usually built on linear input-process-output as model-forms. Furthermore, they emphasise a multi-theoretical approach, rather than just one theory. The models are based on different theoretical assumptions, rather than a simplification of a theory to test. On the other hand, the above discussion of process models has demonstrates there is little agreement among researchers on elements within the process-based view of the board. The literature is fragmented theoretically, and the approach to model-building differs among scholars. Concepts and measures vary, and often are incompatible (Heuvel et al., 2006). It can be argued that general terms used by Zahra and Pearce (1989) can accommodate most features of the other models. The four terms used in the discussion of concepts are: attributes, roles, performance, and contingencies (figure 2.2.11).

*Figure 2.2.11: The main concepts of corporate governance models.*

Based on Zahra and Pearce (1989)
The four main concepts identified in this section will be discussed in further detail in the next four sections of this chapter, in the following order: attributes, roles, performance, and contingencies. The purpose is to understand and break down the main concepts into more simple concepts that can be used for conceptualisation and operationalisation in an empirical study.
2.3 The attributes of boards

*Number and magnitude can always be assigned by means of a count or a measure; they can therefore be expressed in quantitative terms. Forms and arrangements, on the other hand, must be described by other methods: either by identification with geometrical figures, or by analogies that must all be ‘of the utmost clarity’.*

Michel Foucault (1926 – 1984)

It is easiest to categorise elements that can be seen and counted. However, such luxury is not always available. What is usually described as attributes of boards (Zahra and Pearce, 1989; Johnson et al., 1996) have elements that can be seen and counted, as well forms and arrangements which need to be documented in different terms, to rephrase the above quotation from Foucault (2002, p. 147). The purpose of attributes is to describe boards.

*Figure 2.3.1: The overview of discussion of attributes.*

| 2.1. Theories | 2.1. Composition |
| 2.2. Models | 2.3.1. Composition |
| 2.3. The concept of attributes | 2.3.2. Characteristics |
| 2.4. The concept of roles | 2.3.3. Structure |
| 2.5. The concept of performance | 2.3.4. Process |
| 2.6. Implications of context | 2.3.5. Structural- and process view |
| 2.7. Critique of previous research |  |
| 2.8. Research agenda |  |

Based on Zahra and Pearce (1989).

This section focuses on attributes of boards, and concepts also generally classified as attributes. The structure of the section follows the classification of Zahra and Pearce (1989), which distinguishes four elements of attributes: composition, characteristics, structure, and process (figure 2.3.1). Concluding remarks then follow.
2.3.1 Composition

Composition of boards has been the main focus of corporate governance research, and the ‘usual suspects’ the main variables (Finkelstein and Mooney, 2003; Huse, 2005). Zahra and Pearce (1989) describe three composition variables, size, outsiders vs. insiders, and minority representation.

In their annual survey of board practices in large US companies, the executive search firm Spencer Stuart (2002) found board size had shrunk from 15 directors in 1988 to 10.9 in 2002, indicating boards generally are shrinking. The reason is smaller boards are considered more effective. Yermack (1996) found an inverse relationship between board size and firm value in a sample of 452 large US industrial corporations during 1984-1991. Furthermore, evidence from 334 hospital boards shows big boards hinder strategic change (Goodstein et al., 1994), and Boyd (1990) found boards tend to be smaller in a more uncertain environment.

Spencer Stuart’s study (2002) of large US companies showed those in which the CEO was the only inside director, increased from less than one-tenth in 1992 to nearly one-third in 2002. Agency theory supports the hypothesis outside directors play a larger monitoring role than inside directors (Zahra and Pearce, 1989), and lack of monitoring by the board has been the basis of corporate scandals throughout history (Drucker, 1974; Coffee, 2006). Stewardship theory, however, holds the opposite view, that inside director and chief-executive duality has a positive effect on performance (Stiles and Taylor, 2001). There is support for both views. Baysinger and Butler (1985), in a study of 266 large US corporations, found relatively independent boards had a positive effect on average return on equity. Similarly, Kesner (1987), Zahra and Pearce (1992), and Ezzemel and Watson (1993) found a positive relationship. Donaldson and Davis (1991), Vance (1983), and Sullivan (1988) found, on the other hand, a greater proportion of executive directors led to a more positive performance. Other studies, like Hermalin and Weisbach (1988), found board composition had no impact on corporate performance in their sample of 142 NYSE firms.
According to the Spencer Stuart study (2002), in 1992 only 11 percent of boards featured a female director, and 9 percent had a director from an ethnic minority. By 2002 some 82 percent of boards had a female director and three-quarters of S&P 500 companies had African American directors. Several studies have found board diversity has a positive effect on performance (Carter et al., 2003; Erhardt et al., 2003).

Much of the research on composition of the board has sought a link to firm performance. Dalton et al. (1998), in a meta-analysis of 54 studies of board composition, found no substantive relationship between board composition and firm performance. Rhoades et al. (2000), in a meta-analysis of 37 studies, found board composition, especially the proportion of outside directors, had only an inconsequential relationship with firm performance. As Nicholson and Kiel (2004, p. 443) point out: “Despite press, academic and practitioner interest, however, there is general agreement that the evidence does not support assumed agency relationships.”

### 2.3.2 Characteristics

Zahra and Pearce (1989) discuss two components under characteristics of boards. ‘Directors’ background,’ which reflects the age, educational background, values, and experience of directors, and ‘personality of the board,’ which stands for the distinct style of the board. Personality reflects the focus on internal versus external issues, level of directors’ independence from management influence, and directors’ vested interest in the firm as evidenced by stock ownership. However, both the Henley model (Dulewicz et al., 1995) and the intellectual capital framework (Nicholson and Kiel, 2004) introduced earlier, offer a richer picture of what could be categorised as characteristics of the board. Both models focus on competences of board members, both individually and as a group.

Zahra and Pearce (1989) emphasised that each role, control, service, and strategy, requires distinct skills and abilities. For example, independence from management is necessary for the control role (Molz, 1988), balance between external effectiveness and internal efficiency for the strategic role, and professional
competence and prestige are necessary for the service role. Norburn (1986), in a study of 354 directors in 18 industries, found three industry settings – growth, turbulence, and decline – were associated with distinct director traits, abilities, beliefs, and skills. Many authors have described the characteristics of an effective board (Aram & Cowen, 1983, Castaldi & Wortman, 1984; Vance, 1983; Dulewicz et al., 1995; Charan, 1998; Sonnenfeld, 2002; Garratt, 2003), however, most have focused on the ‘one and only’ model of the board, rather than differing roles for individual organisations.

2.3.3 Structure
The literature on board structures has been growing, especially regarding committees. Charan (1998, p. 39) states overemphasis has been placed on the structural dimension of boards, which can distract a board from the real issue.

There is wide agreement committees are important for the board. For example, Klein (1998) reports the independence of key board committees is related to firm value. Beasley (1996) finds independent boards are important in deterring accounting fraud. Furthermore, studies support the relationship between the presence of board committees and board effectiveness, for example, the audit committee (Klein, 2002), remunerations committee (Conyon and Peck, 1998), and nominating committee (Vafeas, 1999).

Another structural issue is the flow of information between the CEO and directors (Tashakori and Boulton, 1983). “Directors can never know as much about the operation of the company as management, so they are dependent on the CEO for being supplied with accurate, timely, and material information” (Monks and Minow, 2004; p. 203). Very little research has focused on the attempt to identify factors that determine whether boards have adequate knowledge and information to make meaningful contributions to strategic decision-making (Carpenter and Westphal, 2001). Even when the board is staffed by a majority of outside directors, the board still functions on information provided by the CEO (Aram and Cowan, 1983). Some have questioned whether directors have suitable knowledge or information to contribute meaningfully to strategy (Carpenter and Westphal, 2001).
2.3.4 Process

Board process studies have focused mainly on what happens at meetings and the overall process, whereas an effective process is required for all the roles of the board (Zahra and Pearce, 1989; Leblanc and Gillies, 2005). For the service role, it is necessary to have effective processes to enable the board to identify issues of concern to the firm, and ensure a plan for managerial succession is in place. For the strategic role, processes to encourage discussion, evaluation and strategic proposals. For the control role, to ensure frequent evaluations of the CEO and company performance by the board or a committee.

The annual Spencer Stuart survey (2002) concludes the average S&P 500 board met 7.5 times in 2002, down slightly from the year before when it was 8.2 meetings. Lorsch and Carter (2004) state because of time limitations, most boards are set up to fall short of expectations. However, recent studies focus more on the debate, culture, and integration of board processes (Sonnenfeld, 2002, Nadler, 2004). Even so, empirical research on processes is very limited.

2.3.5 Structure and processes of the board

Zahra and Pearce (1989) identify four themes of attributes: composition, characteristics, structure, and process. The different attributes have been described in this section. According to Foucault’s (2002) definition of structure, it is possible to simplify the discussion of attributes into structure and process. The elements of composition, characteristics, and structure in the integrated model (Zahra and Pearce, 1989) can be summarised in the structural-based view of the board, as they all refer to the ‘body’ of the board. The process part of attributes in the integrated model (Zahra and Pearce, 1989), is better fitted for the process-based view of the board. Information flow, which Zahra and Pearce (1989) describe as a part of structure, can, furthermore, be fitted into the process view, as Nicholson and Kiel (2004b), Forbes and Milliken (1999), and Huse (2005) do in their models. Only limited research has been done on most attributes in the integrated model (Zahra and Pearce, 1989). The ‘usual suspects’ are the exception, as they define the structural-based view of the board, although it is focused mainly on what is
described as composition in the integrated model (Zahra and Pearce, 1989). It is important to note attributes, as part either of the structural-based view or the process-based view, are considered to have direct links to organisational performance in the integrated model (Zahra and Pearce, 1989), and can therefore be tested as independent variables, with organisational performance as the dependent variable. However, research has indicated work concerning the relationship of boards of directors to organisational performance is not very fruitful.

The next section further explores the process-based view of the board by examining board roles in the literature.
2.4 The Roles of boards

All over the place, from the popular culture to the propaganda system, there is constant pressure to make people feel that they are helpless, that the only role they can have is to ratify decisions and to consume.

Noam Chomsky (1928 - )

This section discusses the concept of roles of boards of directors. In the wake of recent business scandals there is a growing tendency to take the institutional perspective, or emphasise the conformance role of agency theory as the one and only role of boards in all companies. At the same time, directors’ main complaint about the role of the board is their limited involvement with strategy, and desire to become more involved with this task (Stiles and Taylor, 2001, Lorsch and Carter, 2004; Leblanc and Gillies, 2005). The purpose of this section is to acknowledge boards have more than one role.

Figure 2.4.1: The overview of the discussion of roles.

This section focuses on the role of the board, starting with theoretical labels discussed in section 2.1. Archetypes of roles are examined in the second part. The third part concerns roles as tasks. Part four discusses classifying boards in terms of power. The last part concludes the discussion on the concept of roles (figure 2.4.1).
2.4.1 Theoretical origins of roles
Most roles identified in the literature can be traced to theories discussed in the previous section. Whether a role stems from any one given theory, or whether it is better described by several theories, remains debatable. Hung (1998), for example, tries to identify main roles of the board as originating from particular theories, and many roles can be identified with Hung’s (1998) approach. Zahra and Pearce (1989), on the other hand, describe few roles, for example Control, Strategy and Service, which are represented to different degrees in several theories. Many other researchers argue for a combination of different theories to explain the roles of the board (Stiles and Taylor, 2001, Gabrielsson and Huse, 2005, Heuvel et al., 2006). Both approaches are helpful to understand what the board does, although they have different emphases.

As to Hung’s (1998) typology of theories, the main roles of the board are classified according to underlying theory, and shown in table 2.1.2. The two other theoretical perspectives included by Zahra and Pearce (1989), class hegemony theory and the legalistic perspective, may best be described as ceremonial and compliant. Zahra and Pearce (1989, p. 299) focus on the ceremonial role of the board when they describe it as “a means of perpetuating the powers of the ruling capitalist elite.” It may be argued the board has a more active control role within class hegemony theory than managerial hegemony theory, as the board is more powerful when ownership is more concentrated. The theory is not very clear on this issue. The role of the board within legalistic theory is best described as one of compliance, as “boards contribute to the performance of their firms by carrying out their legally mandated responsibilities” (Zahra and Pearce, 1989, p. 292).

Although Hung’s (1998) typology is helpful for understanding the theoretical roots of the corporate governance discussion, and the focus of those theories in the form of roles, there is a lack of detailed discussion in the literature about how those theories differ from a practical perspective. From the above discussion it can be seen the theories handle authority differently. Owner authority is the focus of agency theory, stewardship theory, and resource dependency theory, while the CEO holds authority in managerial and class hegemony theories. On the other hand, an
even greater authority, call it society, is the focus of stakeholder theory, legal theory, and institution theory (table 2.4.1).

*Table 2.4.1: Roles categorised as authority.*

<table>
<thead>
<tr>
<th>Theories and roles</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO</td>
<td>Owners/Board</td>
</tr>
<tr>
<td>Managerial hegemony</td>
<td>Support role</td>
</tr>
<tr>
<td>Class hegemony</td>
<td>Ceremonial role</td>
</tr>
<tr>
<td>Resource dependency</td>
<td>Linking role</td>
</tr>
<tr>
<td>Agency</td>
<td>Control role</td>
</tr>
<tr>
<td>Stewardship</td>
<td>Strategic role</td>
</tr>
<tr>
<td>Stakeholder</td>
<td>Coordinating role</td>
</tr>
<tr>
<td>Institutional</td>
<td>Maintenance role</td>
</tr>
<tr>
<td>Legalistic</td>
<td>Compliancy role</td>
</tr>
</tbody>
</table>


Categorisation like this is important for understanding what boards actually do, and why. Zahra and Pearce (1989) take a different path with their integrated model of agency, legal, class hegemony, and resource dependency theory. They identify from a literature search, three main roles of the board, control, strategy, and service (figure 2.2.3). These roles have become a good contestant for being named the archetypes of roles. Agency theory and resource dependency theory refer to all three roles, while class hegemony theory and legal theory consider only two of the three roles (table 2.4.2).

*Table 2.4.2: Different theories explain the main roles.*

<table>
<thead>
<tr>
<th>Theory/Role</th>
<th>Control</th>
<th>Strategy</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Legal</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Class hegemony</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Resource dependency</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Adapted from Zahra and Pearce (1989).

Furthermore, other researchers have developed a different approach, where the roles of the board are described as tasks boards either perform or do not perform, rather
than searching for theoretical implications (Gabrielson and Huse, 2005). The trend in categorisation of roles has been shifting towards a dualistic categorisation of control and direction, as can be seen in the next subsection.

2.4.2 Archetypes of roles

There is ambiguity in the literature as to what roles boards perform, and the definition of those roles (Heuvel et al., 2006). Many labels for roles often seem the same, and researchers interpret these roles differently.

The first study of roles and tasks has been traced back to Mace (1948) (Heuvel et al., 2006). However, there are not a lot of studies on the role of boards. Gabrielson and Huse (2005) found 127 empirical articles on boards and governance in six leading academic journals from 1990 to 2002, only 27 with primary data. Heuvel et al. (2006) note around 30 articles have discussed board roles and tasks from 1980 to 2004. It is not surprising there has been a constant call for research focused on board roles and tasks (Zahra and Pearce, 1989; Stiles and Taylor, 2001, Leblanc and Gillies, 2005).

However, tasks are not the only classification used to define boards. The relationship between the CEO and the board has also served to identify roles. Huse (2003) describes boards based on this relationship either as a clan, a barbarian, or an aunt. Zahra and Pearce (1991) use power of CEOs and the board to differentiate boards as caretaker, statutory, proactive, and participating boards, to integrate different models from the literature. Caretaker boards are characterised by low board power and low CEO power. Statutory boards are characterised by a strong CEO and weak board (Aram and Cowan, 1984; Vance, 1983; Wood, 1983). Proactive boards are characterised by the commanding power that surpasses the power of the CEO (Herman, 1981; Molz, 1985). Proactive boards are usually composed primarily by outside directors to enhance their independence of management (Zahra and Pearce, 1991). Participating boards are characterised by equal power of the CEO and board, where discussion, debate and disagreement are frequent (Zahra and Pearce, 1991).
It is important to note this approach covers non-task roles, which are sometimes disregarded in task-role categorisation. The Statutory board of Zahra and Pearce (1991) is a metaphor for one of the first roles ever identified, the non-role described as a ‘rubber-stamp’ (Mace, 1971; Nadler, 2004b).

The most common approach is to define board roles as tasks (Zahra and Pearce, 1989; Nicholson and Kiel, 2004; Huse, 2005; Kula, 2005; Heuvel et al., 2006). The starting point for discussion is often the literature review by Zahra and Pearce (1989). The three roles, Control, Strategy and Service, are often considered representative of key activities board need to address (Nicholson and Kiel, 2004; Huse, 2005). However, there is some confusion in the literature about what these roles constitute in terms of tasks.

There is least confusion about the Control role (Heuvel et al., 2006). The labels Control and Monitoring are often used synonymously, although they may be defined differently. According to agency theorists, effective boards independently monitor strategic challenges facing the firm, and evaluate management performance addressing them (Beatty and Zajac, 1994; Fama and Jensen, 1983). Directors may overturn poor decisions and replace ‘underperforming’ managers as a result of such monitoring (Brudney, 1982). The board, therefore, controls management by monitoring its decisions and actions. The definition of the control role is much the same in the integrated model, where directors monitor managers as fiduciaries of stockholders (Zahra and Pearce, 1989).

The Strategy role leads to the most confusion, as it sometimes forms part of the Control role (which can be related to the Zahra and Pearce (1989) discussion of agency theory), and sometimes part of the Service role, when not defined as a separate role on its own. For example, in the review of Johnson et al. (1996), which is an update on Zahra and Pearce’s (1989) work, the strategy role is omitted, and the Service role, Control role, and Resource dependence role as used instead. Johnson et al. (1996) define the Service role as directors advising the CEO and top managers on administrative and other managerial issues, as well as more actively initiating and formulating strategy. The Strategy role described by Zahra and Pearce (1989) is
therefore partially included in the revised definition of the service role. The Resource dependence role, facilitating the acquisition of resources critical to the firm’s success, is found in the description of resource dependence theory (Johnson et al., 1996). Nicholson and Kiel (2004; p. 454), referring to Zahra and Pearce (1989) and Johnson et al. (1996), describe the three roles as follows: (1) controlling the organisation (including monitoring management, minimising agency costs, and establishing the strategic direction of the firm), (2) providing advice to management (which may include providing advice on strategy and is sometimes classified as a component of the control role), and (3) providing the firm, through personal and business contacts, access to resources (including access to finance, information, and power).

Researchers emphasise the importance of the Strategic role (Zahra, 1990; Demb and Neubauer, 1992; Stiles and Taylor, 2001). Directors, in some cases, may provide ongoing advice to top managers on possible strategic changes, or the implementation of existing strategies (Demb and Neubauer, 1992, Lorsch and MacIver, 1989). Nicholson and Kiel (2004b) add a separate Strategy role for three reasons: (a) increasing performance pressures applied by institutional investors (Black, 1992), (b) board perception of the importance of the strategising role (Tricker, 1984), and (c) recent legal precedent placing corporate goal-setting and strategic direction within the board’s charter (Kesner and Johnson, 1990). Nicholson and Kiel (2004b) use four roles in their study, monitoring and controlling, strategising, providing advice and counsel, and providing access to resources. However, many authors have noted the persistent challenge of allowing directors to make a meaningful contribution to company strategy, even though they have the power to do so (Demb and Neubauer, 1992; Lorsch and MacIver, 1989; Westphal, 1999; Westphal and Zajac, 1997). Others have noted the Strategic role is only relevant in cases of crisis (Mace, 1971; Stiles and Taylor, 2001).

Demb and Neubauer (1992) describe the Watchdog role as keeping a sharp eye on all aspects of the company. Although it appears a passive role, it can play an active part creating functions for surveillance and by questioning management. However, the main role of the watchdog is to observe and evaluate how well the company is run. On the other hand, the Pilot role entails active involvement, where the board gathers large amounts of information to make decisions. The Counsellor is the stakeholders’ representative, and this role focuses on how the company identifies itself, and how well that spells out in action. The Counsellor role is a more stakeholder-orientated role than Zahra and Pearce’s (1989) Service role, as it has developed into a focused advisory role.

Lorsch and Carter (2004) offer a slightly different definition for the Watchdog and the Pilot. If the board sees its role as observing events and only acts if it senses something amiss, it is acting as watchdog, and when the board sees its role as contributing to discussions and making decisions about the company’s direction, it is acting as pilot. More generally, Lorsch and Carter (2004) note all boards are involved in some combination of three distinct activities: monitoring company and management performance, making major decisions, and offering advice and counsel to management, especially the CEO. The watchdog is in essence a label for the Controlling role described by Zahra and Pearce (1989), and the pilot label, the Strategic role.

Some researchers have used just two dimensions. Tricker (1994) uses the roles of Conformance and Performance. Berghe and Baelden (2004) define the Monitoring role and Directing role as the leading tasks of the board, categorising other roles under those two categories. In other words, the eight roles Hung (1998) describes are reduced to two. The dual board roles seem to be gaining popularity in research, although there is still ambiguity about the definition of the Directing role, that is Service, Pilot, Resource dependency, Advice and Counsel, or Strategy role.
Table 2.4.3: The roles of boards as two functions.

<table>
<thead>
<tr>
<th>Studies</th>
<th>Direction</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heuvel et al. (2006)</td>
<td>Service role</td>
<td>Control role</td>
</tr>
<tr>
<td>Forbes &amp; Milliken (1999)</td>
<td>Service role</td>
<td>Control role</td>
</tr>
<tr>
<td>Westphal (1999)</td>
<td>Advice and counsel</td>
<td>Oversight and control</td>
</tr>
<tr>
<td>Christensen and Westenholz (1999)</td>
<td>Resource acquisition role Strategic role</td>
<td>Control role</td>
</tr>
<tr>
<td>Hung (1998)</td>
<td>Linking role Strategic role Support role</td>
<td>Control role Coordination role Maintenance role</td>
</tr>
<tr>
<td>Tricker (1994)</td>
<td>Performance role</td>
<td>Conformance role</td>
</tr>
<tr>
<td>Demb and Neubauer (1992)</td>
<td>Pilot role Trustee role</td>
<td>Watchdog role</td>
</tr>
<tr>
<td>Zahra and Pearce (1989)</td>
<td>Service role Strategic role</td>
<td>Control role</td>
</tr>
</tbody>
</table>

Adapted and expanded from Berghe and Baelden, 2004.

Although different role labels have been introduced in the literature, the above categorisation emphasises there is no fundamental philosophical difference between those roles, which are more like competing metaphors. The ambiguity on the Direction side can be clarified better in terms of tasks of the board, as outlined in the next section.

2.4.3 Roles as tasks

The most popular way of describing the roles of the board is in terms of metaphors, as seen in the previous section. Those metaphors describe tasks, although the tasks themselves are usually only loosely described.

Heuvel et al. (2006) select five studies to analyse tasks employed in recent literature reviews and research, Zahra and Pearce (1992), Finkelstein and Hambrick (1996), Johnson et al. (1996) Hillman et al. (2000), and Hillman and Dalziel (2003). They identify eleven tasks (Heuvel et al., 2006). The tasks and pertinent articles are found in table 2.4.4.
Table 2.4.4: The tasks of the board.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Building reputation</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Select new managers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Evaluate mgt. performance</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Determine compensation</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Max value for shareholders</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Formulate/ ratify strategy</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Direct succession problems</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Access extra resources</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Advising management</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Determine management responsibility</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Networking and relations</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Adapted from Heuvel et al. (2006)

This set of tasks compiled by Heuvel et al. (2006) covers tasks identified by other researchers. However, Korac-Kakabadse et al. (2001, p. 25) describe tasks within the control role, strategic role, and service role as follows:

**Control role:**
- safeguard interests of shareholders
- select CEO
- monitor CEO/management performance
- review CEO analyses
- rectify executive decisions, and
- separate decision control from decision management.

**Strategic role:**
- guide corporate mission
- develop, implement and monitor the firm’s strategy
- allocate resources, and
- span boundaries.
Service role:
- co-opt corporation
- control corporation
- enhance corporate reputation, and
- formulate and implement decision-making.

Most of those tasks are included in Heuvel et al. (2006), although the Strategic role is somewhat limited with only one task – formulate/ratify strategic decisions. Korac-Kakabadse et al. (2001) offer a bit broader perspective for the Strategic role, which includes ‘guides corporate mission.’ However, the Strategic role seems to be more of a Resource-based role, as ‘allocate resources’ and ‘span boundaries’ are theoretically closer to descriptions of that role. The work of Heuvel et al. (2006) shows, in the five studies they examined, the same tasks can exist under the heading of different roles, and are actually fairly randomly assigned. Heuvel et al. (2006), however, demonstrate the eleven tasks loaded on two different factors, Control (select new managers, determine management’s responsibility, determine compensation of management, direct succession problems, maximise shareholder value, and evaluate/control management performance) and Service (building reputation, networking and maintaining relations, advising management, formulate/ratify organisational strategy, and taking care of access to extra resources).

Other studies, like Carpenter and Westphal (2001), emphasise strategic involvement, as well as building scales for the Control role and Advice role. Forbes and Milliken (1999), Stiles (2001), Judge and Zeithaml (1992), McNulty and Pettigrew (1999) hold yet another perspective on tasks of the board. To conclude, there is no general agreement on how to measure tasks of the board, or assign them to different roles (Heuvel et al., 2006).

The fragmentation of research paradigms and board theory has led to confusion about what boards of directors are actually supposed to do (Stiles and Taylor, 2001). The nature of a board’s contribution depends on the theoretical perspective adopted. As described above, at least eight theoretically inspired roles of the board can be found in the literature, and several additional themes. However, the categorisation offered by Zahra and Pearce (1989) for the three main roles,
Strategy, Control, and Service, has been widely accepted in the literature. The Service role may be described as a summary of the Resource and Advice role (Korac-Kakabadse et al., 2001; Heuvel et al., 2006). These four roles, Control, Strategy, Resource and Advice, as well as the role of Support are discussed in more detail in the following paragraphs.

2.4.3.1 Control
A review by Zahra and Pearce (1989) disclosed a wide gap between the normative literature’s recognition of board roles, and empirical documentation of performance. They point out although the control role of the board is well recognised in the normative literature, performance of the control role is often inadequate. Several studies have recognised the control role (Molz, 1985; Zahra, 1990; Rosenstein, 1987), especially reviewing decisions and monitoring the chief executive. Several studies have focused on the proportion of inside directors compared to non-executive directors, with regard to the monitoring role and indicators of financial performance (Vance, 1964; Cochran et al., 1985; Kesner, 1987).

2.4.3.2 Advice
Mace (1971; p. 38) found in his study “most presidents and outside board members agree that the role of directors is largely advisory and not of a decision-making nature.” Lorsch and MacIver (1989) interviewed 80 directors, performed 4 case studies and a mail questionnaire in the US, and found boards act mainly as advisers on strategy to the chief executive, by counselling and evaluating options.

2.4.3.3 Access to resources
Several authors have reviewed the resource role of directors (Galaskiewicz, 1985; Penning, 1980; Scott, 1991; Zahra and Pearce, 1989, Johnson et al., 1996). In a study that spanned over 27 years, Mizruchi and Stearns (1988) found the appointment of representatives of financial institutions depends on both organisational performance (declining profits and solvency) and general economic conditions (e.g. the contraction of the business cycle). Kaplan and Minton (1994) found poor stock performance was an important determinant of the appointment of corporate and financial directors to the board of large Japanese corporations. Zahra
and Pearce (1989) determined several factors influence board composition and size, including environmental uncertainty, firm strategy, and financial performance. Daily and Dalton’s (1992; 1993) research on small and entrepreneurial firms suggests the resource dependence role may be important for success in small and entrepreneurial firms.

2.4.3.4 Support
Mace (1972) found boards in most large and medium-sized companies did not establish the basic objectives, corporate strategies and broad policies of the company. Pahl and Winkler (1974), in research on nineteen companies using a variety of qualitative techniques, found boards collectively do not decide or discuss anything, with most proposals ‘going through on the nod,’ and concluded the board is a legitimating institution, rather than a decision-making one. Lorsch and MacIver’s (1989) study of eighty directors and four case companies also supported the managerial hegemony view.

2.4.3.5 Strategy
Zahra and Pearce (1989; p. 304) conclude in their literature survey: “Overall, empirical research on the strategic role of boards is in the infancy stage. Preliminary results show directors are not as actively involved in the strategic arena.” Although research has confirmed directors desire a more active strategic role, there is less support for them actually performing it. Demb and Neubauer’s (1992) study of seventy-one directors revealed over three-quarters of those interviewed saw the board’s main task as setting strategy and overall direction. Dulewicz and Herbert (1999) found determining the company vision and mission to guide and setting the pace for its operations and future development were the most important tasks of boards of UK-listed companies. Taylor (2001) proposed, “board members should focus more on the central task of the board which is ‘corporate entrepreneurship.’” Mace (1971), and Lorsch and MacIver (1989), conclude boards were willing to become involved in the strategic process, but were either constrained from doing so, or else were availed of the opportunity only in times of crisis. In a more recent study, Stiles and Taylor (2001) found boards were not involved to any great extent in the strategy formulation process, but rather set the parameters within which
strategic discussion took place. However, they found support for the board becoming much more proactive in its activities in times of crisis. McNulty and Pettigrew (1999) interviewed 108 UK directors, and found boards were actively involved in strategic choice, change, and control. Hill’s (1995) study of forty-two UK directors in eleven companies confirmed strategic direction was what directors saw as their main purpose, with non-executive directors defining a wide role for themselves, including bringing breadth of vision, scanning the environment, and acting as a sounding board for the chief executive.

The strategic literature has largely ignored the board as a participant in strategic formulation. This is evident when definitions of ‘strategist’ are examined. Some studies have focused solely on the CEO as the strategist (for example, Thomas et al., 1991; Norburn, 1989). However, most studies have focused on the ‘dominant coalition’ (for example, Eisenhardt and Bourgeois, 1988; Eisenhardt, 1989c; Sturdivant et al., 1985; Thomas and Ramaswamy, 1996). The ‘dominant coalition’ is most commonly referred to as the top management team (Eisenhardt, 1989c; Thomas and Ramaswamy, 1996), which Hambrick (1995, p. 111) defines as a relatively small group of the most influential executives at the apex of an organisation. The board as an institution seems not to have a role in strategic formulation, although it may be argued the boundaries between top management and the board are blurred when boards are dominated by executive insiders.

Although researchers have been interested in the Strategic role of the board, the discussion of what the concept of strategy indicates is limited. Different strategic perspectives have been developed in strategic literature (Mintzberg et al., 1998). There seems to be even less agreement about what strategy is, than agreement about the main issues in corporate governance. The following definitions of strategy illustrate the point:

- A firm’s theory of how it can gain superior performance in the markets within which it operates (Drucker, 1974; p. 95).
• The determination of basic long-term goals and objectives of an enterprise and the adoption of courses of action and the allocation of resources necessary for carrying out these goals (Chandler, 1962; p. 13).

• A commitment to undertake one set of actions rather than another (Oster, 1999).

• The creation of a unique and valuable position, involving a different set of activities (Porter, 1996; p. 68).

Further discussion of different theoretical perspectives in strategic literature is outside the scope of this research. However, categorisation by Mintzberg et al. (1998) sheds some light on the issue. They favour the interpretation there are different schools within the strategy literature that represent fundamentally different processes. Minzberg and Lampel (1999, p. 28) propose a categorisation of ten schools in the space of two dimensions, one being the external world moving from ‘comprehensible and controllable’ to ‘unpredictable and confusing,’ and the other being internal processes moving from ‘rational’ to ‘natural.’

![Figure 2.4.2: Categorisation of strategy formation.](image)

Adapted from Mintzberg et al. (1998; p. 28).

The strategic literature and the corporate governance literature seldom cross paths. As previously discussed, the strategic role of the board has largely been either ignored by researchers or amalgamated into other roles, for example the Service
role (Heuvel et al., 2006). Researchers in other disciplines, however, have focused more on strategy and the measurement of strategy. Kanji and Sá (2001) have, for example, developed a leadership excellence model, which measures values, vision, mission, and strategy with different and independent scales. The perspective of the planning school is clear and rational, as far as the categorisation of Mintzberg and Lampel (1999) is concerned. Furthermore, items in the leadership scale of Kanji and Sá (2001) cover most items suggested by corporate governance researchers (for example, Zahra and Pearce, 1989; Johnson et al., 1996; Carpenter and Westphal, 2001; Heuvel et al., 2006). Items used in the scale of Kanji and Sá (2001) cover a much broader and detailed view of strategy than used by corporate governance researchers. If the intention is to try to understand the Strategic role of the board, it is important to use a broad measure of strategy, validated in leadership literature, to test how boards score.

2.4.4 The role of power

Power is an important factor in corporate governance research, as agency theory focuses on the conflict between CEOs and the board. A CEO with all the power indicates the board exists as a formality, in essence to rubber-stamp management decisions. When the power of the relationship is explicitly on the side of the board, it can better choose what role it takes (Zahra and Pearce, 1991). However, this does not necessarily imply the board will embrace a strategic role, as powerful boards within the agency theory framework are there to monitor rather than set strategy (Zahra and Pearce, 1991). Power can help categorisation of boards (Zahra and Pearce, 1991). They measured both the power of CEOs and the power of boards with two identical sets of questions. They then identified four categories of board roles, related to the literature: Statutory, Caretaker, Participative, and Proactive. These roles offer another dimension to measurement of roles of the board, based on tasks.

Power is the capability of one social actor to overcome resistance in achieving a desired objective or result (Pfeffer, 1980; Zahra and Pearce, 1991). Zahra and Pearce (1991) point out reform efforts on corporate boards suggest boards should have more power relative to that of the CEO. Such suggestions are based on the
assumption managerial domination is widespread and counterproductive (Geneen, 1984; Fama and Jensen, 1983; Mizruchi, 1983; Nader, 1984). A healthy balance between CEO and board powers is required to ensure effective company performance (Vance, 1983; Pearce and Robinson, 1987).

Powerful boards are considered beneficial. Zahra and Pearce (1991) argue powerful boards are important for organisational effectiveness for four reasons: (1) Powerful boards provide useful business contacts, thus strengthening the link between corporations and their environments (Bazerman and Schoorman, 1983; Castaldi and Wortman, 1984; Pfeffer, 1972; 1973; Provan, 1980; Zald, 1969). (2) Powerful boards actively contribute to the development of the organisational mission and goals (Pearce, 1982, Pearce and David, 1987) and evaluate CEO and company performance (Andrews, 1987). (3) Powerful boards are necessary for effective “checks and balances” in corporate governance (Dalton and Kesner, 1985). Such boards monitor and evaluate CEO and company performance, and take appropriate action to ensure organisational effectiveness. By performing this role, directors protect the interests of shareholders. (4) Powerful boards play a crucial role in creating corporate identity, and establish and monitor compliance with codes of ethics (Andrews, 1984; Nader, 1984; Purcell, 1978).

Powerful boards function as the brain and soul of the organisation (Mueller, 1993). It is widely believed they enrich their firms, even though their contribution cannot be fully captured in financial terms (Mintzberg, 1983; Zahra and Pearce, 1989). Social network research has convincingly demonstrated the exercise of power can take place through either formal authority or informal influence (Tichy et al., 1979; Pearce and David, 1983).

2.4.5 The concept of roles
The concept of roles is important as they bridge the gap between attributes and organisational performance, and provide a different approach to measure the implications of the board on organisational performance (Zahra and Pearce, 1989). Roles are most often described in terms of tasks, although Zahra and Pearce (1991) also used the level of power to distinguish between different roles. According to
management hegemony theory, the Support role of the board involves the passive ‘rubber-stamp’ of management decisions. However, four more active roles identified in the literature are Control or Monitoring, Advice, Resource, and Strategy roles.

The last two sections of this chapter have focused on the concept of the board of directors. The next section focuses on organisational performance.
2.5 Organisational performance

[To] maximize the wealth-producing capacity of the enterprise. It is this objective that integrates short-term and long-term results and that ties the operational dimensions of business performance – market standing, innovation, productivity, and people and their development – with financial needs and financial results. It is also this objective on which all the constituencies – whether shareholder, customer, or employees – depend for the satisfaction of their expectations and objectives.

Peter F. Drucker (1909-2005)

Performance is usually regarded as a simple concept, although, as emphasised by Peter Drucker (2003, p. 133) above, the perspectives of management thinkers can be considerably, if not fundamentally, different. The purpose of this section is to outline different perspectives on organisational performance besides pure accounting measures. The section opens the discussion of ways to conceptualise and operationalise performance.

Figure 2.5.1: The outline of the performance section.

<table>
<thead>
<tr>
<th>2.1. Theories</th>
<th>2.5.1. Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2. Models</td>
<td>2.5.2. Objective vs. subjective measures</td>
</tr>
<tr>
<td>2.3. The concept of attributes</td>
<td>2.5.3. Performance in CG research</td>
</tr>
<tr>
<td>2.4. The concept of roles</td>
<td>2.5.4. The concept of performance</td>
</tr>
<tr>
<td>2.5. The concept of performance</td>
<td></td>
</tr>
<tr>
<td>2.6. Implications of context</td>
<td></td>
</tr>
<tr>
<td>2.7. Critique of previous research</td>
<td></td>
</tr>
<tr>
<td>2.8. Research agenda</td>
<td></td>
</tr>
</tbody>
</table>

This section discusses performance from a broad perspective. The first part focuses on classification of different performance measures. The second part discusses the difference between subjective and objective measures. The third part discusses measures used in corporate governance research, and the section concludes with a discussion of the concept of performance.
2.5.1 Classification of organisational performance

Organisational performance has been a major research topic for the last thirty years, with a surge in the interest in the last decade (Maltz et al., 2003). As noted in the quotation from Drucker (2003) at the start of this section, performance is a multidimensional phenomenon (Dess and Robinson, 1984; March and Sutton, 1997). Some broader understanding based on categorisation is needed, as simple outcome-based indicators are insufficient to explain performance (Brett, 2000; Venkatraman and Ramanujam, 1986; Chakravarthy, 1986; Wooldridge and Floyd, 1989). Several tools, as for instance the balanced scorecard and shareholder value analysis, have been developed in response to this need. In recent years, several researchers at Henley Management College have focused on the importance of exploring the implications of performance measures in management research (for example Brett, 2000; Lindgren, 2001; Sandbakken, 2003; Tanner, 2005; Larsen, 2007). Therefore, organisational performance is still an important management research topic.

Organisational performance can be categorized as: (1) financial performance, (2) operational performance, and (3) organisational effectiveness (Venkatraman and Ramanujam, 1986). A similar classification of performance measures but with different labels is: (1) financial measures, (2) market-based measures, and (3) qualitative measures (Parnell et al., 2006). Financial performance stands for accounting and financially-based indicators, usually simple outcome-measures. Operational performance stands for market-based indicators that emphasise market growth and share both present and future (Hart and Banbury, 1994). Market-based measures include measures like market value added (MVA), which aims to measure how well a firm creates shareholder wealth (Tully, 1994). Organisational effectiveness or qualitative measures stand for stakeholder-based indicators, measuring concepts like employee satisfaction and social responsibility (Venkatraman and Ramanujam, 1986, Parnell et al., 2000). Qualitative measures include subjective areas of performance (Parnell et al., 2006). The quotation from Drucker (2003) which introduces this section, refers to the same three categories he emphasises for maximising ‘wealth-producing capacity.’ There is need to relate
operational performance to financial performance, as stakeholders depend on this in terms of organisational effectiveness. Therefore, the three categories may be integrated as a broad measure of organisational performance.

Other categorisations of organisation performance emphasise different perspectives of the purpose of performance: (1) the economic return perspective, (2) the excellence perspective, and (3) the survival perspective (Brett, 2000). The indicators associated with the three perspectives are found in table 2.5.1. The economic return perspective of performance relates to classical outcome measures used in finance and accounting, although representing a broader category than Venkatraman and Ramanujam (1986) describe for financial performance. The excellence perspective rests on the work of Peters and Waterman (1982), and focuses on process rather than outcome (Larsen, 2007). The survival perspective is related to contingency theory, focusing on adaptability to the environment and the future (Brett, 2000). The classical economic return perspective has been criticised for having less rigour than usually assumed due to: (1) scope of accounting manipulation, (2) distortion due to valuation of assets, (3) distortion due to depreciation policies, inventory valuation, and treatment of certain revenue and expenditure items, (4) differences in methods of consolidating accounts, and (5) differences due to lack of standardisation in international accounting conventions (Chakravarthy, 1986; Wooldridge and Floyd, 1989; Larsen, 2007). Researchers focusing on corporate excellence argue excellence cannot be determined through the use of financial measures alone (Carroll, 1983). Similarly, researchers argue adaptation to the environment is essential for survival, and financial indicators cannot measure this effectively (Larsen, 2007). It is also argued organisational outcomes measured by financial indicators are influenced by a complex set of factors, including the management process and environmental conditions (Brett, 2000).

The discussion of classification of performance measures reveals a broader perspective than financial performance, or even wider indicators of the economic return perspective, might better approximate organisational performance. Researchers are increasingly adapting broader perspectives to organisational
performance (for example Ramanujam and Venkatraman, 1988; Caruana et al., 1995; Brett, 2000; Kanji, 2002, Larsen, 2007). To survey performance in several areas simultaneously, is important to enable efficient strategic decision-making (Laitinen, 2002). As the broader perspective of organisational performance is adapted, however, more subjective measures need to be applied. That is the focus of the next section.

Table 2.5.1: Indicators associated with different performance perspectives.

<table>
<thead>
<tr>
<th>Economic returns perspective</th>
<th>Survival perspective</th>
<th>Excellence perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenue</td>
<td>Sales Growth Rate</td>
<td>Size</td>
</tr>
<tr>
<td>Earnings before Interest and Tax</td>
<td>Market Share Growth Rate</td>
<td>Innovative Capability</td>
</tr>
<tr>
<td>Operating Profits</td>
<td>Industry Growth Rate</td>
<td>Bias for action</td>
</tr>
<tr>
<td>Market Share</td>
<td>Selling Intensity</td>
<td>Customer Orientation</td>
</tr>
<tr>
<td>Working Capital</td>
<td>Advertising Intensity</td>
<td>Autonomy</td>
</tr>
<tr>
<td>Return on Revenue</td>
<td>Asset Intensity</td>
<td>People Productivity</td>
</tr>
<tr>
<td>Asset Turnover</td>
<td>Functional Dissimilarity</td>
<td>Concentration</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>Product Relatedness</td>
<td>Simplicity of Form</td>
</tr>
<tr>
<td>Return on Sales</td>
<td>Firm Size</td>
<td>Loose-tight Authority</td>
</tr>
<tr>
<td>EBIT/Asset ratio</td>
<td>Firm Liquidity</td>
<td>Lean Stuff</td>
</tr>
<tr>
<td>Retained Earnings/Asset ratio</td>
<td>Firm Diversity</td>
<td>Value Orientation</td>
</tr>
<tr>
<td>Return on Invested Capital</td>
<td>Acquisitiveness</td>
<td>People Orientation</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>R&amp;D Intensity</td>
<td>Process Orientation</td>
</tr>
<tr>
<td>Net Present Value</td>
<td>Seller Concentration</td>
<td>Facts Orientation</td>
</tr>
<tr>
<td>Internal Interest</td>
<td>Altman Z-score</td>
<td>Variability Orientation</td>
</tr>
<tr>
<td>Asset Growth</td>
<td>Syspan PAS-score</td>
<td>Responsibility Orientation</td>
</tr>
<tr>
<td>Sales Growth</td>
<td>Control Intensity</td>
<td>Coping Capability</td>
</tr>
<tr>
<td>Market Return</td>
<td>Emergency Preparedness</td>
<td>Commitment Capability</td>
</tr>
<tr>
<td>Return on Capital Employed</td>
<td>Brands Intensity</td>
<td>Condition Capability</td>
</tr>
<tr>
<td>Asset Valuation</td>
<td>Behaviour Change</td>
<td>Communication Capability</td>
</tr>
<tr>
<td>Provisions</td>
<td>Strategy</td>
<td>Trust Capability</td>
</tr>
<tr>
<td>Capitalisation of Costs</td>
<td>Organisational Structures</td>
<td>Stretch Capability</td>
</tr>
<tr>
<td>Depreciation</td>
<td>Techno-structure</td>
<td></td>
</tr>
<tr>
<td>Goodwill</td>
<td>Climate</td>
<td></td>
</tr>
<tr>
<td>Added Value</td>
<td>Interpersonal Style</td>
<td></td>
</tr>
<tr>
<td>Working Capital / Asset ratio</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Adapted from Brett (2000, p. 184).

2.5.2 Objective vs. subjective performance

The classical dualism of subjective/objective categorisation also applies to organisational performance. Measures can either be subjective or objective, although the dualism might not always be clear-cut. Indicators related to the economic return perspective are usually considered objective measures, as they are based on secondary data. As criticism of accounting and financial indicators
demonstrates (see for example the discussion in the last subsection and Chakravarthy, 1986; Wooldridge and Floyd, 1989; Hillman and Keim, 2001), the indicators are at least partly based on the subjective decisions of accountants and managers. Therefore, it would be an overstatement to claim all financial and accounting indicators are truly objective. Corporate scandals further undermine the claim of objectivity of financial performance measures, for example Enron, WorldCom, Global Crossing, Lucent, Williams, Dynergy, K-Mart and HealthSouth (MacAvoy and Millstein, 2003; Coffee, 2006; O’Brien, 2006). Subjective measures, on the other hand, are usually described as indicators based on primary data and the perception of respondents (Dess and Robinson, 1984). Objective and subjective performance measures require different types of research approach. Some scholars argue objective measures of organisational performance are preferable to subjective measures (Beal, 2000; Dess and Robinson, 1984). Other researchers indicate self-reported data might be more accurate with regard to actual performance than archival performance data (Lindgren, 2001). Furthermore, evidence shows objective and subjective measures are strongly correlated (Dess and Robinson, 1984; Hart and Banbury, 1994; Pearce et al., 1987; Wooldridge and Floyd, 1990; Peng and Luo, 2000; Larsen, 2007). This strong correlation indicates the validity of subjective measures in relation to objective measures, implying either approach to measuring organisational performance is valid.

The preference for objective measures can largely be explained by tradition and historical research approaches. Economists prefer secondary databases for their econometrics analyses to gather primary data. The argument for researchers adopting the excellence perspective and the survival perspective of performance is they provide a broader measure of organisational performance than other databases and basic financial indicators can provide (Venkatraman and Ramanujam, 1986; Brett, 2000). Subjective measures are therefore complementary rather than just an alternative. Hart and Banbury (1994) developed a measurement of performance relating variables to such stakeholders as employees, society, customers, and shareholders, and broadened the scope of interpretation. Indeed, researchers use both subjective and objective measures of organisational performance for complementary purposes (Zahra and Pearce, 1991; Kaplan and Norton, 1996;
Wiliford, 1997; Larsen, 2007). The traditional use of subjective measures is often described as an alternative, when objective measures are not available (Caruana et al., 1995). That view disregards the broad perspective subjective performance measures can provide, and which objective measures usually cannot.

Objective and subjective measures of organisational performance can be used either as complementary or separately. The traditional approach, derived from the economical return perspective, is to use financial indicators. Increasingly, management research is using subjective measures to supplement objective measures, or as alternatives, as the correlation between the two types of measures is strong, and subjective measures can provide a broader picture of organisational performance. The focus in corporate governance literature has been on objective measures discussed in the next subsection.

2.5.3 Performance in corporate governance research

Performance can be defined as the ability of an object to produce results in a dimension determined a priori, in relation to a target (Laitinen, 2002). Interest within the field of corporate governance has focused mostly on organisational performance (Coles et al., 2001). Dalton et al. (1999), in a meta-analysis of 131 samples, note researchers have relied primarily on accounting-based indicators, although some studies use market-based indicators, or both types combined. Tobins Q has been emphasised as the performance variable in corporate governance studies (for example McConnell and Servaes, 1990; Yermack, 1996; Carter et al., 2003; Bøhren and Ødegaard, 2003, Adams et al., 2003; Anderson and Reeb, 2003; Brunello et al., 2003, Brown and Caylor, 2004). Furthermore, economic value added has been used by Anderson and Reeb (2003; 2004) and MacAvoy and Millstein (1998; 2003), firm sales revenues, the firm’s growth, the ratio of sales per employee by Daily and Near (2000), growth in firm sales or in firm capital invested has been used by Gnan and Songini (2003), Gomez-Mejía et al. (2001), and Lausten (2002), the firm’s gross profit margin by Lee (2004), and productive efficiency by Galve and Salas (1996).
Pettigrew (1992, p. 171) states: “Great inferential leaps are made from input variables such as board composition to output variables such as board performance with no direct evidence on the processes and mechanisms which presumably link the inputs to the outputs.” This observation has been made time and again. Bøhren and Ødegaard (2003, p. 11) report the fundamental question in finance-based corporate governance research is whether economic value is driven by governance mechanisms: “Research on the interaction between governance and economic performance has been rather limited, however, and the empirical evidence is mixed and inconclusive.”

Organisational performance is not the only ‘performance’ measure used in corporate governance research. The Henley model (Dulewicz et al., 1995), and the intellectual capital model (Nicholson and Kiel, 2004), indicate there is a trend in the literature towards multiple approaches to determining effectiveness (Van den Berghe and Levrau, 2004), for example, measures regarding task performance, and individual and group satisfaction.

The link between the board of directors and corporate performance is still the main focus of corporate governance research. The problem has been the leap from attributes to financial measures of corporate performance. A recent review of the literature has shown this was not a rewarding pursuit for evidence (Dalton et al., 1998; 1999). The need for a broader set of performance measures, or combination of measures, is therefore eminent in the field of corporate governance.

2.5.4 The concept of performance

The shortcomings of a single item measure of organisational performance, is obvious (Venkatraman and Ramanujam, 1986). Surveying several areas of performance simultaneously is a more rigorous approach (Laitinen, 2002). Agreement on which combination of measures is most appropriate has not yet emerged (Wiliford, 1997). It is important researchers acknowledge the shortcomings of performance measurements, whichever approach is chosen (Parnell et al., 2006). This definitely applies in the field of corporate governance. Organisational performance is not a simple concept which can be measured
effectively with single-item measures. Multiple measurement instruments are required for corporate governance, as has increasingly been the case, for example, in the strategic literature (Parnell et al., 2006).
2.6 Implications of contextual contingencies

*Gravitation cannot be held responsible for people falling in love. How on earth can you explain in terms of chemistry and physics so important a biological phenomenon as first love? Put your hand on a stove for a minute and it seems like an hour. Sit with that special girl for an hour and it seems like a minute. That's relativity.*

Albert Einstein (1879 - 1955)

There are ties between ‘relativity’ in the words of Einstein, and the prescriptions of contingency theory found in the first section of this chapter. ‘Relativity’ indicates how an incident can be interpreted depends on the situation, and ‘contingency’ indicates the incident should depend on the situation. In other words, time and space could affect what the board is, and does, and why. Zahra and Pearce (1989) outline internal and external contingencies in their integrated model, indicating they affect boards, and their relationship to organisational performance. The purpose of this section is to discuss context.

*Figure 2.6.1: The outline of the context section.*

<table>
<thead>
<tr>
<th>2.1. Theories</th>
<th>2.6.1. International</th>
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</thead>
<tbody>
<tr>
<td>2.2. Models</td>
<td>2.6.2. Ownership</td>
</tr>
<tr>
<td>2.3. The concept of attributes</td>
<td>2.6.3. Firm size</td>
</tr>
<tr>
<td>2.4. The concept of roles</td>
<td>2.6.4. Context</td>
</tr>
<tr>
<td>2.5. The concept of performance</td>
<td></td>
</tr>
<tr>
<td>2.6. Implications of context</td>
<td></td>
</tr>
<tr>
<td>2.7. Critique of previous research</td>
<td></td>
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<tr>
<td>2.8. Research agenda</td>
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</tr>
</tbody>
</table>

Adapted from Huse (2005, p. 68).

This section focuses on the concept of contingencies as used in corporate governance research. Three distinct but related contingencies are discussed in the first three parts of this section, followed by concluding remarks on context in general.
2.6.1 International context

The first major study focusing on corporate governance was arguably the Berle and Means (1932) thesis on American corporations. Most research on corporate governance has been done on American corporations, with limited attention to other national contexts (Huse, 2005). However, there is growing interest in different legal and cultural contexts of corporate governance (Heuvel et al., 2006). From an international perspective, the Anglo-Saxon dimension is unique in many ways compared with other cultural dimensions (Weimer and Pape, 1999). Weimer and Pape (1999) classify the Anglo-American dimension as being built on a market-orientated system, while the Germanic, Latin, and Japanese dimensions are built on network-orientated systems (table 2.6.1). Rose and Mejer (2003) indicate countries are neither market nor network-oriented, but rather gradually different (figure 2.6.2). According to Weimer and Pape (1999), Anglo-Saxon countries are considered different regarding the concept of the firm, where it is considered instrumental or shareholder-oriented, as opposed to being institutional-oriented in other international blocs. The board system is one-tier in Anglo-Saxon countries, whereas two-tier systems predominate elsewhere. In Anglo-Saxon countries the shareholder is the salient stakeholder, while oligarchic groups and banks have more power in network-oriented countries. Generally, ownership concentration is much lower in the Anglo-Saxon countries. Another important factor which differs between market-oriented and network-oriented enterprises is the active external market for corporate control.

Corporate governance system differences seem to be diminishing as part of the introduction of governance codes (Albert-Roulhac and Breen, 2005). Most initiatives for governance reform have been initiated in the US and the UK, in the form of the Sarbanes-Oxley act and Cadbury code, respectively (Ali and Gregoriou, 2006). The corporate governance reforms begun in the US and UK have spread all over the world, indicating a global convergence (Hansmann and Kraakman, 2001). According to the European Corporate Governance Institute, by 2003 at least 50 countries had introduced a governance code for companies, countries as different as Mauritius, Russia, and Switzerland.
Table 2.6.1: Taxonomy of systems of corporate governance.

<table>
<thead>
<tr>
<th>Corporate governance system</th>
<th>Market-oriented</th>
<th>Network-oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anglo-Saxon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA, UK, Canada, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany, Switzerland, Austria, Sweden, Denmark, Norway, Finland</td>
<td>France, Italy, Spain, Belgium</td>
<td>Japan</td>
</tr>
<tr>
<td>Concept of firm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental, Shareholder-oriented</td>
<td>Institutional</td>
<td>Institutional</td>
</tr>
<tr>
<td>Institutional</td>
<td></td>
<td>Institutional</td>
</tr>
<tr>
<td>Board system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One-tier</td>
<td></td>
<td>Two-tier</td>
</tr>
<tr>
<td>Two-tier</td>
<td>Optional</td>
<td>One-tier</td>
</tr>
<tr>
<td>Salient stakeholders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shareholders</td>
<td></td>
<td>Industrial banks, Employees, oligarchic groups</td>
</tr>
<tr>
<td>Importance of Stock market</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td>Moderate/high</td>
</tr>
<tr>
<td>Moderate/High</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Active external Market for corporate control</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Ownership concentration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Moderate/high</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance compensation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
<td></td>
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<tr>
<td>Time horizon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short term</td>
<td>Long term</td>
<td></td>
</tr>
<tr>
<td>Long term</td>
<td>Long term</td>
<td></td>
</tr>
</tbody>
</table>
| Adapted from Weimer and Pape (1999)

Figure 2.6.2: Market- vs. relationship-based countries.

Adapted from Rose and Mejer (2003).
Although the initiatives of the Anglo-Saxon perspective have been well received, these approaches may not apply or may be less effective when, for example, legal traditions, cultures, institutional structures, and ownership structures differ (Weimer and Pape, 1999; La Porta et al., 1999). From the institutional perspective, there is a tendency to think globally, believing boards of directors have the same function all around the world. Contingency theory would argue differently (Huse, 2005). There are indications convergence between corporate governance systems on a global scale is less likely than generally thought, and the systems are in effect distinct (Khanna et al. 2006). The point is, if differences noted by Weimer and Pape (1999) constitute a fundamentally unique national governance system, the role of the board in that system is likely to change. Therefore it can be argued national context is important when a comparison is made of the functions of boards in different countries and on other continents.

2.6.2 Ownership context

The main thesis of Berle and Means (1932) was ownership had become so dispersed there was no real owner of organisations, which in turn empowered managerial control of organisations. Many researchers question whether this is as common a problem as indicated, because ownership is much more concentrated in most companies (La Porta et al., 1999; Faccio and Lang, 2002, Lubatkin, 2007). La Porta et al. (1999) and Faccio and Lang (2002) have studied ownership structure in several countries, and found corporate ownership is concentrated in most countries, although to a lesser degree in Anglo-Saxon countries, supporting the categorisation of Weimer and Pape (1999). Many researchers have questioned the claim of dispersed ownership, and how commonly corporations are management-controlled (Demsetz, 1983; Demsetz and Lehn, 1985; Shleifer and Vishny, 1997). Lubatkin (2007) argues the problem of dispersed ownership is non-existent in the majority of companies on a global scale.

Ownership is a question of control over the organisation. Control has been defined as “the power to exercise discretion over major decision making, including, specifically the choice of directors.” (Leech and Leahy, 1991, p. 1418). Ultimately ownership of any organisation means a majority share over 50%. However, the
issue of control is usually more complicated than that, as control can be achieved with less than majority ownership, and ownership can be both vertical as well as horizontal (Prigge and Kehren, 2006). Vertical ownership implies control through pyramiding (La Porta et al., 1999; Faccio and Lang, 2002). Dispersed ownership, or widely-held companies, is based on voting rights of the largest owner, and the cut-off point can vary from 10% to 50%, depending on the researcher (Prigge and Kehren, 2006) La Porta et al. (1999) used a 20% cut-off point between widely-held companies and dominant shareholders in their study. In fact, this is the same cut-off point used by Berle and Means (1932) to determine whether companies were owner-controlled or management-controlled.

Ownership of organisations has been classified from different perspectives. Bøhren and Ødegaard (2006) for example, classify ownership as state, individual (persons), financial (institutions), nonfinancial, and international. The issue of ownership identity is relatively unexplored (Gugler, 2001). With individuals as dominant shareholders, family firms have received the most attention, as family-owned firms are estimated to be 1/3 of all firms (Sacristán-Navarro and Gómez-Ansón, 2006), and family business is considered to be the dominant form of ownership in small and medium-sized companies (Donckels and Fröhlick, 1991; Corbetta and Montemerlo, 1999; La Porta et al., 1999). As a group, however, family businesses are largely disregarded in research (Schulze et al., 2001; Dyer, 2003; Steier et al, 2004). The focus has been mostly on large family firms, often publicly traded (Bukart et al., 2003; Heuvel et al., 2006). However, the majority of family firms fall into the small and medium-sized category (Handler, 1989; Johannisson and Huse, 2000).

The effect of ownership on corporate governance is exemplified to some extent in both agency theory and stewardship theory. Agency theorists argue ownership concentration should have a positive effect on the value of organisations because shareholders have greater incentive to monitor managers and reduce managerial opportunistic behaviour (Jensen and Meckling, 1976). The board is considered to be primarily a means for monitoring. However, in the stewardship perspective the active participation of the board in strategy, rather than the monitoring role, is what
matters. Both perspectives would indicate concentrated ownership should have a positive affect on organisational performance.

**2.6.3 Firm size context**

The majority of corporate governance research has focused on large companies (Charkham, 1995; Dyer, 2003), especially since Berle and Means (1932) thesis recognised management as the true guardians of corporate control. However, interest is growing in the function of boards in the governance structure of small and medium-sized companies (Heuvel et al., 2006). The assumption is well-functioning boards in small and medium-sized companies can create value, strengthen the structure, improve results, and ensure continuity (Zahra and Pearce, 1989, Borch and Huse, 1993; Johannison and Huse, 2000). The role of the board is considered to be more decisive in smaller firms than larger ones (Castaldi and Wortman, 1984; Nash, 1988; Ward and Handy, 1988; Ward, 1992). The research into SMEs, however, remains fragmented and is still in its infancy (Huse, 2000; Heuvel et al., 2006). Furthermore, various firm life-cycle phases still require further research (Lynall et al., 2003).

**2.6.4 Context**

Contingencies or contextual factors have not been well studied to date in corporate governance research (Gugler, 2001; Huse, 2005; Heuvel et al., 2006). The theoretical implications of contingencies are not yet well understood (Zahra and Pearce, 1989). However, increased research effort is now focusing on the implications of contingencies on boards of directors. Huse (2005, p. 68) notes contextual factors used primarily in corporate governance are:

1. National, geographical and cultural differences;
2. Industry and the industrial environment of the corporation;
3. Ownership dispersion and types;
4. Firm size;
5. Life-cycle variations, including the importance of crisis and the configuration of corporate resources;
6. CEO tenure, attributes, and background.
The first three are external contingencies, and the last three internal contingencies, in the integrated model (Zahra and Pearce, 1989). Three of these were discussed in this section: national, ownership and firm size. There is limited literature on the other variables in terms of theoretical implications and empirical results. The three variables discussed in this section were chosen because of their relevance to the context and sample of this study. The concepts of national context, ownership, and firm size are interconnected. Results from a study by La Porta et al. (1999), and Faccio and Lang (2002), indicate most countries outside the Anglo-Saxon orbit have concentrated ownership in small family-owned companies. Berle and Means (1932) thesis was based in the context of large organisations, where ownership was so dispersed companies were in fact controlled by management.
2.7 Criticism of Corporate Governance research

The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds.

John Maynard Keynes (1883 - 1946)

This section takes a more critical view of the literature on corporate governance. Many researchers have called for a shift in research focus, taking a broader view of the issues of the board than agency theory alone (Zahra and Pearce, 1989, Tricker, 2000; Stiles and Taylor, 2001; Roberts et al., 2005). Most research to date has been based on a structural view (Finkelstein and Mooney, 2003). This classic approach may have now become restrictive, and research may benefit from escaping the past and embracing new ideas, as suggested by these authors.

Figure 2.7.1: Overview of the section for criticism.

Section 2.7 critiques past research to provide a fruitful start to this project. The framework for the section is adapted from Silverman (2005)6 (figure 2.7.1).

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6 See more about this framework in section 3.1.
2.7.1 Paradigms

Research on corporate governance can seem a forest of contradictions, with little incremental influence of understanding how boards carry out their roles most effectively and efficiently (MacAvoy and Millstein, 2003). In reality, research lags behind regulators and self-proclaimed theorists in exploring the effects and influence of their ideas, rather than having a strong role in the development of corporate governance and, more specifically, the board of directors (Noburn et al., 2000). The literature review here reveals we are little nearer to an understanding of the issues of corporate governance now than we were in 1989, when Zahra and Pearce reviewed the literature. Lockhard (2005, p. 2) makes the argument:

We know very little about governance. To be fair, establishing causality between governance and subsequent performance is fraught with difficulty. Between these two constructs lies the entire process of management, its performance and outcomes, all of the organisation's internal processes, core competencies and resources - while external to the organisation is the entire external environment, at both industry and societal levels, all of which impact to a greater or lesser degree on performance.

Part of the problem in corporate governance research is researchers in the field have focused on the positivist paradigm of knowledge creation, armed with hypotheses to verify, seeking causality. The results have been inconclusive and misleading (Dalton and Dalton, 2005). Researchers have mostly ignored “what” boards do, and “how” and “why” they do it. Research needs another approach (Zahra and Pearce, 1989, Stiles and Taylor, 2001, Dalton and Dalton, 2005).

The reason for this is no mystery. Doctoral students and scholars in tenure track positions have preferred research using easily available data and methods that can be evaluated by journal reviewers through well-established validity concepts (Huse, 2005). The discussion on models in corporate governance emphasises the importance of a more descriptive model, rather than searching for predictive or even prescriptive models, where the end result is the performance of the company. The predominance of the positivist paradigm, the institutional perspective, and agency theory in corporate governance literature has inspired researchers to take this path,
although the pragmatism of easily collected items of attributes has played its role too.

There is room for improvement within the positivist paradigm (Bøhren and Ødegaard, 2003; Larcker, Richardson and Tuna, 2004; Heuvel et al., 2006, Lubatkin et al., 2007). Concepts, measures, relationships, and methods of analysis of previous research can be improved. Furthermore, it is important to draw insight from other paradigms, different data collection methods, and interpretation techniques (Huse, 2005).

2.7.2 Theories and concepts

Corporate governance is a relatively young and ‘hot’ research field, and so has attracted scholars from a broad range of disciplines such as economics, finance, accounting, law, management, psychology, sociology, and organisational behaviour (Zahra and Pearce, 1989; Stiles and Taylor, 2001; Mallin, 2004). Consequently, various challenging theories have been introduced into the field. Agency theory has become the theory of choice for most researchers and the most natural theoretical framework (Stiles and Taylor, 2001; Mallin, 2004, Lubatkin, 2007). Most of these theories, however, are limited in scale and scope and lack grounding in descriptive empirical research (Stiles and Taylor, 2001).

Furthermore, different methodological approaches and research perspectives have resulted in findings that are largely inconsistent and non-additive (Pettigrew, 1992). Therefore, there has been a call for a general theory of the board (Stiles and Taylor, 2001) that does not lead to such confusion, and an appropriate conceptual framework that adequately reflects the reality of governance (Tricker, 2000). Differing perspectives and lively theoretical debate, with no dominant paradigm, is not unusual in a relatively young field like corporate governance, and may be considered a sign of vitality (Bøhren and Ødegaard, 2003; Ulhøi, 2007).

Theories have been likened to a kaleidoscope, where the shapes and colours of the pictures change by inserting a different tube – “by shifting theoretical perspectives the world under investigation also changes shape” (O’Brien, 1993, p. 11). A theory
can explain a phenomenon from one point of view, while another sees it from a
different point of view. The typologies of Zahra and Pearce (1989) and Hung
(1998) demonstrate this, as well as the roles they construct. The hope is, however,
that these different perspectives do not resemble the old joke of the blind men and
the elephant, where they each hold and elegantly describe different parts of the
animal, although none of them concludes that they are in fact embracing an
elephant.

A closer look at the theories has shown they differ in origin, development, and
emphasis. Combined they portray the role of the board in a much more realistic
fashion than any one of them alone. Stiles and Taylor (2001) argue for a multi-
thoretical perspective to analyse boards, to obtain a more complete picture.

Although some theories are well established in the literature, most notably agency
theory and resource dependency theory, they only partly explain the “how” and
“why” of boards. On the basis of those theories, most researchers have explored
causation between attributes of boards (mostly composition and characteristics) and
performance of corporations, largely ignoring the “process” in the basic input-
process-output model. Without a more thorough examination of what happens in
the ‘black box’ of the board, understanding of boards remains limited (Stiles et al.,
2005).

2.7.3 Models and hypothesis
Research has focused mainly on linking attributes to performance, more or less
overlooking the role of the board. This is, in essence, what Zahra and Pearce (1989,
p. 330) foresaw when they stated: “We believe the search for direct links among
board attributes and company financial performance is misguided and will yield
contradictory findings.” Dalton and Dalton (2005) demonstrated this truth with their
meta analysis: 159 studies in the meta analysis showed no evidence of a systematic
relationship between board composition and firm financial performance, 69 studies
found firms with separate CEO and board chairperson positions did not outperform
firms where these positions were combined, and 229 studies showed there was no
evidence of a relationship between CEO or board member equity holdings and organisational financial performance.

Zahra and Pearce (1989, p. 330) go on to state: “A final concern is the tendency among scholars to search for universal association between board attributes, roles, and company performance. This tendency should be replaced by well-crafted studies that aim to develop mid-range theories and test their predictions.” This is what researchers have been trying to accomplish with their more recent versions of process models (for example, Forbes and Milliken, 1999; Nicholson and Kiel, 2004, Huse, 2005). Furthermore, there is now interest in understanding how processes and roles of boards influence the performance of organisations (Zahra, 2007).

2.7.4 Variables and measures
The main purpose of research models, as based in the positivist paradigm and related hypotheses within corporate governance research, has been to show causation between attributes of the board and performance of the firm. Bøhren and Ødegaard (2003) point out, however, empirical evidence on the interaction between governance and economic performance is as mixed and inconclusive as it is limited. Therefore “we cannot yet specify what the best governance system looks like, neither in a normative nor a positive sense” (Bøhren and Ødegaard, 2003, p. 2). One reason is comparison between studies is difficult, because different units of analysis are used. Some authors examine the added value of the board as a group (Castaldi and Wortman, 1984; Borch and Huse, 1993; Gabrielsson and Winlund, 2000; Johannisson and Huse, 2000; George et al., 2001), while others study the contribution of individual board members as outside directors (Whisler, 1988; Gabrielsson and Huse, 2004) or venture capital representatives (Deakins et al., 2000; Gabrielsson and Huse, 2002). Larcker, Richardson and Tuna (2004, p. 2) isolate seven features of research that make it difficult to draw substantive conclusions, as follows:

1. Most studies use a small set of convenient (easy to collect) set of indicators for corporate governance, as opposed to developing a more comprehensive set of governance variables.
2. Each study tends to use a different set of governance variables, which makes integration across studies extremely difficult.

3. There is very little analysis regarding the measurement properties for the selected indicators of corporate governance. Moreover, there is no detailed insight into the number of dimensions (or constructs) that are necessary to provide a comprehensive assessment of corporate governance.

4. Single indicators are used as measures for ill-defined and complex corporate governance constructs (e.g. percentage of external board members).

5. The sample size and specific firms included in the sample vary considerably across studies depending on the dependent variable examined and the source of the governance variables.

6. Most studies focus on the statistical significance, as opposed to the incremental explanatory power, of the governance indicators.

7. The methodological approach used is typically restricted to some type of linear model where complex interactions among governance are not considered.

The above features are in essence what Zahra and Pearce (1989, p. 304) conclude from their literature review:

> The tentative nature of empirical evidence on performance of the three board roles may be partially explained by the shortcomings of past research. These research efforts have often been limited in scope, based on convenience samples, and inconsistent in operationalization of board variables. Moreover, the bulk of this research has focused on the direct associations between board attributes and company performance, thus ignoring the indirect path (through roles and strategic initiatives) discussed by the four theoretical perspectives. These limitations suggest that caution is advised in interpreting empirical findings on the relationship between board roles and company performance.

An examination of roles, performance, and context can further clarify this issue.

### 2.7.4.1 Roles

As Zahra and Pearce (1989) emphasise above, better understanding of the roles of the board is needed, and new insight or a richer picture from a descriptive
perspective can enhance our understanding of board effectiveness in modern corporations. Nicholson and Kiel (2004b, p. 18) come to a similar conclusion:

By understanding how a board’s skills, resources and attributes allow it to discharge its roles, we believe that management researchers can further understand the hitherto elusive links between boards of directors and corporate performance. ... From a practitioner’s perspective, clarifying the attributes of a board that contribute to effective role execution has the potential to improve corporate performance significantly.

Zahra and Pearce (1989, p.328) state: “We have presented a summary of the three roles of the board: service, strategy, and control. Future research is necessary to identify and document the important components of each set.” However, the issue of roles has been either disregarded, or only one role researched (Nicholson and Kiel, 2004). Nicholson and Kiel (2004), however, point out that boards perform several roles, although to different extents. As discussed previously, opinions vary on what the roles of the board are, although they can be roughly categorised as either a function of ‘monitoring’ or ‘directing’. According to Stiles and Taylor (2001, p. 7): “There is dearth of strong descriptive data on how boards of directors perceive their role and in what respects they can influence the performance of the firm.” Nicholson and Kiel (2004, p. 6) conclude: “to better understand how a board contributes to firm performance, we need to understand the various roles required of it” and how effective the boards are at fulfilling those roles.

One of the main issues, as noted by Zahra and Pearce (1989) and others, is the problem of operationalisation of concepts, as no standard research measures have been adopted (Heuvel et al., 2006). Huse (1993), for example, uses eight questions to cover the control role, while Gabrielsson and Winlund (2000) use a 10-item scale to measure the same concept. Mustakallio et al. (2002), studying the monitoring role derived from agency theory, use a different five-item scale, and Carpenter and Westphal (2001) use three items. An important advancement for theory building would be consensus on how board roles should be measured.
2.7.4.2 Performance
Tobin’s Q has become the standard approximation for performance (McConnell and Servaes, 1990; Yermack, 1996; Carter et al., 2003; Bøhren and Ødegaard, 2003). Zarha and Pearce (1989, p. 327), however, argue “multiple perspectives are desirable to establish the efficacy of corporate boards for company performance.”

The multiple perspective is evolving into measurement of task performance, and individual and group satisfaction (Van den Berghe and Levrau, 2004). Nicholson and Kiel (2004) argue for the concept of ‘fit,’ where the challenge in governance research is to understand the roles required of the board and the fit between individuals and systems in the organisation, as well as alignment with contextual contingencies. They argue (Nicholson and Kiel, 2004, p. 455) “the problem is not to find the ‘one best way’ of governing, but rather to understand how effective combinations of intellectual capital fit together and lead to congruence with a firm’s needs.”

3.7.4.3 Context
The lack of both control variables and focus on roles of the board is cause for concern in corporate governance research. Zahra and Pearce (1989, p. 325) argue the “impact of contextual forces on board variables has been widely ignored” and “few studies have intentionally controlled for inter-industry differences, company size, and organisational life cycles. … Because studies lacked controls, many published results are open to speculation and different interpretations.” The need to “explicitly incorporate a contingency perspective” (Heracleous, 2001, p. 170) has been called for in the literature (Donaldson and Davis, 1994; Johnson et al., 1996). A model that accounts for contingency factors “enables researchers to identify necessary control variables and gaps in our understanding of how the board can impact on firm performance” (Nicholson and Kiel, 2004, p. 8).
2.7.5 Methodology and methods

There is a shortage of research based on primary data (Gabrielsson and Huse, 2005; Heuvel et al., 2006) that moves the corporate governance discussion away from the ‘usual suspects’ paradigm (Finkelstein and Mooney, 2003).

According to Stiles and Taylor (2001), only a small body of primary research exists on boards of directors from which to draw any methodological insights. They define three methodological problems: (1) the problem of access, (2) the problem of defensive responses, and (3) the problem of ‘holding directors to the script.’ Stiles and Taylor point out, in response to this situation, researchers have adopted a multi-method approach to research design, or triangulation model, where multiple methods converge on a single ‘answer.’ Some examples given were Demb and Neubauer (1992), who interviewed 71 directors from eleven multinational companies as well as using results from a questionnaire with a sample of 137 students at board level courses at IMD; Judge and Zeithaml (1992) used a combination of qualitative and quantitative approaches, and took 114 semi-structured interviews in forty-two organisations and analysed the responses with two seven-point scales; Lorsch and MacIver (1989) interviewed eighty directors, using a survey sample of 1,100 and four case studies; and Peck (1995) used observation of fifteen board meetings and a questionnaire to gain insight into the perception of directors of their work.

In other words, several methodological approaches have been used in the few studies on corporate governance based on primary data, rather than the more common statistical analysis of secondary data.

The next section sets the agenda for the research central to this thesis, where some of the issues related to that agenda are discussed in more detail.
2.8 Agenda for research

*In the interests of peace I am opposed to the so-called peace movement.*

Karl Popper (1902-1994)

This section is about the research agenda. Several research paths were possible according to the literature review, which has focused on process studies rather than the more popular studies of composition of boards linked to performance. The argument was the board was an interesting organ to study, and the central question focused on whether the board as an entity had any influence on performance or value creation of the company, both in the short and long term.

*Figure 2.8.1: The overview of the section for research agenda.*

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This section focuses on the key issues of the definition and limitation of the study (figure 2.8.1). First, the choice of perspective is explained, then important issues defining the study are discussed: country and SME context, role of boards, attributes, and performance. These issues frame the main research question and the hypotheses for the study summarised at the end of the section.
2.8.1 Chosen perspective
The literature review gives a broad overview of the corporate governance field of research, particularly on that organ of the corporation called the ‘board of directors.’ The review reveals there is vitality within the field, where many theories try to explain what the board is, does, and why it does it. The main topic is the relationship between the board of directors and organisational performance, as it is in thesis. However, the difference is this study is based on the process-based view of the board, not the structural-based view. The research aims to falsify the claim that the board of directors should be abandoned and eliminated from the structure of the organisation because it has no potential value for the company. Therefore, the objective is to falsify managerial hegemony theory.

The original plan was to do the study in more than one Nordic country but after cost and benefit considerations it was limited to Iceland. The reason was, first and foremost, based on the question of access, which was facilitated in Iceland (Stiles and Taylor, 2001). However, although access was improved, the choice limited the research in other ways. First of all, the research was set in a country with its own legal and cultural context. This affected not only interpretation of the results with regard to contextual influences, but also the design of the study itself. These influences are discussed later in further detail. Second, Iceland is a small country, with a small market, and small companies. That alone shifted the focus of the study away from large corporations to SMEs. The choice of location for the research also impacted on the question of how to generalise from the results, as discussed in the concluding chapter.

A multi-theoretical perspective was adopted, so this research does not focus on testing one theory, but rather explores propositions discussed within various theoretical contexts in previous research. Theories are then applied to explain the results and implications of the study. The claim is that one theory alone may not explain the complex relationship of board influence on corporate performance, and using multiple approaches gives a more complete picture.
Although this researcher has adopted the realist perspective of science, the intent was to design the research with a positivist approach. Accordingly, three decisions were taken: (1) the propositions were to be developed from existing theories and previous research, (2) concepts used by other researchers would serve as variables, and (3) items and scales would be adopted from previous research. Furthermore, the research would observe the recommendations of Larcker, Richardson and Tuna (2004) and aim to (a) use a more comprehensive set of governance variables, (b) use variables that can be used for comparison with previous studies, (c) emphasise the measurement properties of scales and theorise about their dimensions or number of items, and (d) emphasise the use of scales instead of single indicators for complex governance constructs.

The perspective taken for this research can therefore be described as a multi-theoretical perspective with an SME focus and a positivist’s flair for action.

2.8.2 SMEs and country context

This research is focused on companies in Iceland, which are for the most part, SMEs. A review of the literature on small and medium-sized companies illustrates there is room for conceptual and methodological improvement (Heuvel et al., 2006). Empirical research in different contexts, legal systems, and contingencies to validate board roles identified in the literature is lacking (Heuvel et al., 2006). And according to Heuvel et al. (2006), none of the previous empirical studies has examined the importance of different board roles within the context of small and medium-sized family firms. In essence, there are very good reasons for doing research in Iceland on small and medium-sized companies.

Very little research has been done in Iceland on corporate governance issues, however, a descriptive survey was performed in 2003 in Iceland in relation to development of a governance code. There is need in general for studies that explore corporate governance in legal settings other than Anglo-Saxon (Weimer and Pape, 1999) for a broader view of the world of corporate governance.
The Icelandic setting defines this research in other ways. Some important requirements of the Icelandic governance system affect boards of directors:

1. One-tier boards with some two-tier characteristics,
2. The position of CEO and chairman are separate by law,
3. The CEO has no voting power on the board but sits in most meetings,
4. All directors are non-executive by law,
5. There are usually no employee representatives,
6. Directors are either the biggest owners or representatives of owners.

Another important aspect of the Icelandic governance system is that it is a mixture of one-tier and two-tier boards. It is one-tier in the sense there is no other board mechanism, but resembles the two-tier system in that all board members are non-executive, a characteristic of supervisory boards (Chingula, 2006). Additionally, members are usually the biggest owners of the company and their representatives elected for one year at a time at a general meeting. Although all boards are non-executive, there is no legal obligation or tradition of employee representation on the board. CEOs are not part of the board although they attend most, if not all, meetings.

The implications of this context are an important factor affecting the interpretation of the results of the research. The context controls for issues such as joint CEO/chairman roles, and the debate about non-executive vs. executive directors.

2.8.3 Role of boards
The main theme of this research is the role of boards, and not as simple as it may seem. There are two main issues: (1) defining and labelling roles selected from the literature search, and (2) designing scales to measure these roles.

Many researchers divide the discussion of roles of the board into two categories, directing and monitoring (Tricker, 1994; Carpenter and Westphal, 2001; Heuvel et al., 2006 etc.). There is little confusion about the monitoring role itself, and although the labels differ (for example, control, conformance, watchdog), in essence all these labels refer to the process of monitoring management. However,
the directing role is the source of much confusion. Zahra and Pearce (1989) describe a service and a strategy role, and Nicholson and Kiel (2004) describe a resource role. These three roles are linked to different theories so they can be logically separated.

The selection of measurement scales for the roles of the board turned out to be problematic. In accordance with guidelines set out above, scales were sought with sufficient information they could be duplicated, and which had been validated and published in major journals. Carpenter and Westphal (2001) use three scales, one for the “ability to contribute,” one for “monitoring,” and one for “advice interaction.” All have high Cronbach alphas, indicating high interim reliability. These three scales formed the basis of the measurement tool, supplemented by insight from Heuvel et al. (2006), who compiled tasks from five leading studies (Zahra and Pearce, 1992; Finkelstein and Hambrick, 1996; Johnson et al., 1996; Hillman et al., 2000; Hillman and Dalziel, 2003). Furthermore, the study by Heuvel et al. (2006) was directed at SMEs, although only focusing on the “control” and “service” roles. Merging the two studies formed a broader and richer measurement instrument. The strategic role was further expanded by integrating instruments from Kanji and Sá (2001), which measured values, vision, mission, and strategy with different and independent scales.

Four main roles were conceptualised and operationalised in this study: monitoring, strategy, advice, and resource dependency.

The approach of Zahra and Pearce (1991), examining board roles in terms of power, was adopted as insurance, in case the ‘roles as tasks’ perspective adopted in this study did not materialise in the research. For practical purposes, it was decided to simplify the approach used by Zahra and Pearce (1991). This involved using one set of questions rather than two sets of questions, and changing the questions to measure the relative power of the CEO and the board. The change was minimal, as Zahra and Pearce (1991) had asked the same respondent the two sets of questions, and therefore one could expect a similar bias. The implication of this simplification was, unlike Zahra and Pearce (1991), who used two dimensions to measure power,
one for the CEO and one for the board, this study used only one, a measure of relative power between the CEO and the board. If the board scored equal to or higher than the CEO on the power scale, this would indicate a participative or proactive board, while a lower score would indicate a statutory or caretaker type of board.

2.8.4 Attributes
Zahra and Pearce (1989) identified four themes of attributes: composition, characteristics, structure, and process. The different attributes were described previously. As this study is interested in the tasks of boards, there is less focus on measuring the attributes themselves.

Research linking composition of the board to corporate performance, has examined the size of boards, the mix of director types, female and minority participation, and the ratio of inside to outside directors. Iceland prohibits inside directors, so there is no need to test the ratio of inside to outside directors. However, it might be interesting to determine any implications of truly independent boards, with neither family nor financial ties to the company. The Icelandic culture is very homogeneous, so minority issues are not a concern. Female participation on boards was relevant to explore. Therefore, composition of the board evolved into three measures: size of board, female participation, and independent director participation.

‘Characteristics of the board’ has two components (Zahra and Pearce, 1989). First is directors’ background: age, education, values, and experience. Second is the individual and collective personality of directors: as in interests and focus. The context of this research meant board members were expected to be large shareholders in the company, and therefore likely to have a vested interest in the performance of the corporation. However, the question of independence can be a test of broader stakeholder interests on the board. Forbes and Milliken (1999) used tenure of the chairman to stand for experience of the board. Their initiative was copied in this research. The study does not explore the character of the board in depth, as it is beyond the scope of the thesis.
‘Structure of the board’ refers to the number and types of committees. There is little tradition for committees at board level in Iceland, and given the study focuses on SMEs, it may be assumed the number of board committees would be minimal. However, one factor often considered part of the structure of the board, although more to do with the process of the board, is information flow. This researcher has taken special interest in the issue of information flow at board level in the last few years (Jonsson, 2006; 2007). Very little research has focused on the attempt to identify factors that determine whether boards have adequate knowledge and information to make meaningful contributions to strategic decision-making (Carpenter and Westphal, 2001). However, even when the board is staffed by a majority of outside directors, the board still functions with information provided by the CEO (Aram and Cowan, 1983). Some have questioned whether directors have suitable knowledge or information to contribute meaningfully to strategy (Carpenter and Westphal, 2001). Therefore, information flow to the board is particularly interesting.

‘Process’ signifies the approach the board takes to decision-making (Zahra and Pearce, 1989). Zahra and Pearce (1991) emphasise process in their study, using three different scales to measure aspects of the board decision process. As this is one of the most comprehensive approaches for measuring board process in the literature, these scales are adopted in this research. Furthermore, these scales form part of the power-roles study (Zahra and Pearce, 1991), also considered in this study, and therefore it opens up the possibility of validating previous results.

Although some attribute variables have been selected for this study, this was predominantly to enable comparison with previous studies, because the focus on attributes has dominated research in corporate governance.

2.8.5 Performance

Few measures of corporate performance are to be found in governance literature, the most notable of which is the Tobins Q. In this study a different approach is taken, where the measure of performance is based on perceived performance.
However, this is not an alien approach, as Zahra and Pearce (1991) have used it, although in very limited scope. There are three reasons why this approach is taken in this study. (1) The initial investigation showed it would be difficult to find actual financial data for the survey companies because of a lack of comparable databases. (2) Previous research has shown requesting financial information can seriously reduce the response rate and can be problematic. (3) Previous research has found a high degree correlation between self-reported performance estimates and actual performance (Dess and Robinson, 1984; Venkatraman and Ramanujam, 1987). Hart and Banbury (1994) found correlation between self-reported performance and objective data to be between .55 and .99, depending on the specificity of the industry and sub-industry.

Furthermore, the perceived performance measure offers a broader measure of performance than traditional financial measures. The instrument developed by Hart and Banbury (1994) measures performance variables related to different stakeholders: employees, society, customers, and shareholders. This broader approach should be especially interesting in this research, and perhaps shed some light on how the board of directors contributes to corporate performance.

2.8.6 Research question and hypotheses

As noted in the beginning of this section, the focus of this study is the relationship between boards and corporate performance. The model itself is simple, although more complex when all items and concepts within each factor are included.

The main research question is the following: There is a positive relationship between boards and organisational performance in SMEs.

The main hypotheses are the following:
H1. There is a positive relationship between the level of role importance and company performance.
H2. There is a positive relationship between the process of boards and company performance.
H3. There is a positive relationship between the composition of boards and company performance.

*Figure 2.8.2: The main hypotheses.*

Adapted from Zahra and Pearce (1989).

The hypotheses are expanded in the next chapter where the operationalisation of the concepts is discussed in more detail.
Summary of Chapter 2 – Literature review

This chapter reviews the literature from a descriptive perspective, as well as offering some critique. It is an argument for the research question, focus, and agenda. The chapter brings together theory and research practice, with the focus on the role of the board. Some of the studies are discussed further in the next chapter, where operationalisation of the concepts is explained. Furthermore, some issues discussed in this chapter will resurface in the discussion of the results and analysis of the survey in Chapter 4.

The main implications from this chapter are:

- There are many theories in the field of corporate governance, some counter-theories and some complementary. Researchers increasingly are focusing on a multi-theoretical perspective.
- The board has many roles, understood according to different theoretical approaches, although the archetype includes the monitoring role, the strategy role, and the resource role.
- Most models within the literature are input-process-output models, of which the best-known is the integrated model of Zahra and Pearce (1989).
- Research from the structural-based view of the board has been inconclusive, while research from the process-based view of the board is sparse.
- There are several problems associated with previous research efforts in the field, especially regarding theoretical perspectives, definition of concepts, and measurement of variables.
- Three propositions are tested in this research, the relationship of board composition, roles, and process to organisational performance.
- The research is done in the context of SMEs in Iceland and emphasises the strategic role of the board.

The next chapter focuses on research methodology and examines how the propositions are to be tested.
Chapter 3 – Methodology

This chapter provides an overview of what is generally described as methodology. The purpose of the chapter is to outline the basis for the research paradigm. The survey tool is the main focus of the chapter. First, an argument is presented for the operationalisation of concepts to be used in the research introduced in the last chapter, the literature review. Second, a description of the survey approach is provided. The chapter leads into discussion of the empirical chapter of this thesis, Chapter 4, where results and analyses of the questionnaire are discussed.

Figure 3.1: The outline of the methodology chapter.


This chapter outlines the background of the research model, the research process, and some philosophical considerations. It begins with a rather general discussion of research methodology to clarify some of the issues. Next, the research model and operationalisation of the concepts under investigation are presented. The third part describes the survey instrument. The sampling procedures are described last. The chapter presents the ‘how’ and the ‘what’ of the research.
3.1 Methodology in a wider context

By three methods we may learn wisdom: First, by reflection, which is noblest; Second, by imitation, which is easiest; and third by experience, which is the bitterest.

Confucius (551 BC - 479 BC)

Methodology has been defined (Leedy, 1989 quoted in Remenyi et al., 1998, p. 28) as “an operational framework within which the facts are placed so that their meaning may be more clearly exposed.” Silverman (2005, p. 99) states methodology “refers to the choices we make about cases to study, methods of data gathering, forms of data analysis, etc., in planning and executing a research study.” The purpose of this section is to clarify some of the issues regarding the research design.

Figure 3.1.1: Methodology: From paradigm to method.

Silverman (2005, p. 100) describes seven levels of analysis to link some of the most basic terms in scientific research. Although Silverman (2005, p.98) speaks of ‘models,’ he explains they “roughly correspond to what are more grandly referred to as paradigms.” ‘Paradigm,’ following the interpretation of Kuhn (1962), is a more appropriate term for the first part of this chapter, which describes methodology in general terms. The second section focuses on what theories are. The third section discusses concepts and categorisation. The fourth clarifies models, and the last part discusses methodology as a research tool (figure 3.1.1).
3.1.1 Paradigm

A ‘paradigm’ can be described as two different but related things. First, it can mean a description of what reality is like and the basic elements it contains. In other words, ‘ontology,’ or what we believe about the nature of reality. Secondly, it can refer to the nature and status of knowledge in terms of ‘epistemology,’ or how we know what we know (Silverman, 2005, p. 98; Patton, 2002, p. 134). Ontology and epistemology are philosophical topics not usually directly discussed in doctoral theses (for example; Brett 2000; Gay, 2001; Tanner, 2005; Long, 2005). However, ‘what can I know?’ is regarded as one of the most fundamental questions pertaining to any field of study (Popper, 2002). Classical empiricism, or the British school, of Bacon, Locke, and Berkeley, associated with Hume and Mill, holds the view the ultimate source of knowledge is observation or induction. Classical rationalism, or the Continental school, associated with Descartes, Spinoza and Leibniz, on the other hand, holds intellectual intuition or deduction is the source of true knowledge (Popper, 2002, Stove, 1982). In most doctoral theses the empirical view is accepted, as it is often described as the true theory of scientific knowledge (Popper, 2002, McCloskey, 1998).

Popper’s (2002) criticism of the authoritarian implication of the empiricists and the rationalists is interesting. He argues rationalists tend to think the source of knowledge and truth is God or nature. Furthermore, he argues empiricism relies on authority in its quest for sources of observation, and points out all observations involve interpretation, and there is no such thing as pure observation. Popper (2002, p. 33) proposed a different perspective on sources of knowledge:

The question about the sources of our knowledge can be replaced in a similar way. It has always been asked in the spirit of: ‘What are the best sources of our knowledge — the most reliable ones, those which will not lead us into error, and those to which we can and must turn, in case of doubt, as the last court of appeal?’ I propose to assume, instead, that no such ideal sources exist — no more than ideal rulers — and that all ‘sources’ are liable to lead us into error at times. And I propose to replace, therefore, the question of the sources of our knowledge by the entirely different question: ‘How can we hope to detect and eliminate error?’

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7 First published in 1963.
Popper (2002) argues the process of criticism is a means of detecting and eliminating error. Through constructive criticism, theories or intuitions may be examined, and the field of knowledge advanced. This approach has been, at least in part, adopted in this thesis. Popper’s response to the epistemological question of ‘how do we know?’ is summarised below (Popper, 2002, p. 35):

So my answer to the question ‘How do you know? What is the source or the basis of your assertion? What observations have led you to it?’ would be: ‘I do not know: my assertion was merely a guess. Never mind the source, or the sources, from which it may spring — there are many possible sources, and I may not be aware of half of them; and origins or pedigrees have in any case little bearing upon truth. But if you are interested in the problem which I tried to solve by my tentative assertion, you may help me by criticizing it as severely as you can; and if you can design some experimental test which you think might refute my assertion, I shall gladly, and to the best of my powers, help you to refute it.’

This critical view of Popper can be described as a special paradigm, although his views are often categorised as positivism or empiricism (for example in Easterby-Smith et al., 2002) when he is clearly opposing their views. Indeed, Popper called himself ‘negativist’ rather than ‘positivist.’

The philosophical questions of ontology and epistemology, however, only partly describe different paradigms. Patton (2002, p. 134) categorises paradigms according to six questions: (1) What do we believe about the nature of reality? (ontology); (2) How do we know what we know? (epistemology); (3) How should we study the world? (methodology); (4) What is worth knowing? (philosophical debate about

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8 Popper best explains the difference himself (Popper, 2002, p. 310): “Falsificationists (the group of fallibilists to which I belong) believe – as most irrationalists also believe – that they have discovered logical arguments which show that the programme of the first group [verificationists] cannot be carried out: that we can never give positive reasons which justify the belief that a theory is true. But, unlike irrationalists, we falsificationists believe that we have also discovered a way to realize the old ideal of distinguishing rational science from various forms of superstition, in spite of the breakdown of the original inductivist or justificationist programme. We hold that this ideal can be realized, very simply, by recognizing that the rationality of science lies not in its habit of appealing to empirical evidence in support of its dogmas – astrologers do so too – but solely in the critical approach: in an attitude which, of course, involves the critical use, among other arguments, of empirical evidence (especially in refutations). For us, therefore, science has nothing to do with the quest for certainty or probability or reliability. We are not interested in establishing scientific theories as secure, or certain, or probable. Conscious of our fallibility we are only interested in criticizing them and testing them, hoping to find out where we are mistaken; of learning from our mistakes; and, if we are lucky, of proceeding to better theories.”
what matters and why); (5) What questions should we ask? (disciplinary and interdisciplinary debate about the nature of inquiry); and (6) How do we personally engage in inquiry? (praxis debates about interjecting personal experience and values into the inquiry). ‘Paradigm’ in this study means a general perspective, or way of thinking, reflecting fundamental beliefs and assumptions about the nature of science (Kuhn, 1962). It is built on more philosophical exploration than a ‘crude mental model’ would emphasise (Phillips, 1996; Smith, 1997).

There are many methods to classify paradigms. Foucault (1989) argue there is a problem with the epistemological configuration and placement of human sciences, in constant but ill-defined relationship to three other fields. These three are, according to Foucault (1989, pp. 389-390), biology, economics, and philology. Biology sees man as a creation of functions and norms; economics provides rules so man may deal with conflict; and for philology man’s behaviour is an attempt to find significance and systems having meaning. Burrell and Morgan (1979) suggest a two-dimensional perspective, e.g. subjective/objective and radical change/regulation, and describe four paradigms: radical humanist, radical structuralist, interpretivist, and functionalist. Crotty (1998) suggests five major perspectives: positivism (and post-positivism), interpretivism (including phenomenology, hermeneutics, and symbolic interactionism), critical inquiry, feminism, and post-modernism. Creswell (1998) settled on five traditions within the qualitative dimension: biography, phenomenology, grounded theory, ethnography and case study. Others have found more categories (e.g. Wolcott, 1992; Tesch, 1990). Silverman (2005) describes four paradigms within social research: functionalism (which looks at the functions of social institutions), behaviourism (which defines all behaviour in terms of ‘stimulus’ and ‘response’), interactionism (which focuses on how we attach symbolic meanings to interpersonal relationships) and ethnomethodology (which focuses on facts rather than theories). Interactionism can be linked to the philological origin, and behaviourism to the biological origin identified by Foucault (1989). Although functionalism does not relate as clearly to economics in Foucault’s (1989) discussion, the link is there, as the functionalist paradigm has been described (Gioia and Pitre, 1990) as seeking to examine

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9 First published in France in 1966 as Les mots et les choses.
regularities and relationships that lead to generalisations and universal principles. Functionalism has more commonly been labelled as positivism (Easterby-Smith et al., 2002, Popper, 2002). Other paradigms are often labelled non-positivism in contrast, or social constructionism, (Easterby-Smith et al., 2002), phenomenology (Remenyi et al., 1998), or interpretivist (Burrell and Morgan, 1979; Crotty, 1998), although they may have a more narrow meaning when described by other researchers (see, for example, table 3.1.1, main research perspectives from Patton’s point of view). In other words, there is no agreement on a categorisation of research paradigms (Patton, 2002).

The dual categorisation of methodology into both positivism and non-positivism has been the most popular approach in business research (Easterby-Smith et al., 2002; Remenyi et al., 1998). It is in essence an epistemological approach to the methodological distinction between quantitative and qualitative research. Gummerson (1991) proposes ‘hermeneutics’ as a paradigm bridge between positivism and phenomenology. However, hermeneutics has become better known as a subset of interpretivism (Crotty, 1998), focusing on the meaning of the conditions in which human acts take place, or products are produced (Patton, 2002, p. 113). The mixed-method style is sometimes labelled relativism (Easterby-Smith et al., 2002) or realism (Patton, 2002) although it is all too often not related to any paradigm (Green and Caracelli, 2003). Realism is sometimes described as an evolution away from the positivist paradigm, where scientific credibility carries a premium (Patton, 2002), and it is important to test claims with a set of valid and verifiable methods to capturing social relationships and their causes (Miles and Huberman, 1984).

This exploration of paradigms, and the basis for their categorisation, demonstrates at least in part why there is such confusion associated with research paradigms. They are grounded upon very fundamentally different approaches to research and theory building in social sciences (Gioia and Pitre, 1990). While the paradigms “provide guidance and a basis for interaction among researchers operating within the same framework, the different theoretical frameworks impede interactions
<table>
<thead>
<tr>
<th>Perspective</th>
<th>Disciplinary roots</th>
<th>Central question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnography</td>
<td>Anthropology</td>
<td>What is the culture of this group of people?</td>
</tr>
<tr>
<td>Autoethnography</td>
<td>Literary arts</td>
<td>How does my own experience of this culture connect with and offer insights about this culture, situation, event, and/or way of life?</td>
</tr>
<tr>
<td>Reality testing:</td>
<td>Philosophy, social sciences and</td>
<td>What is really going on in the real world? What can we establish with some degree of certainty? What are plausible explanations for verifiable patterns? What is the truth insofar as we can get at it?</td>
</tr>
<tr>
<td>Positivist and realist</td>
<td>evaluation</td>
<td></td>
</tr>
<tr>
<td>approaches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constructionism/</td>
<td>Sociology</td>
<td>How have the people in this setting constructed reality? What are their reported perceptions, “truths,” explanations, beliefs, and world view?</td>
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<tr>
<td>constructiveism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phenomenology</td>
<td>Philosophy</td>
<td>What is the meaning, structure, and essence of the lived experience of this phenomenon for this person or group of people?</td>
</tr>
<tr>
<td>Heuristic inquiry</td>
<td>Humanistic psychology</td>
<td>What is my experience of this phenomenon and the essential experience of others who also experience this phenomenon intensely?</td>
</tr>
<tr>
<td>Ethnomethodology</td>
<td>Sociology</td>
<td>How do people make sense of their everyday activities so as to behave in socially acceptable ways?</td>
</tr>
<tr>
<td>Symbolic interaction</td>
<td>Social psychology</td>
<td>What common set of symbols give meaning to human interaction?</td>
</tr>
<tr>
<td>Semiotics</td>
<td>Linguistics</td>
<td>How do signs (words, symbols) carry and convey meaning in particular contexts?</td>
</tr>
<tr>
<td>Hermeneutics</td>
<td>Linguistics, philosophy, literary</td>
<td>What are the conditions under which a human act took place or a product was produced that makes it possible to interpret its meanings?</td>
</tr>
<tr>
<td>analysis</td>
<td>criticism, theology</td>
<td></td>
</tr>
<tr>
<td>Narratology/</td>
<td>Social sciences (interpretive):</td>
<td>What does this narrative or story reveal about the person and world from which it came? How can this narrative be interpreted to understand and illuminate the life and culture that created it?</td>
</tr>
<tr>
<td>Narrative analysis</td>
<td>Literary criticism, literary non-fiction</td>
<td></td>
</tr>
<tr>
<td>Ecological psychology</td>
<td>Ecology, psychology</td>
<td>How do individuals attempt to accomplish their goals through specific behaviours in specific environments?</td>
</tr>
<tr>
<td>Systems theory</td>
<td>Interdisciplinary</td>
<td>How and why does this system as a whole function as it does?</td>
</tr>
<tr>
<td>Chaos theory:</td>
<td>Theoretical physics, natural sciences</td>
<td>What is the underlying order, if any, of disorderly phenomenon?</td>
</tr>
<tr>
<td>Non-linear dynamics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grounded theory</td>
<td>Social sciences, methodology</td>
<td>What theory emerges from systematic comparative analysis and is grounded in field work so as to explain what has been and is observed?</td>
</tr>
<tr>
<td>Orientational:</td>
<td>Ideologies: Political, cultural, and</td>
<td>How is X perspective manifested in this phenomenon?</td>
</tr>
<tr>
<td>Feminist inquiry, critical theory,</td>
<td>economical</td>
<td></td>
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<tr>
<td>and others</td>
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Adapted from Patton (2002, pp. 132-133).
across and among different perspectives” (Patton, 2002, p. 134). There is, however, an argument for using a multi-perspective approach, to create fresh insight for the researcher. Different ontological and epistemological assumptions can tap different facets of organisational phenomena, and can produce markedly different and uniquely informative theoretical views of events under study (Gioia and Pitre, 1990).

The methodological approach to paradigms in this thesis is probably best described as a compromise among various perspectives. The ontological and epistemological basis rests in the empiricism of the British school of thought, chosen because of tradition and institutionalisation, as the thesis was written and defended at Henley Management College, the oldest management school in Britain. The background of the researcher is in economics and management, fields which see the world in terms of rules and conflict, as described by Foucault (1989). However, Popper’s (2002) argument for the critical approach to science has influenced this research, and some of his terms and methods are used in the thesis (as will become clearer in next section). There is little doubt the traditional perspectives of empiricism have had a stronger influence on this thesis. This traditional empirical approach supports a positivist paradigm, as described by Easterby-Smith et al. (2002). However, this thesis is conducted more in the spirit of realism as described by Patton (2002), where realism is related more to positivism than to non-positivism, as it was developed from logical positivism and post-positivism. The reason for this perspective is realism offers a more lenient view of non-positivist methods, which gives a richer picture of the phenomena under study, than a pure positivist approach (Remenyi et al., 1998).

Realism emphasises empirical findings with solid description and analysis, and not a personal perspective or voice, although some subjectivity and judgment is permitted (Patton, 2002). Triangulation of data sources and analytical perspectives are used to increase the accuracy and credibility of findings (Patton, 2002). The criteria for quality include ‘truth values’ and plausibility of findings; credibility, impartiality and independence of judgment; confirmability, consistency and
dependability of data; and explainable inconsistencies of instabilities (Patton, 2002, p. 93). The realist perspective strives for rigour, but it also allows the flexibility to use other means for research. This flexibility would be inappropriate under the umbrella of positivism.

In short, as emphasised by Easterby-Smith et al. (2002), the relativist position (or realist-orientated perspective), where multiple perspectives are adopted and validated with triangulation, can provide better insight into boards, where the starting point is supposition rather than hypotheses, the analysis consists of probability rather than verification,\(^\text{10}\) and the outcome is correlation rather than causality. Flexibility in the use of methodologies provided by the realist paradigm can better explain the “how” and “why” of board operations and their contribution to the organisation.

3.1.2 Theory

The word ‘theory’ has many different definitions. Gioia and Pitre (1990) define it as any coherent description or explanation of observed or experienced phenomena. Silverman (2005) describes theory as a set of concepts arranged to define and explain some phenomenon, while Strauss and Corbin (1998) define theory as a plausible relationship produced among concepts and sets of concepts. Another definition of ‘theory’ is an ordered set of assertions about a generic behaviour of structure assumed to hold throughout a significantly broad range of specific instances (Patton, 2002). More generally, theory has been described as the answer to the question “why” (Kaplan, 1964; Merton, 1968, Sutton and Staw, 1995). Theories are also regarded as solutions to problems (Popper, 1994).

Although there seems to be a fairly coherent understanding among scientists of what theory is or is not, the spectrum for interpretation is wide (Sutton and Staw, 1995; Weick, 1995). People talk of theories as of ideas, which explain the ‘why’ of their daily lives (Llewelyn, 2003). Scientists tend to speak of theories as ‘grand theories,’ formulated in the world of ideas rather than practice (Van De Ven and

\(^{10}\) Easterby-Smith et al. (2002) used the term ‘falsification’ here. From the perspective of Popper (2002) who coined the concept of ‘falsification’ the term of ‘verification’ is, however, more appropriate in this discussion.
Johnson, 2006; McKelvey, 2006). In other words, theories are contained in libraries, ideas established by thinking through issues and relationships in an abstract way and with a high level of generality (Llewelyn, 2003). This observation is interesting as it reflects the approach of rationalism rather than empiricism. Llewelyn (2003) actually categorises theories on a spectrum between empiricism and rationalism, although her approach is closest to the instrumentalist view. Llewelyn (2003) argues there are ‘levels’ of theories: (1) metaphor theories, (2) differentiation theories, (3) concepts theories, (4) theorising settings, and (5) grand theories. This typology helps explain the origin and purpose of theories and theory building. It could be a better description of the process of making theories, or theorising, rather than being an indication of a theory as a product (Weick, 1995). It emphasises, however, how freely researchers use the word ‘theory’ (Sutton and Staw, 1995). More importantly, this typology emphasises the importance of concepts, categorisation, and relationships in the process of theory-building.

Metaphor theories are in essence a method of understanding and experiencing one kind of thing in terms of another (Lakoff and Johnson, 1980). Metaphors explain new and unfamiliar concepts through some prior acquaintance with familiar concepts, often from a more ‘basic’ context (Llewelyn, 2003). Gentner (1989) states metaphor has the power to establish a primary understanding of any phenomenon. Differentiation theories emphasise the importance of categorisation. Their aim is to create meaning and significance through contrast and categorisation of things (Llewelyn, 2003). Concepts are established and clarified through categorisation, dualism in its simplest form (for example, in-out, public-private, mind-body). A classic example is McGregor’s (1960) theory of X and Y management. Concept theories work through explicating practice, in other words, the creation of meaning and significance by linking the subjective and objective realms of experience (Llewelyn, 2003). New concepts, or re-working old concepts by repositioning them in a network of terms (Sayer, 1992), reflect different ways of thinking and acting in the world – ‘feminism’ being a good example. Theorising settings put theories in context and offer an understanding of the setting, in other words, they create meaning and significance by explaining relationships between phenomena (Llewelyn, 2003). The focus of theory has shifted to the settings in which action
takes place, or the conditions under which actors act. Finally, grand theories offer understanding of enduring structural aspects of experience (Llewelyn 2003). They focus on the structural conditions both essential and impersonal, explaining phenomenon with a high level of generality. Grand theories are scarce and “are unlikely to be challenged, modified or revised following an encounter with empirical reality” (Llewelyn, 2003, p. 677). It is important to note although this categorisation of theories is only a basic outline, and highly focused on philology within Foucault’s (1989) categorisation, it emphasises the point theories are usually neither overtly categorised nor questioned.

Grand theories and higher-level theories, the preferred academic theories, form the basis of deductive research, where theories are developed before empirical evidence is sought. However, Glaser and Strauss (1967) argue for a more inductive hands-on approach to theory building. They argue it is the intimate connection with empirical reality that permits the development of a testable, relevant, and valid theory. Theories should be built from empirical evidence rather than out of thin blue air. It is not a question of qualitative or quantitative methodology, as sometimes is mistakenly assumed. As Glaser (2000, p. 7) points out: “Let me be clear. Grounded theory is a general method. It can be used on any data or combination of data. It was developed partially by me with quantitative data.” Their grounded theory approach is an inductive method of theory building, and offers a different perspective on knowledge creation.

Some arguments emphasise theory building is both an inductive and deductive process. Eisenhardt (1989; p. 532) notes “traditionally, authors have developed theory by combining observations from previous literature, common sense, and experience.” Llewelyn (2003, p. 666) argues as “all social phenomena are concept-dependent, theorizing for qualitative work in the social sciences cannot only ‘begin’ at the level of ‘grand theory,’ theorizing and conceptualising must be conjoined.” Christensen and Raynor (2003) see theory building as a loop of the inductive and the deductive processes, a way to generate, test and refine theories (figure 3.1.2).
It is interesting to combine both the deductive and the inductive approach of the rationalists and the empiricists, respectively, as Christensen and Raynor (2003) do in their model (see figure 3.1.2). This is a good description of how research is carried out within the positivist paradigm, where the starting point is existing theory and the goal is to confirm and further develop it. Glaser and Strauss (1967) however, would argue the starting point should be observation, not theory. Both methods of theory building, the library approach of grand theorists, and the hands-on approach of grounded theorists, focus on confirming the theories once established. This confirmation approach is what makes theories ‘scientific,’ as the argument is the research has been done to confirm the theory, and it therefore must be true (Popper, 2002).

*Figure 3.1.2: The process of theory building.*

![Diagram of theory building process]

Adapted from Christensen and Raynor (2003).

This is, however, what Popper (2002, p. 39) rejects as good science. “[T]he false idea, is that we must justify our knowledge, or our theories, by positive reasons, that is, by reasons capable of establishing them, or at least of making them highly probable; at any rate, by better reasons than that they have so far withstood criticism.” Popper has a point, as it is difficult to tell what is scientific theory and what is not, something that scientist still struggle with (Sutton and Staw, 1995; McKelvey, 1995). Popper’s struggle was with Marx, Freud, and Adler, and the apparent explanatory power of their theories (Popper, 2002, pp. 43-44).
questions were: ‘When should a theory be ranked as scientific?’ or ‘Is there a criterion for the scientific character or status of a theory?’ Popper describes his conclusion in seven points (Popper, 2002, pp. 47-48):

1. It is easy to obtain confirmations, or verifications, for nearly every theory – if we look for confirmation.

2. Confirmations should count only if they are the result of risky predictions; that is to say, if, unenlightened by the theory in question, we should have expected an event which was incompatible with the theory – an event which would have refuted the theory.

3. Every ‘good’ scientific theory is a prohibition: it forbids certain things to happen, the more a theory forbids, the better it is.

4. A theory which is not refutable by any conceivable event is non-scientific. Irrefutability is not a virtue of a theory but vice.

5. Every genuine test of a theory is an attempt to falsify it, or to refute it.

6. Confirming evidence should not count except when it is the result of a genuine test of the theory; and this means that it can be presented as a serious but unsuccessful attempt to falsify the theory.

7. Some genuinely testable theories, when found to be false, are still upheld by their admirers – for example by introducing ad hoc some auxiliary assumption, or by re-interpreting the theory ad hoc in such a way that it escapes refutation. Such an approach can be described as the ‘conventionalist twist’ and rescues theory from refutation only at the price of destroying, or at least lowering, its scientific status.

It is this critical approach, also mentioned in the last section, which is important for understanding theories as solutions to problems, and whether they are good or bad solutions. McCloskey (1998) has, however, claimed that falsification is impractical. That claim is based on critique of empiricism. Popper was, however, arguing for falsification as part of ‘theorizing’, as Weick (1995) uses the term, where French rationalism and British empiricism are used with different emphasis, as to develop and test theories from the perspective of falsification rather than verification. In the words of Popper (2002, p. 67):

The critical attitude, the tradition of free discussion of theories with the aim of discovering their weak spots so that they may be improved upon, is the attitude of reasonableness, or
rationality. It makes far-reaching use of both verbal argument and observation – of observation in the interest of argument, however.

Popper suggests this new way of thinking as a way to progress scientific knowledge. Kuhn (1977) argued that the scientist tries to force facts into the conformity of a theory and McCloskey (1998) pointed out that there is no falsification going on when scientists try to fit new facts into existing theories. Wacker (2004) uses Popper’s arguments to define good theory (table 3.1.2).

<table>
<thead>
<tr>
<th>Virtue</th>
<th>Key feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uniqueness</td>
<td>Uniqueness means one theory must be differentiated from another.</td>
</tr>
<tr>
<td>Conservatism</td>
<td>A current theory cannot be replaced unless the new theory is superior.</td>
</tr>
<tr>
<td>Generalisability</td>
<td>The more the areas to which theory can be applied, the better the theory.</td>
</tr>
<tr>
<td>Fecundity</td>
<td>A theory which is more fertile in generating new models and hypotheses is better than a theory with fewer hypotheses.</td>
</tr>
<tr>
<td>Parsimony</td>
<td>States, other things being equal, the fewer the assumptions the better.</td>
</tr>
<tr>
<td>Internal consistency</td>
<td>Internal consistency means the theory has identified all relationships and gives adequate explanation.</td>
</tr>
<tr>
<td>Empirical riskiness</td>
<td>Any empirical test of a theory should be risky. Refutation must be very possible if theory is to be considered a 'good' theory.</td>
</tr>
<tr>
<td>Abstraction</td>
<td>Means it is independent in time and space. It achieves this independence by including more relationships.</td>
</tr>
</tbody>
</table>

Adapted from Wacker (2004, p. 644).

As noted in Section 1.1, theory of corporate governance and the board of directors is incomplete and fragmented. A multi-theoretical perspective has been adopted here to address this (Stiles and Taylor, 2001; Huse, 2005), and because one single approach may be too narrow for understanding the role of the board. Indeed, if one were to test only one theoretical role of the board, the research would by definition disregard any other potential theoretical roles the board might have. A grounded research approach may have been adopted, but given the problem of access to boards (Stiles and Taylor, 2001), this approach is difficult to conduct in practice. The multi-theoretical perspective was somewhat limited in terms of conceptualisation and operationalisation by the scope of the research, as questioning subjects about all different theoretical roles predicted was not possible. This raises the question of categorisation of theories and criteria for good theory, the theme of
this subsection. The solution was a classical empiricist approach, to choose those most discussed and studied by other researchers (for example, Zahra and Pearce, 1989; Zahra and Pearce, 1991; Johnson et al., 1996; Stiles and Taylor, 2001; Westphal and Carpenter, 2001; Nicholson and Kiel, 2004; Heuvel et al., 2006). However, this solution does not effectively address the quality of those theories (Popper, 2002). Popper’s argument for a critical approach to judging theories and the concept of falsification are further examined in the following chapters.

Four main theories are used to guide the process of operationalisation: agency theory, stewardship theory, resource dependency theory, and stakeholder theory. Agency theory is the obvious choice, as no other theory within the corporate governance literature has come as close to being considered synonymous with a ‘corporate governance theory’ (Lubatkin, 2007). Stewardship is the counter theory, and focuses on the strategic role of the board (Donaldson, 1990). Resource dependency theory offers a different perspective of the role of the board, as a link between the internal and external environment (Kiel and Nicholson, 2004). Stakeholder theory offers a different perspective than the shareholder perspective (Hung, 1998). In the typology of Hung (1998), the multi-theoretical focus is on the contingency perspective part of the typology (figure 2.1.2). The core problem formulation of this thesis is to falsify the statement the board has no value or importance. It can be argued this is the claim of managerial hegemony theory, the institutional perspective, which holds the board is merely a ‘rubber stamp’ (Mace, 1971). Showing a positive relationship or organisational performance either by means of agency, stewardship, resource dependency, or stakeholder theory would falsify the managerial hegemony perspective. Therefore, the underlying structure of problem formulation is not simply an empiricist approach to confirm or verify theories, as the study also includes Popper’s perspective featuring falsification.

3.1.3 Concepts and categorisation
The model of theory building proposed by Christensen and Raynor (2003) emphasises ‘concepts,’ and ‘relationships’ between concepts. This is how Strauss and Corbin (1998) describe theory. Concepts are abstract or generic ideas that
become the building blocks of theory (Remenyi et al., 1998). Llewelyn (2003) argues theorising and conceptualising need to go together. Silverman (2005, p. 24) defines ‘concepts’ as “clearly specified ideas deriving from a particular model [paradigm].” This can also be described as the perspective of ‘tradition’ (Foucault, 2002). From a grounded theory perspective, it is rather the phenomena being studied, not the philosophical paradigm, which brings out concepts and relationships of concepts (Glaser and Strauss, 1967). That being said, there is an important implication for linking concepts with paradigms, which can become a basis for categorisation. Foucault’s (1989) function and norm, conflict and rule, signification and system are, for examples, a way to understand the origin and purpose of concepts.

It was Glaser and Strauss (1967) who emphasised the importance of classification in theory building (Christensen and Raynor, 2003). Classification improves the likelihood of accurate and reliable theory, in other words, a theory with a close fit to the data (Eisenhardt, 1989). Christensen and Raynor (2003) have argued categorisation is, in fact, a very important step in theory building, and portray it as a method to give relationships of concepts meaning. Foucault (2002) explained it as ‘the order of things’, the inner law and hidden network of theories. Potter and Wetherell (1987, p. 116) emphasise categorisation is “fundamental” to the social scientist and the “principal building block.” The bases of categorisation vary. Glaser and Strauss (1967) define substantive categorisation (in other words attribute-based categorisation (Christensen and Raynor, 2003)) and formal categorisation (in other words circumstance-based categorisation (Christensen and Raynor, 2003)). Substantive categorisation is based on characteristics of the phenomenon, while formal categorisation refers to either the circumstances in which they are used or when they are used.

Categorisation can be described as ‘taxonomies,’ which completely classify a phenomenon through mutually exclusive and exhaustive categories, or as ‘typologies,’ which are built on ideal types or illustrative endpoints, rather than a complete and discrete set of categories (Patton, 2002). Guba (1978) argues categories should be judged on the basis of ‘convergence,’ or on how well things fit
together, or more precisely on the basis of ‘internal homogeneity’ and ‘external heterogeneity.’ The former is how certain things are categorised together or hold together in a meaningful way, and the latter is how differences between categories are made bold and clear. Challenging categorisation is an important component of theoretical development, as “they can impede as well as enable new (and possibly more productive) ways of both thinking and doing” (Llewelyn, 2003, p. 671). In fact, Lakoff and Johnson (1980) have argued the objective/subjective dualism has stalled debate on the epistemology of knowledge in the social sciences. Categorisation is a common approach to inductive theory-building. Usually categorisation can be found in ‘grand theories,’ developed by thinking through issues and relationships in an abstract way, and the basis of deductive research, which on many occasions aims to improve the categorisation proposed (Llewelyn, 2003).

In Section 1.3 the hypothesis was formulated as a question regarding the relationship between two main concepts, boards of directors and organisational performance. Both concepts were discussed in detail in the literature review. ‘Board of directors’ has various theoretical meanings and implications. Hung’s (1989) typology makes this point regarding conceptualisation and classification. As for concepts, the literature review focused on roles of the board in terms of tasks, and four main roles were identified: monitoring, strategy, resource, and advice. As noted in the literature review, and as emphasised by, for example, Heuvel et al. (2006), the concepts are far from clear. There is neither agreement about what they are, nor how they should be measured. Furthermore, theses roles cannot be categorised as taxonomies. Not even the monitoring and the strategy role of agency and stewardship theory can easily be conceptualised as two mutually exclusive and exhaustive categories. The review of these theories and concepts demonstrates how confusing this is (for example, Zahra and Pearce, 1989; Johnson et al., 1996; Stiles and Taylor, 2001; Heuvel et al., 2006). This is problematic when it comes to designing a research model and operational definition of the concepts, because of potential multicollinearity. The decision process of Fama and Jensen (1983) used in the introduction for clarification, could be the basis for such a categorisation, but it is focused on agency theory and omits other theoretical perspectives, like, for
example, resource dependency theory. Furthermore, it is not clear what ‘initiation,’ ‘ratification,’ ‘implementation,’ and ‘monitoring’ actually are regarding tasks of the board, and where the line is drawn between these concepts. The perspective adopted in this thesis is that of an exploratory study, therefore, how different concepts relate remains to be tested in further research. Perhaps that could be a first step towards a new corporate governance theory.

3.1.4 Model and propositions
The term ‘model’ is hard to describe because of its wide usage. In the words of Remenyi et al. (1998, p. 285):

A model may be described as a representation of an artefact, a construction, a system or an event or sequence of events. The representation may be abstracted into symbols, equations and numbers, i.e. mathematical expectations; it may consist of a picture or a drawing, or a fabricated likeness such as a model aeroplane, or it may be an expression of a situation or relationship in words. A complex model may contain several of these representations simultaneously.

“Cambridge Advanced Learner's Dictionary” defines ‘model’ as follows:

The word model is used in various contexts meaning something (abstract or physical) that represents ‘the real thing.’ That entity may be anything from a single item or object (for example, a bolt) to a complete system of any size (for example, the Solar System).

And “Collins Cobuild English Language Dictionary” gives a similar definition:

A model is a physical representation that shows what an object looks like or how it works. The model is often smaller than the object it represents. A model is a system that is being used and that people might want to copy in order to achieve similar results.

The word ‘representation’ can be found in all three definitions, meaning a model is something that describes something in some form. Early exercises in model-building more or less tended to disregard reality, and were purely theoretical (Leeflang, 1974). In the 70’s, model builders tried so hard to imitate reality the models became very complicated, which then led to concern the usefulness of
models should be emphasised (Leeflang, 1974). The mantra became models should
be good representations of reality, but also easy to use. Little (1970) developed
criteria which subsequently guided many in model building. The most important
features were models should be simple, complete, robust, adaptive, evolutionary\textsuperscript{11},
easy to control, and easy to communicate (Little, 1970).

The term ‘theory’ is quite often used synonymously and simultaneously with
the term ‘model.’ However, there is a quite valid distinction between these two terms.
According to Hawking (1988, p. 25), “a theory is a good theory if it satisfies two
requirements: It must accurately describe a large class of observations on the basis
of a model that contains only a few arbitrary elements, and it must make definite
predictions about the results of future observations.” As is evident in Hawkings
quote, there is a distinct difference between the two terms. Theory provides a more
general framework of connected statements used in the process of explanation,
while a model is an idealised and structured representation of reality (Johnston et
al., 1994) or an experimental design based on a theory (Harris, 1966). A model is in
a sense a tool used to describe, explain, or test a theory, and it can be descriptive,
predictive, and prescriptive (or normative) (Patton, 2002). Some models have all
these purposes.

The most obvious link between a theory and a model in the deductive process is the
hypotheses, or propositions, in the relativist paradigm. Hypotheses are in effect
statements, claims, or assumptions that can, and should be, tested by research
(Silverman, 2005). They are assumptions derived from previous research, theory, or
current business situation. They enable researchers to explain and test proposed
facts or phenomenon (Hair et al., 2003). A model is a framework for testing the
hypotheses. Hair et al. (2003) offer a guideline for evaluation of an empirical
model:

1. \textit{It is empirical} – meaning that it is compared against reality.

\textsuperscript{11} The evolutionary part was added by Urban and Karash (1971), and later included by Little
(1975).
2. *It is replicable or objective* – meaning the researcher’s opinion is independent of the results. Other researchers conducting the study would obtain the same results.

3. *It is analytical* – meaning it follows the scientific method in breaking down and describing empirical facts.

4. *It is theory driven* – meaning that it relies on the previous body of knowledge.

5. *It is logical* – meaning conclusions are drawn from the results based on logic.

6. *It is rigorous* – meaning every effort is made to minimise error.

Models in the corporate governance literature are in many cases based on a multi-theoretical perspective, as demonstrated in the literature review (for example, Zahra and Pearce, 1989; Carpenter and Westphal, 2001; Huse, 2005). There is a problem associated with the multi-theoretical perspective, as noted in the discussion of concepts, because the above definitions of models imply models tend to represent only one theory. It is theory framed in few statements. The concern with a model based on a multi-theoretical perspective is that concepts are not mutually exclusive or collectively exhaustive. The model in this thesis is based on the work of Zahra and Pearce (1989), which is a conceptual model not yet operationalised. Furthermore, the concepts used are not clearly defined in the work of Zahra and Pearce (1989) and have been interpreted differently by various researchers (Heuvel et al., 2006).

The objective of this thesis is to disprove the board is not valuable for the organisation by showing a positive relationship between the board of directors and organisational performance. Three propositions have been formulated to show this relationship:

H1. There is a positive relationship between the level of role importance and company performance.
H2. There is a positive relationship between the process of boards and company performance.
H3. There is a positive relationship between the composition of boards and company performance.
The three independent variables are neither mutually exclusive nor collectively exhaustive. They are, however, theoretical propositions which could or should show a relationship with organisational performance. Zahra and Pearce (1989) propose the relationship between composition and organisational performance, as well as the relationship between board process and organisational performance, is both direct and indirect, through the roles of the board. Therefore, there is a relationship between the independent variables. Furthermore, Zahra and Pearce (1991) have theorised the relationship between the role of the board and its composition and processes is the reverse, meaning the role of board is the independent variable, while composition and process are dependent variables. In any case, the purpose of the research is to test the proposition as a single equation and take a more exploratory view of the research model in a multivariate context.

Three perspectives helped guide the decision as to which methods and methodology to adopt in this research and they may be described as cost-effectiveness, parsimony, and rigour. The principle of cost-effectiveness of research is adapted from Remenyi et al. (1998), where research strategy is affected by the cost, time, and skill of the researcher, and not only by the research question or the problem. The Henley DBA degree is designed for part-time students and time is a very important factor. The Zahra and Pearce (1989) model calls for different research methods because only some of the variables it introduced had been operationalised. Grounded research, in the spirit of Glaser and Strauss (1967), was needed to develop the variables and propositions. This was time-consuming and costly. The principle of cost-effectiveness, therefore, indicated good reason for simplifying the research model from that developed in the theoretical discussion. The principle of parsimony states it is important to keep things as simple as possible (Little, 1970; Hair et al., 2003). Focus group discussions in Nitterdal, 2005, criticised some of the complexities of the Zahra and Pearce (1989) model. The principle of rigour is discussed in the following section.

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12 These perspectives arose in discussions at focus groups chaired by Professor Pat Joynt in Nitterdal Norway and Wisconsin USA.
3.1.5 Methods
Silverman (2005, p. 109) defines ‘methodology’ as "a general approach to studying research topics." Methodology shapes which methods are used, and how each method is used. More precisely, Easterby-Smith et al. (2002, p. 31) define methodology as a “combination of techniques used to enquire into a specific situation,” and method as “individual techniques for data collection, analysis, etc.” At the start of this section the paradigms were discussed, as well as the choice of realism, a more practical approach to positivism. A growing understanding is surfacing as to why positivism and non-positivism need not represent opposing positions. Easterby-Smith et al. (2002) argue it is not possible to identify any philosopher who subscribes to all aspects of one particular view, and many researchers, especially in the management field, deliberately combine methods originating from each tradition. There seems to be a growing interest in detangling qualitative and quantitative methods from positivist and non-positivist paradigms. This is often described as pragmatism, a practical approach to research (Patton, 2002, p. 135).

From the methodological point of view, Easterby-Smith et al. (2002) emphasise the differences between positivism, relativism, and social constructionism (table 3.2.3). However, the difference in practice is not always so clear-cut, as Easterby-Smith et al. (2002) have themselves pointed out, with the increased popularity of pragmatism.

Table 3.1.3: Methodological implications of different epistemologies.

<table>
<thead>
<tr>
<th>Elements of methods</th>
<th>Positivism</th>
<th>Relativism</th>
<th>Social constructionism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aims</td>
<td>Discovery</td>
<td>Exposure</td>
<td>Invention</td>
</tr>
<tr>
<td>Starting points</td>
<td>Hypotheses</td>
<td>Suppositions</td>
<td>Meanings</td>
</tr>
<tr>
<td>Designs</td>
<td>Experiments</td>
<td>Triangulation</td>
<td>Reflexivity</td>
</tr>
<tr>
<td>Techniques</td>
<td>Measurement</td>
<td>Survey</td>
<td>Conversation</td>
</tr>
<tr>
<td>Analysis</td>
<td>Verification/</td>
<td>Probability</td>
<td>Sense-making</td>
</tr>
<tr>
<td></td>
<td>Falsification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcomes</td>
<td>Causality</td>
<td>Correlation</td>
<td>Understanding</td>
</tr>
</tbody>
</table>

Adapted from Easterby-Smith et al. (2002, p. 34).

This thesis is set in the paradigm of realism, although most of the quantitative methodological discussion could be interpreted as positivism. Pure positivism
would preclude the more interpretive approach of realism. The choice of method is based on one hand on methodological-philosophical issues, and on the other hand the research question (Patton, 2002). It is not always clear which weighs heaviest. Galliers (1992) lists the most common research approaches. These are: action research, case studies, ethnographic, field experiments, focus groups, forecasting, future research, game or role playing, in-depth surveys, laboratory experiments, large-scale surveys, participant-observer, scenario discussions, and simulation.

The three perspectives of cost-effectiveness, parsimony, and rigour helped decide the method and methodology. The principle of rigour probably had the greatest influence. Rigour is the effort to minimise errors (Popper, 2002; Hair et al., 2003) by using appropriate and sound research methodology (Remenyi et al., 1998). Two points were taken from the principle of rigour. First, a questionnaire for data gathering was chosen, because as a scientific method it is more rigorous than the open style interviews and case studies, which were also considered. Second, the aim was to use already operationalised concepts where possible to minimise designing new measurement scales. As Larcker et al. (2004) point out, there is no lack of measurement scales, although many are based on convenience and lack rigorous analysis.

*Figure 3.1.3: Validity as the link between research practice and theory.*

![Diagram of research practices and theories](image-url)
Rigour is at least partly a question of validity. Trochim (2001) provides a categorisation where validity is described as the relationship between research theory and research practice (figure 3.1.3). Three types of validity are discussed in this chapter. Construction validity is the subject of section 3.2, external validity is discussed in section 3.4 on sampling, and internal validity in section 3.3 about the survey method. Conclusion validity is discussed in Chapter 4. The importance of validity lies at the core of this thesis.

The survey method as the quantitative approach, and interviews and focus groups as the qualitative approach, are the methods used in this research. This study utilises a mixed-method approach to research and it emphasises realism as the research paradigm (Phillips, 1996). This is a common approach used by researchers (Greene and Caracelli, 2003; Easterby-Smith et al., 2002), as the problem, not the paradigm, determines which methods are most relevant for solving the problem (Patton, 2002; Newman et al., 2003). Both the qualitative and the quantitative approaches used in this study are discussed in more detail in the following subsections.

3.1.5.1 The qualitative approach

Using both a qualitative approach as well as a quantitative approach can enrich the problem definition as well as the solution, although mixing methods may lead to contradiction and confusion (Easterby-Smith et al., 2002). In this study, the qualitative approaches are used for supporting the quantitative approach, as researchers within the realism paradigm often tend to do (Greene and Caracelli, 2003; Easterby-Smith et al., 2002). Several authors note triangulation increases validity (for example Jick, 1979; Bickman and Rog, 1997; Smith, 1997; Scandura and Williams, 2000). Qualitative approaches are used for all four types of validity identified above: external, internal, construct, and conclusion validity. Furthermore, it may be argued the qualitative approach used in the early stages of this research may have affected the research process.

Two types of qualitative technique were used in this study, interviews and focus groups. Interviews are considered acceptable in the positivist paradigm when the questions are closed and easily quantified, while other interview techniques are
considered qualitative (Patton, 2002). Patton (2002, p. 324) categorises qualitative interviews into three types: the informal conversational interview, the general interview guide approach, and the standardised open-ended interview. In this research, the standardised open-ended interview was used, as this method had several qualities relevant to this study. Patton (2002, p. 346) gives four main reasons for using the standardised open-ended interview:

1. The exact instrument used in the evaluation is available for inspection by those who will use the findings of the study.

2. Variation among interviewers can be minimized where a number of different interviewers must be used.

3. The interview is highly focused so that interviewee time is used efficiently.

4. Analysis is facilitated by making responses easy to find and compare.

From the realist perspective, the issue of a more structured analysis and the possibility of evaluation both play a big part in the choice of interview type. However, the question of interviewee time had the most influence on the choice in this study. It was difficult to get interview time with board members, and it was foreseen the researcher would have to work within a time frame of half an hour. Board members are hard to hold to the script (Stiles and Taylor, 2001), which implied a more structured interview would result in responses to the most questions. Guidelines offered by other researchers were followed to a large extent (Fontana and Frey, 2000; Huberman and Miles, 2002; Saunders et al., 2003).

A focus group interview is an interview on a specific topic with a small group of people (Patton, 2002). It is a research technique that collects data through group interaction on a topic determined by the researcher (Morgan and Piercy, 1996). The topics are narrowly focused, usually seeking reactions to something (a product, program, or shared experience), rather than exploring complex life issues in depth and detail (Patton, 2002). Originating in marketing, the focus group has become an acceptable method used for various purposes in social science (Fontana and Frey, 2002). Group interviews have a number of advantages, for instance, low cost, flexibility, as well as generating rich information (Fontana and Frey, 2000). The
guidelines of other researchers were followed (Fontana and Frey, 2000; Madriz, 2000).

Qualitative methods were used (a) prior to the research design, (b) during the research design, and (c) in the aftermath, when the results from the survey had been analysed. The three steps are described briefly.

First, although the research design is based on a literature survey, it must be acknowledged this researcher was influenced by other means. During the research process, several interviews with board members, mostly chairmen, were carried out to gain an understanding of the subject. Some of these have already been published as interviews without any special analysis in a semi-scientific magazine (Jonsson, 2003; 2003b; 2004; 2005b; 2005c), and others have served as the basis for papers published in international journals (Jonsson, 2005; 2006; 2006b; 2007; Jonsson and Taman, 2006). Others, while transcribed, have not been used in any publication. The number of people interviewed is around thirty. It is possible or even probable these interviews have in some way shaped the views of the researcher and therefore the choice of research design. However, these interviews are not considered in any other way as part of this thesis. The reason is partly practical, as it would expand the thesis to an unreasonable length and complicate it. More importantly, the interviews were never considered as part of this thesis from a methodological perspective, but were conducted to gain a broader understanding of corporate governance and its implications. That being said, it would be wrong to conceal the fact these interviews had taken place, as they have added depth to the understanding of this researcher for the subject. These interviews will not be discussed in any detail in this thesis, although their contribution has been acknowledged.

Secondly, and more importantly, focus groups were used on several occasions during the research design to help with the strategy and the structure, as well as to increase the validity of the content. The various focus groups emphasised different aspects of the validity of the research. Several researchers note focus groups can improve the content validity of surveys and their interpretation (Carmines and Zeller, 1979; Peter and Churchill, 1986; Churchill, 1992; Scandura and Williams,
2000; Churchill and Iacobucci, 2002; Easterby-Smith et al., 2002). All focus groups were steered by Professor Patrick Joynt. Other participants were professors, graduated DBA’s and students working towards their DBA degree. The following is a short description of the purpose and function of the focus groups.

- **August 2005 – Nitterdal, Norway – Focus: Internal validity.**
  The focus of the discussion was research design, the research model, and the research question. There was also discussion about perceived measures for performance as a viable choice for this type of research. The conclusion was the research design and the research model were too complicated and needed to be simplified, for the purpose of operationalisation.

- **August 2006 – Nitterdal, Norway – Focus: External validity.**
  The discussion was about the sample and sampling approach. The conclusion of the discussion was the target population of Icelandic SMEs was not a problem, as it would represent a major European study outside the UK and a contribution in itself. There were concerns about the sampling approach, as random sampling was not possible because of database problems. A comment was made ‘researchers need to do with what they can get’ and be pragmatic. It was argued the study should emphasise it was exploratory in nature.

- **September 2006 – Wisconsin, USA – Focus: Construct validity.**
  The discussion was about operationalisation and measurement. The discussion concluded it was not clear whether some of the proposed instruments measured the concepts they were supposed to. Some instruments were criticised for not being rigorous enough. Furthermore, it was argued instruments outside the corporate governance literature, especially within the top management team and leadership literature, could be considered and adapted if they were better measuring tools. As a result of this discussion, various instruments were researched and utilised.
There was discussion of the preliminary findings from the questionnaire. The conclusion was the results were very promising and could make an interesting contribution to the corporate governance discussion.

Furthermore, a group of individuals was used on two occasions for revision. During the development of the questionnaire, the draft of the questionnaire was sent to Professor Patrick Joynt at Henley Management College, Professor Bernard Taylor at Henley Management College, Doctor Caspar Rose at Copenhagen Business School, and Doctor Steven Tanner. The final revision of the questionnaire was sent to five Icelandic professionals, who are described in more detail in section 3.3.8. Furthermore, several professors and doctors (Professor Pat Joynt, Professor Bernard Taylor, Professor Thrainn Eggertsson, Professor Gudmundur Magnusson, Dr. Per Olaf Brett, Dr. Jonas Gabrielsson) were asked to revise and reflect on the final draft of the thesis.

Thirdly, open-ended questions were sent to respondents, after the survey had been completed, so as to increase the validity of the results. Several authors note such triangulation enhances the conclusion validity (for example Jick, 1979; Curran and Downing, 1989; Bickman and Rog, 1997; Scandura and Williams, 2000). The result of this process is described in Chapter 4.

Qualitative approaches, for example interviews and focus groups, were used throughout the research process to gain understanding and increase the validity of the research. These were used only for support, not as the main research method, for which a quantitative approach was used.

3.1.5.2 The quantitative approach
The quantitative approach of this study revolves around the survey method. Churchill (1995) emphasises research design should stem from the problem. The problem formulation, presented in Chapter 1, focused on the relationship between the board of directors and organisational performance. To include the process-based view of the board in the research, it was necessary to gather primary information
from those working with or within the board. As the study was based on the paradigm of realism, the survey method was used, which made it possible to address the thesis on a grander scale than any qualitative technique.

There are three types of research design, according to the classification of Churchill (1995, p. 128): exploratory research, descriptive research, and causal research. The focus of exploratory research is the discovery of ideas and insights. Descriptive research is typically concerned with the frequency of which something occurs, or the relationship between two variables. Causal research tries to determine cause-and-effect relationships. Churchill (1995) notes, moreover, any given study may serve several purposes. If problem formulation does indeed determine the research approach, this study would represent causal research, as the focus here is to show a positive relationship between the board of directors and organisational performance. The relationship between the three types of research design is important in the context of this study, and needs to be explored further. Churchill’s (1995, p. 129) depiction of the relationship between the three types of research design is shown in figure 3.1.4.

Figure 3.1.4: The relationship among research designs.

Doctoral research is always exploratory in part, as the purpose of the literature review is to clarify concepts and identify relevant hypotheses for study (Churchill, 1995). This is often seen as the initial step in research (Churchill, 1995). In this study, the exploration is important, as there is much confusion about theories and
concepts in the literature (Heuvel et al., 2006, Lubatkin, 2007). On the other hand, the main emphasis of the study is to find a relationship between two variables, the goal of causal research. Causal research is a misnomer, as Churchill (1995) and Popper (2002) point out, as the scientific notion holds although causality may be inferred, it can never be demonstrated conclusively. The purpose of this study is to infer relationship between variables rather than causality (Churchill, 1995). This can be accomplished by three means: concomitant variation, time order of occurrence of variables, and elimination of other possible causal factors (Churchill, 1995). As the purpose of this study is to find a relationship between the board of directors and organisational performance, this discussion is very important. The argument is for a time order of occurrence between the variables, as organisational performance is the effect of decisions taken by the board and management. However, the purpose of the study was not to trace the effects of specific decisions which could show the time order of occurrences. Rather, the purpose was to find concomitant variation through multivariate analysis, in order to show how the variables vary together (Churchill, 1995). Furthermore, some effort, with the use of control variables and partly controlled settings, was made to eliminate other factors which could influence the relationship. The rules for Icelandic boards eliminate the influences of joint CEO/chairmen and executive directors on the relationship between the two variables. Furthermore, the external variables of company size, industry, and ownership were used as control variables. It is hard to show causation by such means, except in a laboratory setting, which would decrease the external validity of the study. Such experiments in causation are usually related to the positivist paradigm (Churchill, 1995).

The survey method is classified in research design as descriptive (Churchill, 1995). It is a method used for relativist or realist studies (Easterby-Smith et al., 2002), and often referred to as a ‘sample survey,’ because sample elements are typically selected to be representative of some known universe (Churchill, 1995). The ideal sampling procedure is random sampling of a wide population. However, this luxury is often not plausible, and the researcher may then need other sampling techniques, and often non-probability techniques, to do the job. This is the case in this study, as is discussed in more detail in section 3.4.
A narrow target population, and a sampling approach based on convenience and judgment, makes generalisation of the study difficult, if not impossible. The results are, however, representative of the population. It is therefore hard to argue this study is purely causal or descriptive by design, although a rigorous approach to those designs was followed. This study is more exploratory by nature than causal or descriptive, according to the literature about theories, models and concepts, which is rather ambiguous. It is therefore argued this is an exploratory study, the initial step in a set of broader future studies, and to a great extent follows the research process outlined by Churchill (1995, p. 69) (figure 3.1.5).

The first chapter of this thesis sets the stage and formulates the problem. The literature review in Chapter 2 and the first section of this chapter helped to determine the research design. The remainder of this chapter focuses on the data collection and sample method. Chapter 4 examines the results, analysing and interpreting the data. The main techniques for analysis were factor analysis and multivariate analysis, described in more detail in Chapter 4.

The survey method is used as the quantitative approach in this study. It is a mixture of exploratory, causal, and descriptive design, although the purpose is regarded as
exploratory by nature. The remainder of this chapter is dedicated to the survey method.

3.1.6 The methodological approach

This section focuses on methodology in a wider context than usually discussed in a DBA thesis. It represents the background discussion to previous and later sections of this thesis, and argues from a methodological perspective for the research approach. The paradigm of choice is realism, based on positivism, and is exploratory in nature. The theoretical perspective is multi-theoretical with the focus on agency theory, stewardship theory, resource dependency theory, and stakeholder theory. The model is based on concepts related to the board of directors and organisational performance. The former was conceptualised from three different perspectives: composition, roles, and process of the board. Composition was based on a structural view of the board, while roles and process were described from a process-based view. There were four main variables: one dependent variable for organisational performance, and three independent variables for the board of directors. The research primarily uses the survey method, although with the aid of qualitative techniques to increase the validity of the results.
3.2 Operationalisation

*If there is some precision, there is some science.*

Herbert Spencer (1820 - 1903)

Construct validity is discussed in this section. It concerns the operationalisation of concepts and the issue of how to quantify or measure them. It is about precision, or rather more about limiting error (Hair et al., 2003). This is a process mostly related to positivism, often called instrumentalism (Popper, 1994). The purpose is to decide how to measure the concepts under investigation (Churchill, 1991). It is a process of finding or designing appropriate instruments to measure quantitatively the reality or facts researched (Comte, 1853). The process is necessary to make the survey instrument.

*Figure 3.2.1: The outline of the operationalisation section.*

This section presents a general discussion of the approach to operationalisation used in this thesis (figure 3.2.1). Operationalisation of the concepts related to the board of directors is discussed next, and then organisational performance. The section is concluded with a discussion of construct validity.
3.2.1 Approach to operationalisation

Popper (2002, p. 82) states the process of defining theoretical concepts in terms of measuring operations is often taken as a ‘given.’ Operationalisation is a concept most often used in association with positivism (Popper, 1994). As Popper (2002, p. 82) notes, no ‘general theory’ of measurement exists which describes the function of operationalisation for testing scientific theory. However, the process can be described in a few simple steps, compiled here from various sources (Churchill, 1991; Hair et al., 2006; Easterby-Smith et al., 2002, Wacker, 2004). These are:

- Identify predictors in the literature.
- Evaluate the importance/feasibility of predictors.
- Identify possible instruments capturing measuring predictors/constructs.
- Modify instrument if necessary.
- Alternatively: Develop new instrument following standard procedures.

The concepts suitable as predictors were identified in the literature review. The following sections take this discussion a step further, and examine the importance or feasibility of these predictors. The implications of the structural-based view and the process-based view of the board were outlined in previous chapters. However, there is some truth to the claim the process of conceptualisation is not very robust in empirical research (Wacker, 2004). This has been acknowledged as being one of the most critical limitations of corporate governance research (Heuvel et al., 2006). The conceptualisation is a priori to operationalisation (Wacker, 2004). ‘Bad’ formal conceptual definition can cause logical inconsistency and lead to conceptual difficulties such as (a) unclear measures, (b) definitional overlap, and (c) loss of causality (Wacker, 2004, p. 633). It is acknowledged this is important, although the approach adopted in this study is to rely on previous conceptualisation in the literature. A more in-depth examination of conceptualisation is perhaps a topic for future research.

An important part of operationalisation is to identify appropriate instruments to measure the concepts used in the hypothesis. The ideal instrument would need very little modification, have been widely used and tested, and have high internal consistency. A Cronbach alpha above .70 was used as a cutoff which should suffice
for any measurement (Churchill, 1979; Nunnally and Bernstein, 1994; Kline, 1994). The development of a new instrument was beyond the scope of the thesis, and would increase methodological complications. It is very complex and challenging to establish an instrument with enough construct validity to be useful (Cronbach and Meehl, 1955). Basing the questionnaire on previously-used measures can maximize reliability and validity (Churchill, 1991; Hair et al., 2006). Alternatively, if appropriate instruments were not found in corporate governance literature, top management team and leadership literature might also be explored, as boards of directors can fall within the realm of those fields as well (for example Eisenhardt, 1989; Thomas and Ramaswamy, 1996). Although this approach has been criticised on the grounds construct validity may not be transferable between different situations (Peter and Churchill, 1986), it is certainly more rigorous than developing new instruments from scratch.

Special procedures apply when scales are borrowed. Engelland et al. (1999) identify four requirements: (1) domain definitions must be appropriate, (2) experts should be used to improve content validity, (3) scales developed before 1989 should be avoided due to validity and reliability concerns, and (4) scales should only be subject to ‘modest’ refinement. This guideline is followed in this section. Scales that do not report validity and reliability should also be avoided (Churchill and Peter, 1984; Engelland et al., 1999). Most of these requirements were followed, as the domain definition of the top management team and leadership literature were considered to be appropriate. The focus group in Wisconsin 2006 did discuss adaptation of the measure to increase construct validity, and none of the scales was developed before 1989. Furthermore, only ‘modest’ refinements were necessary, and only scales reporting their validity and reliability were used. Adapting scales from other disciplines addresses criticism of previous research on corporate governance about the lack of tested and validated measurement tools (Bøhren and Ødegaard, 2003; Larcker et al., 2004).

The basic research model proposed in Section 2.8 was developed from three different approaches (composition, process, and roles) to measuring the influence of the board, and one to measure performance. As noted in the previous section, there
is some concern associated with this model, as the classification of variables is not based on taxonomy, but rather on unclear typology. It can only be tested by exploratory research design. The concepts in the model are explored in the framework for operationalisation in the remainder of this section.

3.2.2 The Board of directors

The concept of board of directors can be conceptualised and measured from different perspectives. Three different but related perspectives were proposed for conceptualisation and operationalisation of the board: composition, process, and roles. The roles of the board are the main focus of this study, as they have been used widely to conceptualise boards (for example Zahra and Pearce, 1989, Johnson et al., 1996, Heuvel et al., 2006). Composition of the board has been used most frequently for convenience, with references to the structural-based view of the board (Bøhren and Ødegaard, 2003). There has been increased effort in the literature to look at processes of the board, not necessarily related to specific tasks, as in roles of the board (Kiel and Nicholson, 2004, Huse, 2005). It should be noted, however, there is no agreement on definition of the concepts or their measurement (Larcker et al., 2004; Heuvel et al., 2006) as emphasised in the literature review. This implies the task of operationalisation must rely on the subjective judgment of the researcher, and the few instruments validated in the literature.

The following subsections are divided into (1) tasks of the board – monitoring, resource, and advice role, (2) tasks of the board – strategy, (3) power of the board – authority, (4) processes of the board, and (5) composition of the board.

3.2.2.1 Tasks of the board – monitoring, resource, and advice roles

In terms of roles as tasks, boards have been conceptualised widely in the literature, although there is little agreement on either the tasks or the roles, as noted in the literature review. Several authors have discussed tasks of the board in conceptual terms (for example, Zahra and Pearce, 1989; Johnson et al., 1996; Hillman and Dalziel, 2003). There is even less consensus about operationalisation of the roles of the board (Heuvel et al., 2006), as researchers develop measures based on their own interpretation of the literature. Generally measurement of complex concepts is
based on single-item variables (Bøhren and Ødegaard, 2003; Larcker et al., 2004). However, there are some examples of multi-item instruments used to measure roles of the board in terms of tasks (table 3.2.1).

Table 3.2.1: Examples of measures of board roles.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Items</th>
<th>Reliability/alpha</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board involvement</td>
<td>2 factors, 14 items. 7 point Likert scale.</td>
<td>.72-.96</td>
<td>Judge and Zeithaml (1992).</td>
</tr>
<tr>
<td>Strategic involvement</td>
<td>3 factors, 10 items. 5 point scale.</td>
<td>.83-.92</td>
<td>Carpenter and Westphal (2001).</td>
</tr>
<tr>
<td>Roles in SMEs</td>
<td>2 factors, 11 items. 5 point scale.</td>
<td>.78 – .83</td>
<td>Heuvel et al. (2006).</td>
</tr>
<tr>
<td>Board power</td>
<td>1 factor, 15 items. 6 point scale.</td>
<td>.79-.86</td>
<td>Zahra and Pearce (1991).</td>
</tr>
</tbody>
</table>

The operationalisation of Heuvel et al. (2006) was the most recent study found at the time this study was operationalised. Their eleven tasks are based on a series of studies (Zahra and Pearce, 1992; Finkelstein and Hambrick, 1996; Johnson et al., 1996; Hillman et al., 2000; Hillman and Dalziel, 2003). Heuvel et al. (2006) was chosen as a starting point for the operationalisation of roles. The two factors in their study were the ‘control’ role, and ‘service’ role. Furthermore, operationalisation of the ‘monitoring role’ and ‘advice role’ from Carpenter and Westphal (2001) were considered to broaden the measurement, although there was some duplication between the scales. The measurements of Judge and Zeithaml (1992) were also considered, although they did not influence the final design of the instrument. The merged scale was considered to represent, at least partly, the monitoring role, resource role, and the advice role identified in the literature. As there were concerns about misrepresentation of the complexities of the strategic role, it was decided to adapt an instrument from another discipline to measure that role, as discussed in section 3.2.3.2. The items directly emphasising the active strategic role are included in the next subsection. The instrument used in this study consisted of 10 items to measure the monitoring role, resource role, and the advice role, as follows:
5.15 The board determines management’s responsibility.  
5.16 The board monitors top management strategic decision-making.  
5.17 The board formally evaluates the CEO’s performance.  
5.18 The board defers to the CEO’s judgment on final strategic decisions.  
5.19 The board determines salary/compensation of CEO and top management team.  
5.20 The CEO solicits board assistance in the formulation of corporate strategy.  
5.21 Directors are a “sounding board” on strategic issues.  
5.22 The board provides advice and counsel to the CEO on strategic issues.  
5.23 The board builds organisational reputation.  
5.24 The board focuses on networking and maintaining relations with stakeholders of the company.  
5.25 The board provides access to extra resources.

The instrument for measuring the monitoring, resource, and advice roles of the board here, was based on two studies (Heuvel et al., 2006; Carpenter and Westphal, 2001), both of which developed their instruments from several qualitative and empirical studies. By combining them it was possible to include tasks in this study that represent three conceptually different roles of the board.

3.2.3.2 Tasks of the board – Strategic role

Several researchers have discussed the strategic role of the board (Andrews, 1984; Baysinger and Hoskisson, 1989; McNulty and Pettigrew, 1999; Zahra and Pearce, 1989; Daily et al., 2003; Judge and Zeithaml, 1992; Shen, 2003). Most used a single item measure. This study intended to measure the complex concept of strategy, so a search for an appropriate measurement instrument was conducted in other disciplines, as recommended by the focus group in Wisconsin 2006. The search within top management team literature and leadership literature resulted in several possibilities (table 3.2.2).

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13 The numbers refer to the number of the question in the final questionnaire.
Table 3.2.2: Possible measures for the strategic role.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Items</th>
<th>Reliability/alpha</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCEL</td>
<td>8 attributes 16 items. 7 point Likert scale.</td>
<td>.89</td>
<td>Sharma et al. (1990) used by Caruana et al. (1995).</td>
</tr>
<tr>
<td>PILOT</td>
<td>4 factors 60 items. 5 point scale leads to a 1 of 6 classification.</td>
<td>Not given</td>
<td>Prabhu and Robson (2000).</td>
</tr>
<tr>
<td>Leadership</td>
<td>1 factor covering leadership with 5 items. 7 point scale.</td>
<td>.76</td>
<td>Claver et al. (2003).</td>
</tr>
<tr>
<td>Leadership and consistency of purpose</td>
<td>1 factor 1 item at ‘Core concept’ level. 24 potential items at ‘Areas to address’ level.</td>
<td>Not used</td>
<td>EFQM (1999).</td>
</tr>
</tbody>
</table>

Adapted from Tanner (2005).

The Kanji (2002) Leadership Excellence instrument was chosen, as it reflects strategic formulation from the perspective of the strategic planning school. It had been used in other doctoral research at Henley Management College (for example, Tanner, 2005). The instrument adapted from Kanji (2002) has 18 items and six factors. As the instrument was developed for leadership research, four items were dismissed, as they were questions about leadership excellence. Otherwise, there was only need of minor changes in the instrument, substituting the word ‘leader’ for the word ‘board,’ and changing the scale from 10 points to 7 points. These changes are discussed in detail in Section 3.3. The instrument covered items used by other researchers in the field of corporate governance. The adapted instrument was categorised into four factors: organisational values, vision, mission, and strategy.

The instrument used in this study was based on the following items:

5.1 The board develops shared meanings and interpretations of reality.
5.2 The board uses the organisational values to guide decision-making.
5.3 The board puts in place reinforcement systems consistent with organisational values and principles.
5.4 The board creates a compelling vision of the future of the organisation.
5.5 The board communicates the vision effectively.
The board inspires confidence in the vision.
The board identifies the organisation’s purpose.
The board generates commitment among organisational members for the chosen purpose.
The board keeps the mission current.
The board develops policies and strategies consistent with the organisation’s mission, vision, and values.
The board anticipates change.
The board guides change.
The board monitors resources and uses feedback to review strategies.
The board monitors organisational performance and uses feedback to review strategies.

The instrument for measuring the strategic role of the board used in this study was based on understanding a broad measure would give a richer picture of the relationship between boards of directors and organisational performance. The purpose of using a broad measure for the strategy role was to demonstrate greater construct validity in regard to the strategic role, as well as to learn more about this role of the board from an exploratory perspective. The instrument was adapted from Kanji (2002) and Kanji and Sá (2001).

3.2.3.3 Power of the board – Authority

One of the instruments considered as a measure of board roles, was the one used by Zahra and Pearce (1991). This instrument was developed to measure the authority or power of the board, compared to the CEO (Zahra and Pearce, 1991). The instrument is interesting nevertheless, as items on the scale are closely related to items of task measurement. The instrument of Zahra and Pearce (1991) was based on several descriptive studies of the board (e.g. Andrews, 1987; Boulton, 1978; Henke, 1986; Louden, 1975; Mace, 1971; Mintzberg, 1983; Mueller, 1979) and was a viable alternative to measuring roles as tasks. It was decided to include the instrument as a kind of contingency strategy if the roles as tasks measure did not prove valid. This approach was supported by the focus group in Wisconsin 2006. Furthermore, other scales were also adapted from the Zahra and Pearce (1991) study, as discussed below, making potential comparison with the original study easier. The items of the scale are the following:
3.1 How much formal authority or power has the board regarding changing company by-laws.
3.2 How much formal authority or power has the board regarding approving changes in capital structure.
3.3 How much formal authority or power has the board regarding decisions about capital expenditures.
3.4 How much formal authority or power has the board regarding decisions about future divestments.
3.5 How much formal authority or power has the board regarding decisions about future acquisitions.
3.6 How much formal authority or power has the board regarding establishing long-term goals.
3.7 How much formal authority or power has the board regarding policy formation.
3.8 How much formal authority or power has the board regarding planning for top leadership succession.
3.9 How much formal authority or power has the board regarding selecting a new CEO.
3.10 How much formal authority or power has the board regarding evaluating the performance of key executives (other than CEOs).
3.11 How much formal authority or power has the board regarding selection of corporate strategy.
3.12 How much formal authority or power has the board regarding decisions to adopt new technologies.
3.13 How much formal authority or power has the board regarding decisions regarding top executives’ compensation.
3.14 How much formal authority or power has the board regarding decisions regarding charitable contribution.
3.15 How much formal authority or power has the board regarding dealing with stakeholders.

The instrument for measuring the authority of the board compared to the CEO was adapted as a contingency plan and for a wider understanding of the board from an exploratory perspective. The instrument was adapted from Zahra and Pearce (1991).

3.2.3.4 Processes of the board
Different perspectives and approaches have been used for what Zahra and Pearce (1989) called ‘board processes.’ As noted in the literature review, Dulewicz et al. (1995; 1995b) emphasise ‘organising and running the board,’ Nicholson and Kiel (2004) ‘board intellectual capital,’ and Forbes and Milliken (1999) ‘effort norms,’ ‘cognitive conflict,’ and ‘use of knowledge and skills.’ The three models treat what can be described as board ‘processes’ from very different perspectives. If there was little agreement about the roles of the board as tasks, there was even less about
processes, other than specific tasks of the board. This made the process of operationalisation grim, and it was debated whether any effort to operationalise processes, in terms other than ‘tasks,’ should be abandoned. However, it was decided to include some items to measure processes of the board other than tasks to add richness to the study from an exploratory perspective. As the main conceptual and theoretical framework of this study was the intergraded model provided by Zahra and Pearce (1989), an argument could be made to use the framework to guide the operationalisation process. Indeed, Zahra and Pearce (1991) did operationalise some of the concepts they had emphasised in their 1989 literature review. The three instruments adapted for this study were board efficiency (Cronbach alpha of .78), board decision process (Cronbach alpha of .81) and board decision style (Cronbach alpha of .77). The items of the instruments were the following.

**Board efficiency**

2.1 Thoroughness of deliberation.
2.2 Frequency and length of meetings.
2.3 Board’s organisation.
   (The measurement is a seven-point scale from poor to excellent).

**Board decision process**

2.4 Board’s decision process is slow/quick.
2.5 Board’s decision process is uninformed/informed.
2.6 Board’s decision process is impulsive/deliberate.

**Board decision style**

2.7 In dealing with the CEO, the board is regressive/progressive.
2.8 In dealing with the CEO, the board is timid/aggressive.
2.9 In dealing with the CEO, the board is hostile/friendly.
2.10 In dealing with the CEO, the board is discouraging/encouraging.
2.11 In dealing with the CEO, the board is supportive/non-supportive.

Furthermore, as noted in the literature review, there has been increased interest in the information flow to the board (Coffee, 2006). Although item 2.5 in the decision process does address information, it was decided to add another instrument to measure information flow to the board. The instrument chosen, which directly addressed information flow to the board, came from the study of Lervik et al. (2005). The instrument had been used in a series of studies conducted by Huse in
Norway, and consisted of five items constructed as one factor. Although the Cronbach alpha was not given for the scale, it was decided to use it anyway, as the items seemed logical and a good reflection of the discussion of information flow to the board (for example: Drucker, 1974; Coffee, 1977; Coffee, 2006; Jonsson, 2006; Jonsson, 2007). The items in the scale were:

- **2.12** Information flows efficiently in due time to our board members via formal and informal channels.
- **2.13** Our board members carefully scrutinize information prior to meetings.
- **2.14** The board is usually active in finding their own information in addition to the reports from management.
- **2.15** The board is often asking discerning questions in connection to suggestions initiated by management.
- **2.16** The board often asks critical questions regarding information presented by the management.

The instruments used in this study for measuring the processes of the board were based on two studies. Three instruments were adapted from Zahra and Pearce (1991) and one instrument from Lervik et al. (2005). The instruments chosen focused on the efficiency of the board, decision processes, board decision style, and information flow to the board.

### 3.2.3.5 Composition of the board

Several researchers have used composition of the board to measure the implications of the board on organisational performance. Dalton et al., (1998) found 159 studies in a 40-year timeframe. Composition has also been emphasised in studies focusing on the ‘process-based view’ of the board (for example Zahra and Pearce, 1989; Johnson et al., 1996; Forbes and Milliken, 1999; Carpenter and Westphal, 2001). Some indicators for composition are so familiar in corporate governance research they have been dubbed ‘the usual suspects’ (Finkelstein and Mooney, 2003; Huse, 2005). Huse (2005) lists the ‘usual suspects’ as: number of board members, the insider/outsider ratio, CEO duality, and directors’ shareholding. The ratio of minorities, especially women, could also be included, as several authors list the male: female ratio in their discussion of composition (for example, Zahra and Pearce, 1989; Johnson et al., 1996).
The context of this study rules out CEO duality and insider/outsider ratio, as usually described as the ratio between executives and non-executives. However, four classical items were adapted for this study: number of board members, number of women on boards, number of independent directors, and the shareholding of the chairman. The independence of directors was determined according to the Icelandic corporate governance code, indicating an independent director has no financial, family, or business connection to the company.

In short, composition of the board was operationalised in accordance with previous studies, where it is mainly an issue of counting people on the board. Three one-item scales were adapted to ascertain the number of people on the board, number of women on the board, and number of independent directors on the board.

3.2.3 Company performance

Research within the corporate governance field has focused mostly on financial measures based on secondary data for performance, like Tobin’s Q, for example (McConnell and Servaes, 1990; Yermack, 1996; Carter et al., 2003; Bøhren and Ødegaard, 2003). This approach was dismissed for this study, because of the context of the research, and narrow focus of these measures.

Performance is a common dependent variable in research on strategy and structure (Dess and Robinson, 1984). The use of organisational performance raises a number of concerns, such as instability of performance advantage, oversimplification using simple models in a complex world, and retrospect recall (March and Sutton, 1997). Performance is a complex and multidimensional phenomenon (Dess and Robinson, 1984; March and Sutton, 1997). As noted in the literature review, the mix of appropriate performance measures has been found to vary according to industry and size of business (Maltz et al., 2003). Venkatraman and Ramanujam (1986) recognised different measures are required for different studies, and defined three domains: financial performance, financial and operational performance, and organisational effectiveness. Brett (2000) classifies organisational performance from a philosophical perspective: survival performance, excellence performance, and economic return performance. Researchers interested in organisational
performance have taken a broader view of performance measures than done in corporate governance research. For example, Fitzgerald et al. (1991) suggest a measurement framework with ‘results’ and ‘determinants.’ Results include financial performance and competitiveness, while determinants include quality, flexibility, resource utilisation, and innovation. Hart and Banbury (1994) and Kanji (2002) have also developed broad measures for organisational performance. The issue of organisational performance has received much interest from DBA students at Henley Management College, who have used and developed broad measures for measuring organisational performance (for example, Brett, 2000; Lindgren, 2001; Tanner, 2005; Larsen, 2007). Some of the most common instruments for measuring performance are found in table 3.2.3.

The Hart and Banbury (1994) measure was used as a basis for the performance measure, as it has been widely used in research, and applied and developed by DBA students at Henley Management College (Lindgren, 2001; Tanner, 2005). The search continued for a broader measurement of performance, as it was not clear in what way boards of directors influence performance. Tanner (2005) merged three interesting measures for performance (e.g. Hart and Banbury, 1994; Kanji, 2002, Claver et al., 2003) in his study measuring performance of different stakeholders. His approach was largely followed, although a simpler version was constructed.

The instrument for measuring organisational performance, developed by Hart and Banbury (1994) and used by Lindgren (2001) and Tanner (2005), is a five-factor instrument with 13 items. The factors are: current profit, growth/share, future position, quality, and social responsiveness. Kanji’s (2002) measure for performance is one factor with seven items. Furthermore, Claver et al. (2003) use a four-factor measure with 17 items. The factors are: customer satisfaction, employee satisfaction, social impact, and TQM performance. Tanner (2005) used all three measures, although with some refinements.
Table 3.2.3: Instruments for measuring performance.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Items</th>
<th>Reliability/ alpha</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial measures (for example, Profitability, Shareprice, Tobins Q, ROI, ROE, etc.)</td>
<td>Ratio of total income to total assets</td>
<td>Not applicable (not self-reported)</td>
<td>McConnell and Servaes, 1990; Yermack, 1996; Carter et al., 2003; Bøhren and Ødegaard, 2003</td>
</tr>
<tr>
<td>Performance</td>
<td>5 factors 13 items 7 point scale</td>
<td>.69-.75</td>
<td>Hart and Banbury (1994) as used by Lindgren (2001)</td>
</tr>
<tr>
<td>Firm performance</td>
<td>Subjective and objective data taken at various levels of the organisation</td>
<td>.84-.87</td>
<td>Dess and Robinson (1984)</td>
</tr>
<tr>
<td>Business excellence</td>
<td>1 factor 7 items 10 point scale</td>
<td>.89</td>
<td>Kanji (2002)</td>
</tr>
<tr>
<td>Strategic response capability</td>
<td>2 factor, 17 items 7 point scale</td>
<td>.82-.89</td>
<td>Bettis and Hitt (1995) as used by Lindgren (2001)</td>
</tr>
<tr>
<td>Performance</td>
<td>Performance by stakeholder</td>
<td>.802-.91</td>
<td>Hart and Banbury (1994); Kanji (2002); Claver, Tari et al. (2003) as used by Tanner (2005)</td>
</tr>
</tbody>
</table>

Adapted from Tanner (2005)

The requirement for the performance measure for this study, other than using tested instruments, was that respondents could answer the questions. In the focus group in Wisconsin 2006, a concern was raised whether directors could answer questions on employee and customer satisfaction, especially considering companies in the sample were SMEs, which might not measure such things on a regular basis. Therefore, customer and employee satisfaction were not emphasised as in the
instruments of Claver et al. (2003) and Tanner (2005). They are partly reflected in the instrument of Hart and Banbury (1994), although not emphasised as special factors. As Claver et al. (2003) focus on TQM, which is outside the scope of this research, the only items adapted from that instrument were items regarding social responsibility. Tanner (2005) expanded the focus on social responsibility to a factor of 8 items, which was adapted in this study. Social responsibility was emphasised to reflect stakeholder theory. Furthermore, to reflect on innovation, four items were adapted from Bettis and Hitt (1995). Lindgren (2001) and Tanner (2005) used this measure in a different fashion to reflect strategic responsiveness. It was estimated the four items from Bettis and Hitt (1995) could add dimension to the performance measure. And last, items duplicated in different instruments were deleted. The completed operationalisation of organisational performance is reflected in an instrument of 27 items based on Hart and Banbury (1994), Kanji (2002), Claver, Tari et al. (2003), Bettis and Hitt (1995) and Tanner (2005).

The instrument used in this study included the following items:

4.1 Develops policies to reduce and prevent health and safety risks.
4.2 Develops policies to protect the environment.
4.3 Is actively involved in the local community.
4.4 Is well respected by the local community.
4.5 Is environmentally responsible.
4.6 Develops the local economy.
4.7 Follows sustainability (corporate and social responsibility) policies.
4.8 Has a diverse workforce.
4.9 Has a strong financial performance.
4.10 Achieves its goals.
4.11 Has achieved the desired service and/or product outcomes.
4.12 Has a high competitive position.
4.13 Has high profitability.
4.14 Has a positive cash flow.
4.15 Will seek to diversify in the marketplace.
4.16 Will change its existing products and services.
4.17 Will introduce new services and/or products next year.
4.18 Will have an active services and/or product development programme.
4.20 Has a positive sales growth.
4.21 Has an increasing market share.
4.22 Has a high standard of quality in service and/or products.
4.23 Has high employee satisfaction.
4.24 Sense potential threats (legislative, political, technological, competitive, customer demands, etc.)
4.25 Conceptualise a response and make decisions and plans to meet threats.
4.26 Reconfigure resources and implement necessary changes to meet threats.
4.27 Sense new business or technological opportunities.

The instrument constructed to measure organisational performance used in this study was based on the position a broad measure would give a richer picture of the relationship between boards of directors and organisational performance. The instrument was based on the work of several researchers (Hart and Banbury, 1994; Kanji, 2002; Claver et al., 2003; Bettis and Hitt, 1995; Tanner, 2005).

3.2.4 Construct validity
The operationalisation process has in essence been about the construct validity of the research. The board of directors and organisational performance were operationalised from concepts and instruments found in the literature. The implications of the board of directors were measured from three different perspectives: (1) Roles as tasks (the monitoring role, resource role, and the advisory role) were measured using instruments developed by Heuvel et al. (2006) and Carpenter and Westphal (2001). Furthermore, an instrument for the strategic role was adapted from Kanji (2002). As an alternative, to measure the role of the board an instrument was adapted from Zahra and Pearce (1991). The instrument measured authority of the board compared to authority of the CEO. (2) The processes of the board were operationalised with instruments from Zahra and Pearce (1991) and Johannisson and Huse (2000). The concepts were: board efficiency, board decision process, board decision style, and information flow to the board. (3) The concept of composition was operationalised with board size, women on boards, and independence of directors, all single-item measures adapted from various sources (e.g. Zahra and Pearce, 1989; Johnson et al., 1996; Forbes and Milliken, 1999; Carpenter and Westphal, 2001). Organisational performance, on the other hand, was operationalised by merging several instruments, following Tanner (2005) to a large extent. The instruments used to operationalise organisational performance were from Hart and Banbury (1994), Kanji (2002), Claver et al. (2003) and Bettis and Hitt (1995). By adapting instruments developed and validated by other researchers, and published in refereed journals, the construct validity of the survey tool was dramatically increased, as opposed to constructing an original instrument.
3.3 Survey instrument

*It is better to know some of the questions than all of the answers.*

James Thurber (1894 – 1961)

This section discusses the questionnaire, or the survey instruments. It is about deciding questions to ask and the presentation of those questions. A questionnaire is a predetermined set of questions designed to capture data from respondents (Hair et al., 2003). It is a scientifically developed instrument to measure key characteristics under investigation (Hair et al., 2003).

There are several approaches to designing a questionnaire (for example, Leedy, 1989; Bell, 1993; Huber and Van de Ven, 1995; Bryman and Cramer, 1997). Churchill’s (1995, p. 360) nine-step procedure is one of the most recommended (figure 3.3.1). This section uses Churchill’s structure, keeping in mind the design of a questionnaire is still more of an art than a science, and guidelines should not be taken literally (Churchill, 1995, p. 359).

Figure 3.3.1: The outline of the survey method section.

Adapted from Churchill (1995, p. 360).
3.3.1 Step 1: Specify what information will be sought
Deciding what information will be sought is easy if researchers have been meticulous and precise early in the research process (Churchill, 1995). This means the right concepts have been established, and the process of operationalisation has chosen proper instrument to measure those concepts. This preparation makes information-gathering fairly simple.

This study is about the relationship between boards of directors and organisational performance. The concept of performance, the dependent variable of the study, was operationalised using an instrument based on Hart and Banbury (1994), Kanji (2002) and Claver et al. (2003), in a fashion similar to Lindgren (2001), and Tanner (2005). A broad measure of performance was chosen, to explore which elements of organisational performance relate to boards. The result of this decision was a 27-item performance measure.

The board of directors was conceptualised from three perspectives: roles, composition, and process. The role of the board was conceptualised from two different perspectives: as tasks, and in terms of authority. The latter was proposed as a contingency plan if boards as tasks proved problematic or gave no results. The instrument to operationalise authority was adapted from Zahra and Pearce (1991). Conceptualising and operationalising the role of the board as tasks was more difficult. Most of the items were adapted from Heuvel et al. (2006) and Westphal and Carpenter (2001). The strategy section, however, was expanded considerably from most previous research on corporate governance, by borrowing an instrument from the leadership literature adapted from Kanji (2002). The result of this approach was a 15-item instrument for measuring the authority of the board, and a 25-item instrument for measuring tasks of the board, including strategy. There were four process features. Three (effectiveness, style, and decision) were adapted from Zahra and Pearce (1991), while the fourth, the concept of information, was adapted from Lervik et al. (2005). Composition was based on single-item instruments been used in several other studies (Zahra and Pearce, 1991; Carpenter and Westphal, 2001). The five main concepts operationalised were the following:
1. Board roles as tasks
   - Strategic role
   - Monitoring role
   - Resource role
   - Advice role
2. Board role as authority
3. Processes
4. Composition
5. Performance.

Other information was also gathered, although not considered part of this study, to conduct future research. This was done because of the difficulty gaining access to boards (Stiles and Taylor, 2001), and an opportunity to gather as much information as possible, without undermining the main research purpose. Only a few items were added, as the length of the questionnaire was an important issue and limited what information could be sought.

3.3.2 Step 2: Type of questionnaire and method of administration

While the first step in Churchill’s questionnaire process concerns what information is to be sought, the second step is about how it will be gathered. Churchill and Iacobucci (2002) describe this step as a question of structure and disguise on the one hand, and how it is to be administered on the other hand. The two hands are interrelated, as decisions about one approach guide the other.

This research follows in the footsteps of prior research in this field, taking notice of the implications of doing research on the black box of boards of directors (Stiles and Taylor, 2001). Given the time constraints and level of secrecy at the top management level, a structured and undisguised questionnaire was designed. This a common recommendation in the research methodology literature for these situations (Bailey, 1982; Leedy, 1993) It is also the common approach in the field, as Gabrielsson and Huse (2004) note in their overview of empirical articles where primary data had been collected. As a result, the goal was to make the questionnaire as simple as possible to answer, following the advice of Hair et al., (2003). A ‘tick-box’ format of closed questions was used where possible. This is in line with other researchers (Dulewicz et al., 1995; Gabrielsson and Huse, 2004).
Several approaches were considered regarding administration of the questionnaire. Given the structured form of a questionnaire had been chosen due to time limitations and the cost of research, whether it should better be sent by mail or by e-mail was the next decision. Several factors influenced the decision: structure, response rate, sample size, type of answers, time and cost. The structure of the questionnaire suited both methods of distribution, but was especially well suited for e-mail. Obtaining the maximum response rate was critical, and a focus group discussion of both methods was not conclusive. However, in light of the popularity of the internet and e-office in Iceland, the response rate might be expected to be higher using e-mail than regular mail. The size of the sample was also a major concern. The databases did not have a very comprehensive record of e-mails of CEOs and chairmen. On the other hand, company e-mail addresses were available. Some CEO e-mail addresses could be gathered from company websites, but very few gave e-mail addresses for chairmen. There was no guarantee any questionnaires would reach CEOs and chairmen through regular mail addressed to the companies. It was not clear whether a larger sample rate via regular mail would lead to more responses, although this route could certainly lead to fewer responses. Some consideration was given in the focus group as to whether the type of response would differ in an e-mail survey from responses to a mail survey. Some speculation arose as to whether more thought would be given to a mail survey than an e-mail survey. This point was debated, and it was argued general mail survey fatigue, and rush to get them “off the desk as soon as possible,” seriously undermined any advantage of a mail survey. Respondent time and survey costs turned out to be the deciding factors. Calculating all the costs of producing and distributing the surveys revealed in the end, the costs of a mail survey would be lower. On the other hand, the time saved by using an e-mail survey outweighed the cost.

In conclusion, the e-mail approach was considered much better, as the researcher had some understanding of the process and the technology of website surveys. The software used was Outcome. Most of the work of typing the survey and administering the responses was outsourced to a research assistant. One of the issues of an e-mail survey was accountability of answers. The original idea was to send each respondent a keyword to account for every answer directly. Problems
with finding e-mail addresses for chairmen changed this plan. In an effort to obtain responses from chairmen, the CEOs were asked to forward the survey to them. However, it was subsequently decided a more simple solution would be to ask the respondents to name their company, emphasising the respondents would never be directly linked to any other answers. Furthermore, it was stressed if respondents felt uncomfortable using the name of their company, the name could be omitted. In an effort to increase respondents’ attention, they were also mailed a postcard about the survey, and provided a link to the survey. In short, the survey was sent out as an electronic survey via e-mail to the CEOs of the companies in the sample.

3.3.3 Step 3: Determine content of individual questions

In Churchill’s guideline, the first and second steps are about ‘what’ information is to be sought and ‘how’ to do so. The third step is to determine the content of the questions. In other words, to dig deeper into ‘what’ information is needed and ‘how’ that information will be sought. The first two steps largely determine the third step (Churchill, 1995).

The importance of using tested instruments guided this research, as some criticism of previous work in the field of corporate governance had been levelled on this account (Bohren and Ødegaard, 2003; Larcker et al., 2004; Heuvel et al., 2006). Established instruments to a large extent determine the content of individual questions. The principle was to follow the original instruments as closely as possible to ensure construct validity, so the process of determining the content of individual questions was facilitated. The changes to some of the wording are discussed in step five.

Churchill (1995, pp.363-374) discusses four questions in this step: Is the question necessary? Are several questions needed instead of one? Do respondents have the necessary information? Will respondents give the information? The answer to the first question was addressed in the previous section. The instruments chosen were considered the best choices available to measure the concepts, which the literature suggested as viable, to measure the two main variables of the study: the board of directors and organisational performance. Other choices of concepts or instruments
would have resulted in different questions. The principle was to stick to the original instruments, although it could be argued some of the questions could be better constructed. The answer is therefore ‘yes,’ the questions were necessary because they were part of the adapted instruments.

The second question asks whether several questions are needed instead of one. The principle advantage of tested instruments is they are suited to measure more complicated concepts (Hair et al., 2006). However, it is important to examine how many items should be in a scale. There is a tendency toward higher reliability and lower measurement error when the number of items is increased (Churchill, 1979). This is not a very strong relationship, and the greatest differences appear in scales between two and three items, and those with more than three. Instruments with more than ten items tend have very high coefficients (Peterson, 1994; Foreman and Money, 2004). The issue is if the coefficient is higher than .9 it might indicate redundancy between items in the scale (Boyle, 1991). In other words, some items measure the same thing and therefore could be reduced. Studies did not report on the impact of individual items, and therefore it was impossible to determine which items should be deleted without actual testing. To answer Churchill’s question, it was decided to stick to the number of items suggested in the original instrument if they applied to the research.

The third question, whether respondents had the necessary information, is important. Both the literature and previous research suggest the best informants of board processes are the CEO and directors of the board (Zahra and Pearce, 1989; Stiles and Taylor, 2001; Westphal and Carpenter, 2001; Heuvel et al., 2006). The instruments and questions were adapted with that in mind, so questions could be easily answered, meaning respondents could answer from the top of their head, and would not need to find information in files. In designing the questionnaire, it was estimated if both the CEO and chairman of each company answered the questionnaire, it would decrease the response bias of having one single informant. The revision process tested whether the respondent had the information to answer the question, and it was confirmed respondents should be able to answer all the questions.
The last question, whether respondents were willing to answer the questions, addresses one of the main issues of this research. As noted, access was a problem, and the board was considered a black box about which it is hard to get information (Stiles and Taylor, 2001). Therefore, it was vital to check whether any questions might be considered too delicate for the CEO and chairman to answer. The conclusion of an analysing the questions was non-responses would not present a problem. This was confirmed in the revision process. The only concern was whether some would think disclosing turnover to be an issue. As it was considered a delicate matter, the company turnover question was put at the end of the questionnaire (Churchill, 1995). The answer to the question of whether respondents were willing to answer the questions is therefore positive.

In short, it was not necessary to change the content of individual questions at this point, because they had been adapted in the operationalisation process from validated instruments. The next step in the process was to consider the responses to the questions.

3.3.4 Step 4: Determine form of response to each question

The form of response was a choice between open-ended questions or fixed-alternatives (Churchill, 1991). Fixed alternatives could be, for example, dichotomy, a multichotomy, or a scale. The main principle in designing this questionnaire was to follow the format proposed in the original instrument, and to ensure consistency (Hair et al., 2003). In the case of conflict between principles, the simplicity and consistency principles were weighted more heavily than retaining the original question format, as long as it was theoretically acceptable to change the form of the question.

The questions at the beginning and end of the questionnaire about composition of the board and organisational context, were open questions, as in the original instruments (Zahra and Pearce, 1991; Carpenter and Westphal, 2001; Lervik et al., 2005). All other questions were answered on a seven-point scale, which is a common method used for consistency in management studies (for example
Lindgren, 2001; Brett, 2000; Tanner 2005). This did not decrease validity, as Peterson (1994) notes there is no significant difference between the 5-point and the 7-point Likert scale. The process part, adapted from Zahra and Pearce (1991), was changed from 5 to 7 points. Furthermore, the answer form for authority (Zahra and Pearce, 1991) was changed from a 6-point scale to 7-point scale. The scale for the strategic role (Kanji, 2002) was originally a 10-point scale. Tanner (2005) modified it to a 7-point scale also used in this study.

Another issue about the form of answers is reverse scales. Opinion on reverse scales is divided in methodology literature (Churchill and Peter, 1984). Tanner (2005), for example, decided to avoid reverse scales in his questionnaire. The original instruments used in this thesis did not report the use of any reverse scales. A closer look at Zahra and Pearce (1991) scales for decision and style showed one item in each of the scales might be based on a reverse scales. However, it was not discussed in their paper (Zahra and Pearce, 1991) and so it was decided to retain it in the original version, and deal with it at the stage of analysis.

The result of this step in the survey design process was the answer format was fairly consistent with the original instruments. However, some of the scales from the original instruments were modified for the purpose of consistency and ease of use for respondents.

3.3.5 Step 5: Determine wording of each question
The fifth step of questionnaire design focuses on phrasing each question (Churchill, 1995). As noted, the questionnaire was based on verified instruments with predetermined questions, and the goal was to change those instruments as little as possible. The wording was pre-tested and the results of that process are discussed in the last step. Two issues need to be discussed as part of this step. One is changing the wording to fit the survey to the purpose of this study, and the other is the issue of translation, as the survey was carried out in Iceland where English is a second language.
Two instruments needed revision with regard to wording of questions. One was the adapted instrument for the strategy role (Kanji, 2002), which was originally directed toward leaders of companies. The change was minimal, as the only word that did not fit this research was the word ‘leader,’ which was substituted by the word ‘board.’ The argument for so doing was the board can be considered part of the top management team and having leadership role (Eisenhardt, 1989; Thomas and Ramaswamy, 1996). Furthermore, this was the conclusion of the focus group in Wisconsin 2006. The other instrument needing revision was the measurement for authority (Zahra and Pearce, 1991). The problem with this instrument was discussed in the last section on operationalisation, and was to simplify the use of the instrument and ask CEOs and chairmen the same question. This meant the phrase ‘Compared to the CEO’ needed to be added in the introduction to this section of questions. The reviewers of the questionnaire saw no confusion with this wording. As is discussed later, the use of ‘formal authority’ from the original instrument was questioned. The revision of the wording of the instruments was, therefore, considered minor.

A bigger issue was the question of language. Two options were considered: either translate the questions into Icelandic, or leave them in English. The problem with the first choice was the danger of ‘lost in translation’ error. This would need to be addressed by the process of rigorous translation, forwards and backwards, with different translators. The problem with English was it was impossible to know whether respondents would truly understand the questions, although it may be argued respondents should be more or less fluent. This dilemma was solved in the focus group in Wisconsin 2006, as a third option emerged, to use both languages, with English as the primary language and Icelandic secondary. This solved the potential problem of ‘lost in translation,’ and there was no need for reverse translation. The comparability of the wording in both languages would be checked at the revision stage.

The principle of keeping the original instruments as intact as possible was supported in this step of the survey design, as there were only minor changes made.
to the wording of questions, and the original language was retained, followed by translation into Icelandic.

3.3.6 Step 6: Determine the sequence of questions
The sequence of questions was not built on any hard-and-fast principles, but rather rules-of-thumb for guidance (Churchill, 1995). Some of those rules are (a) use simple, interesting opening questions, (b) use a funnel approach, (c) design branching questions with care, (d) ask for classification information last, and (e) place difficult or sensitive questions late in the questionnaire (Churchill, 1995). These rules-of-thumb guided this survey design.

The first section of the questionnaire consisted of simple questions on the composition of the board easy enough for everyone to answer and at the same time emphasising the focus and the purpose of the study. The funnel approach was also considered, meaning to start with broad questions and then go into more detailed sections as constructed in the instruments. However, this questionnaire was organised into sections addressing different issues and concepts. There were no branching questions in the study so the funnel approach was not applied. The classification questions and sensitive questions about turnover were kept until the end of the questionnaire, as proposed by Churchill (1995).

The rules-of-thumb Churchill (1995) proposed were used to determine the sequence of questions in this survey design. There were not many problems in the process as it was fairly logical.

3.3.7 Step 7: Determine physical characteristics of questionnaire
The physical characteristics of the questionnaire were important, as it was an electronic survey linked to e-mail, rather than a paper survey. The decision to do so was discussed in some detail in step two of the survey design process. Questionnaires are increasingly sent out in this format and there are cases of doctoral researchers using this approach (for example, Bowd, 2002). The format and appearance was identical to a paper survey, and respondents were asked to answer the whole questionnaire before submitting it. The format and structure of
questionnaires used by Brett (2000), Lindgren (2001), Bowd (2002) and Tanner (2005) were followed to a large extent.

Several steps were taken to increase the response rate. First, it was emphasised in the e-mail sent to the participants, as well as in the follow-up postcard, the research was done (a) in association with Henley Management College, (b) in partnership with the University of Iceland and Copenhagen Business School, and (c) was sponsored by the Icelandic Stock Exchange and the Icelandic Research Fund. Secondly, it was emphasised in the text the survey was anonymous, and was so guaranteed by the researcher. Thirdly, the first e-mail was followed up with a physical postcard and a second e-mail, further emphasising the importance of the research for Icelandic business. Fourthly, the respondents were promised a short report on the results of the study.

The initial e-mail sent was designed to be as brief as possible, emphasising the institutions behind the study and what it was about. A link led the respondent to the survey, where a more detailed cover letter and instructions in Icelandic on how to respond to the survey was provided (see appendices). The cover letter was designed in a simple format to address the most important questions: For whom? About what? Time? Why in English and Icelandic? Security? How to answer? The postcard, sent by regular mail to the survey companies and addressed to the respondents, had almost the same text as the initial e-mail and cover letter. The second e-mail focused on the importance of the work and how many answers were needed to make the survey valid. Furthermore, additional information was provided about the researcher, as it was expected some respondents would recognise his name from various publications. It turned out this second e-mail made all the difference.

The questionnaire was administered as an electronic mail survey. The respondents were notified with e-mails and a postcard. Otherwise, the characteristics were similar to other paper questionnaires.
3.3.8 Steps 8 and 9: Pre-test questionnaire and revise if necessary

Pre-testing a questionnaire is a real test of how it performs under actual conditions of data collection (Churchill, 1995). The problem is, no standard approach exists for pre-testing questionnaires (Dillman, 1978; Brett, 2000). Churchill (1995) notes the pre-test is done to assess the questions, and the sequence of questions. There is also an argument for using the pre-test to test the scales (Brett, 2000). However, this was not considered a viable approach here, as it would require a large number of respondents who would be eliminated from the whole sample by pre-testing, and there was already a problem of low response rate in the area of corporate governance (Forbes and Milliken, 2003).

The approach taken in this research was to ask five hand-picked individuals to review and critique the questionnaire, as well as to answer the questions. They were chosen for their different background in research, and experience on boards. The five persons asked to do this were the following:

1. Guðmundur Magnússon – professor of economics and former dean of the University of Iceland. He has had several positions on boards and committees.
2. Benedikt Jóhannesson – doctor in mathematics and CEO of a survey and data analysis company. He is one of the most experienced directors in Iceland, as he has chaired boards of some of the biggest companies in the country.
3. Sigurður Jóhannesson – doctor of economics and a researcher for the Economic Institute of Iceland. He is a chairman of one board and a respected researcher in Iceland.
4. Eggert Claessen – a DBA student at Henley Management College and a serial entrepreneur. He has been a chairman for several small and medium-sized companies.
5. Magnús Guðfinnsson – MSc. in management and a middle manager at Siminn – an Icelandic telephone company.

The reviewers were asked to give feedback on the following issues in particular:

1. Is the English version of the instructions and the questions clear?
2. Is the Icelandic version of the instructions and the questions clear?
3. Is the Icelandic version a good translation of the English version?
4. The sample is Icelandic companies. Is it best to send:
   a. A version with English as the main language and Icelandic translation following.
   b. A version in English only with some difficult words translated into Icelandic.
   c. A version in Icelandic with an English translation.
   d. A version only in Icelandic

5. Can you answer all the questions without any problems?
6. Are there questions which you think respondents would not like to answer?
7. Is the questionnaire too long (considering it takes 30 minutes to answer it)?

Feedback results showed language was not a big issue, although they advised it would probably be best to send it in both languages as evidence of rigour. Therefore, the questionnaire was sent out with the English version first, and the translation into Icelandic following (see appendix). All respondents thought the English version was clear, and the Icelandic version a good translation of the former. One reviewer commented the Icelandic version followed the English version too closely, making the translation more mechanical than fluent. There were some comments on certain words which could be translated differently, or a clearer definition needed. The Icelandic version of items: 1.6, 3.16 and 4.6 were improved and double-checked with the respondents. All respondents noted they could answer the questions without any problems, and they did not think others would have difficulty answering them. Furthermore, they thought the questionnaire was not too long, although one commented it should not be any longer. One section, requesting additional information not to be used in this thesis, was omitted to make the questionnaire even shorter. Therefore, the final version consisted of approximately one hundred items. Pre-testing of the questionnaire showed little revision was required. Some words were changed, and one section omitted to shorten response time. The final version was nearly identical to the test version.

3.3.9 Internal validity

Nine steps adopted from Churchill (1995) were used to design the questionnaire. The aim of these steps is to increase internal validity of the study. In the first step, the information sought was discussed as a continuation of the operationalisation process. In the second step, the type of questionnaire was chosen to be an electronic survey, and the administration of the survey was outlined. In the third step, it was
emphasised the content of individual questions closely followed the original instruments. In the fourth step, the format of the responses was made uniform using a seven-point scale, as the goal was consistency throughout the questionnaire. The fifth step emphasises wording of each question should be changed as little as possible from the original instrument. Some minor changes were necessary here to adapt the questions to boards. In the sixth step, the sequence of questions was based on the advice of Churchill (1995). In the seventh step, the physical characteristics were discussed in terms of an electronic questionnaire, and what was done to secure a fair response rate. The last two steps were merged into one revision step, and that process showed there was need only for minor changes in the questionnaire. The process of designing the survey turned out to be surprisingly smooth.

The next section focuses on the data gathering approach and the sampling procedures. Some of the issues in previous sections are discussed in more detail.
3.4 Sampling and data gathering method

Of the more highly educated sections of the community, the happiest in the present day are the men of science. Many of the most eminent of them are emotionally simple, and obtain from the work a satisfaction so profound that they can derive pleasure from eating and even marrying.

Bertrand Russell (1872 – 1970)

To make such claims about a population as does Russell above, a researcher needs to be sure he has collected enough data to prove it. Usually sample data suffices, rather than collecting data from the whole population. The purpose of this section is to discuss the sampling procedure.

A sampling procedure is a method for collecting information from part of a larger group, to infer something about that larger group, or population. This is different from a census, where information is sought from all members of the population (Churchill, 1995). For our purposes, a census would be too costly, if it were possible at all. Churchill (1995) recommends six steps in the sampling procedure (figure 3.4.1).

Figure 3.4.1: The outline of the sampling procedure.

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| 3.4.1. Define the population       |
| 3.4.2. Identify the sampling frame |
| 3.4.3. Select a sampling procedure |
| 3.4.4. Determine the sample size   |
| 3.4.5. Select the sample elements  |
| 3.4.6. Collect the data            |

Adapted from Churchill (1995, p. 536).
3.4.1 Step 1: Define the population
The term ‘population’ can refer not only to people, but also to companies, institutions and even inanimate objects such as production parts (Churchill, 1995). Defining a population can be more complicated than often thought. Churchill (1995, p. 535) defines population as the totality of cases that conform to some designated specifications, and the specifications define the elements that belong to the target group and those that are to be excluded. Leedy (1993) calls this population ‘research frame population,’ and Churchill (1995) calls it ‘target population.’ In effect, the target population is a smaller group than the whole population. This is important because it is relevant to what is possible to generalise from a study.

The problem formulation of this thesis focuses on boards of directors and performance of organisations. This implies the target population is companies with boards of directors that have some kind of performance measure, which would include a vast amount of companies worldwide. Differences within that population are also so wide, any generalisation about the whole population from a small sample would be far-fetched, to say at least. Churchill’s (1995) ‘designated specification’ is up for interpretation. The rule-of-thumb Churchill (1995, p. 537) emphasises is the higher the incidence, the easier and less costly it is to define the sample, where ‘incidence’ refers to the percent of the population that qualifies for inclusion. The position taken in this research was practical, and on that basis, it is considered an exploratory study. Instead of a wide definition of population, it was considerably narrowed to SMEs in Iceland. The primary reason was the issue of access to boards (Stiles and Taylor, 2001). The researcher estimated he would have some leverage to motivate respondents in this market area. Furthermore, data collection in one area would be less costly and time-consuming than casting a wider net. The third argument was problem formulation only required the claim to be falsified in a certain area to be falsified in general. Therefore, this study generalises only about SMEs in Iceland, the target population. However, it will be argued some inferences can be drawn from the sample to a wider population, which may be explored by future research.
If the argument for carrying out the survey in Iceland was practical, the focus on SMEs is both theoretical and practical. Practical because there simply are not enough big Icelandic companies to form the basis for statistical analysis. A census would have been possible, although problematic, as the problem of access would become an issue (Stiles and Taylor, 2001). It was theoretical, as was noted in Chapter 2, because boards are more likely to be active in small organisations than big organisations. The standard definition of the European Union is SMEs are companies with more than ten employees and less than 250 employees. Other researchers have used a similar definition (Wiklund and Shephard, 2003). Information provided by Statistic Iceland indicates the target population is 2,033 or more companies.

However, the unit of analysis is not the companies per se, but the boards of directors within those companies. The informants in previous corporate governance studies have primarily been the CEOs, chairmen, and other directors of boards (for example, Zahra and Pearce, 1991; Forbes and Milliken, 1999; Stiles and Taylor, 2001; Westphal and Carpenter, 2001; Heuvel et al., 2006). Only relatively few studies have addressed more than one respondent from each board, examples are Zahra and Pearce (1991), and Carpenter and Westphal (2001), who questioned both the CEO and a director on the board. This approach was considered to increase the external validity of the study and offer the possibility of comparing answers from CEOs to those of directors. As already noted, CEOs attend most, if not all, board meetings, although not considered part of the board in Icelandic corporate law. Their obligation is first and foremost to provide information and argument, as they do not have voting power. Therefore, they are a good source for information about the board. The chairman by law cannot be CEO of the company, and is generally considered a non-executive. Therefore, it was concluded access to responses from both the CEO and chairman would add value to the survey.

In short, the defined target population of this research was SMEs in Iceland, where the unit of analysis was the board of directors, and the informants were the CEO and the chairman of the company. This represents relevant preparation for the next step of the sampling procedure.
3.4.2 Step 2: Identify the sampling frame

The sampling frame refers to the selection process of the sample, the telephone book being the classical sampling frame in general surveys (Churchill, 1995). The telephone book is an example of an accessible sampling frame. However, sampling is not as straightforward when informants are not easily accessible. The sampling frame was problematic for this research.

The research planned responses from CEOs and chairmen of SMEs in Iceland, and the questionnaire was to be sent electronically. This implied a list of SMEs in Iceland could be accessed, along with their addresses, the name of the CEO and chairman, and relevant e-mail addresses. The first problem was a list of the target companies, and although it is available at Statistic Iceland, it is costly to access. That database does not specify names or email addresses of the CEO or chairmen. This had been foreseen during the research design. The researcher had been granted access to two different databases, one from Lanstraust, a credit information company, and the other from Talnakonnun, a data analysis company. These two databases contained enough companies from the target population to conduct the survey. The addresses of the companies and most of the names of the CEOs were available in the combined database. There were very few names of chairmen and not many e-mail addresses. Therefore, a considerable time was spent filling in the gaps of the database, measured in days. Information came from company web pages and newspaper stories, but it proved impossible to find the names of all the chairmen and their e-mail addresses. However, the research took a considered risk and requested CEOs to forward the survey message and link to the questionnaire to their chairmen. The sampling frame, therefore, did result in some changes to the research design, and decreased the probability of obtaining the desired number of responses. The unification and refinement process left 560 companies in the database.

In short, the sampling frame was a combination of two databases, which included names of CEOs and their e-mail addresses. However, the sampling frame made it difficult to reach the chairmen. The issue of sampling frames is highly related to the issue of sampling procedures (Churchill, 1995), discussed in the next step.
3.4.3 Step 3: Select sampling procedure

The sampling procedure depends largely on what can be developed from the sampling frame (Churchill, 1995). Churchill (1995, p. 539) classifies sampling designs into non-probability samples and probability samples. Probability samples differ from non-probability samples because probability samples can calculate the likelihood any given population element will be included in the sample, when sample elements are selected objectively by a specific process. Although a sampling framework allowing for a probability sample would be ideal, researchers often use non-probability samples for practical purposes. Bryman and Cramer (1997) note less than 16% of correlation research they surveyed used probability samples. Leedy (1993) argues non-probability samples may be appropriate in some cases.

In this research, the sampling framework determined the sampling procedure. As there was no possibility of choosing a random sample from the whole target population, or using some other probability sample approach, the sampling procedure can only be described as a non-probability sample approach. Churchill (1995) identifies three methods within the non-probability framework: convenience samples, judgment samples, and quota samples. Relying on two databases for the sampling framework makes the sampling procedure either convenient or accidental. The implication is there is no way of knowing whether those included are representative of the target population (Churchill, 1995). It can also be argued the sample framework is a judgment sample, as the databases were chosen because their sample elements are believed to be representative of the target population. A more detailed look at the two databases can provide a better picture of the companies in the sample. The database of Talnakonnnun is part of a larger database that focuses on keeping track of the biggest companies in Iceland. Companies from that database are the largest medium-sized companies in Iceland. The purpose of the Lanstraust database is to keep track of credit information, and consists of a random set of companies. The databases were determined satisfactory because they included the elements of the sample necessary for the research.

The sampling procedure was based on a convenience and judgment sample. The databases used in this survey did not include the whole target population, but were
acceptable because of their sample elements. Non-probability samples are more common in research than probability samples, and a non-probability same was chosen here as no other sampling framework was accessible. This determined the sampling procedure, as it influenced sample size discussed in the next step.

### 3.4.4 Step 4: Determine the sample size

The question of sample size is complicated, as it depends on the type of sample, the statistics in question, the homogeneity of the population, and the time and money available for the study (Churchill, 1995). The limiting factor in this study was the sampling frame, which provided only 560 subjects, and studies in the corporate governance field typically suffer from low response rates (Forbes and Milliken, 2003). Response rates for surveys for ‘executives in the upper echelons’ are in the range of 10-12% (Geletkanycz, 1998; Hambrick et al., 1993; Koch and McGrath, 1996), which would mean 56 - 67 subjects for this research.

There are no absolute numbers in regard to sample size or subjects needed for a study, although there are some guidelines (Hair et al., 2006). The main aim is sufficient size and quality to yield credible results in terms of accuracy and consistency (Hair et al, 2003). Churchill (1995) discusses sample size as a trade-off between sample size on the one hand, and precision and confidence on the other. The sample size grows with an increased need for precision and confidence level. The formula is the following (Churchill, 1995; Hair et al., 2003):

\[
\text{Sample size} = \frac{(\text{degree of confidence} \times \text{variability})}{(\text{desired precision})^2}
\]

The formula for determining sample size calls for three decisions (Hair et al., 2003): (1) the degree of confidence level, (2) the level of precision, and (3) the amount of variability. The 95% confidence level (<.05 error) is usually applied in business studies, but a lower level can also be acceptable (Hair et al., 2003). The level of precision, the maximum acceptable difference between the estimated sample value and true population value, is a judgment call by the researcher (Hair et al., 2003). However, Churchill (1995) points out researchers pay dearly in terms of increased sample size if they want more precision, as increasing the precision by factor c,
increases the sample size by factor $c^2$. Hair et al. (2003) use 1/3 of a unit in their examples as a common measurement for precision. Furthermore, the variability or standard deviation, in other words the homogeneity of the sample, is based on research experience (Hair et al., 2003). When the scale is seven points, as in this study, it is common to use 1.5 for variability, as it divides the range of the scale (7-1 = 6) with 4 ($6/4 = 1.5$), with regards to normal distribution. Using the above estimates, the minimum sample size would need to be $82.6 \left(\frac{(2 \times 1.5)}{.33}\right)^2 = 82.6$.

Another approach to estimate the sample is to use rules-of-thumb provided by Hair et al. (2006) regarding number of observations per item in factor analysis. Hair et al. (2006) suggest five observations per variable or item should be the absolute minimum, and the ratio of ten for every item sufficient. The largest scale in this research, which is a compiled scale for performance, is 27 items. That implies the sample should be larger than 135 observations, and more like 270 observations. Hair et al. (2006) have similar rules-of-thumb for generalisability of the study, the minimum ratio five observations per variable, while 15 - 20 observations per variable would be more desirable. As there are approximately 100 items used in the study (a few more were added for further research), this latter ratio would take the sample to 1,500 – 2,000 observations.

As the study is exploratory in nature, the issue of high end ratio was not a big concern. As evident from different calculations of sample size, the estimated 56-67 observations would be very low for multivariate and factor analysis. More than 83 observations, and up to 135 observations, would increase validity. This led to efforts to increase the response rate.

3.4.5 Step 5: Select the sample elements

The sample elements are the characteristics of the sample the researcher wants to include in the study (Churchill, 1995). The sample elements go hand in hand with the sample procedures, as they determine if and how the researcher can choose or control for the elements. In a convenience sample there is no assurance the sample elements represent the target population. In a judgment sample, the sample is
chosen because it is believed the elements of the sample represent the elements of the target population (Churchill, 1995). In this study, the elements were the following:

- Icelandic companies
- Small and medium-sized companies
- Shareholder companies
- Board of directors with two or more people.

The argument for using Icelandic companies is primarily a question of access to boards. Choosing one country eliminates problems with regulatory differences between countries. Some elements of Icelandic boards, such as the split role of CEO and chairman, and all directors being non-executive, make it possible to limit the structural influences of the board on the study. The pragmatism of the choice of sample is supported by the problem formulation, where falsification of the claim does not require generalisation to all companies. This can be emphasised with the old swan example from Popper (1994): the proposition ‘all swans are white’ can never be proven, although a single black swan can serve to falsify it.

The choice of small and medium-sized companies is related to the location in which the study was carried out, as the number of large companies was insufficient to support a study based on regression analysis. However, there are some interesting elements supposedly related to boards of smaller companies. They are thought to be more active (Heuvel et al., 2006), focus more on the strategic role (Stiles and Taylor, 2001), and they are probably more accessible to a survey, as it is likely the larger the company, the less CEOs spend time on such requests.

The focus on shareholder companies is tied to the problem formulation, as the purpose of the study is to find a positive relationship between boards of directors and organisational performance. It is likely this relationship would be more easily interpreted in terms of shareholder companies, especially regarding financial performance.
Whether other elements of the target population, for example, industry or ownership, are represented accurately in the sample, cannot be determined. Those elements are controlled for by specific questions in the survey.

In short, the sample elements were based on judgment and convenience issues. The main elements can be described in one phrase: Icelandic shareholder SMEs with boards. These elements are the elements of the target population.

**3.4.6 Step 6: Collect the data from the designed elements**

The collection of data entails processing responses to the questionnaire (Churchill, 1995). Churchill (1995) discusses data collection in terms of sampling and non-sampling errors. Sampling errors have been discussed under sampling procedure, and refer to the possibility a sample other than the chosen one within the target population would give different results. In other words, the sample is not representative of the target population. When the sample is based on convenience and judgment, this error can be significant. When the sample is random, the way to minimise sampling error is to enlarge the sample (Churchill, 1995). Non-sampling errors reflect errors, which tend to bias the sample value away from the population parameter. Such errors occur, for example, in conception, logic, misinterpretation of responses, statistics, errors in tabulation or coding, or in reporting the results (Churchill, 1995, p. 608). An overview of non-sampling errors is provided in figure 3.4.2.

*Figure 3.4.2: Overview of non-sampling errors.*

Non-observation errors occur because of non-coverage and non-response. Non-coverage is essentially a sampling frame problem, discussed above. The main issue
is, for pragmatic reasons, the sampling frame directed the sampling procedure to a non-probability approach. The Talıkakonnu database describes its companies as ‘large’ medium-sized companies. Therefore, the bias could be ‘large’ medium-sized companies are over-represented, in contrast to ‘small’ medium-sized companies. The Lantanaust database somewhat decreases this bias, as smaller companies are covered. However, it is difficult to determine how large the bias is. The non-response error is the question of whether the respondents in the sample, representing the elements of the target population, did answer the questionnaire. The possibility of non-response error in regard to chairmen has already been mentioned in the survey design, as the e-mail addresses of the chairmen were not available, and the questionnaire was to be forwarded to them, which increased the possibility of a low response rate. This type of error is discussed in more detail in next chapter, with the results of the data gathering process.

Observation errors are found in data collection (field errors) and processing (office errors) (Churchill, 1995). Field and office errors are also discussed in more detail in the next chapter, as this chapter reflects the situation prior to sending out the questionnaire and the next chapter the results. The electronic design of the questionnaire, however, helped to limit the field and office errors, as most of the process of distributing the questionnaire, and receiving, tabulating, and presenting the data, was automated. It can therefore be argued using electronic methods decreases observation errors.

As emphasised in the survey design, the procedure for data collection was the following:

1) E-mail sent to the e-mail addresses available, which included all of the CEOs and some of the chairmen. In the e-mail, the CEOs were asked to forward the e-mail to the relevant chairman. The e-mail emphasised the purpose of the study, the name of the sponsors and the researcher, and contained a link to the questionnaire. The questionnaire was available on the web, and designed like a normal paper questionnaire. The respondents themselves returned the questionnaire after they had finished answering the questions.
2) A second e-mail was sent out five days after the first one, very similar to the first, to remind participants to respond to the survey.

3) A postcard was mailed roughly a week after the first e-mail, stating the purpose of the research, the name of sponsors, and the researcher. The postcard was sent to all respondents via their company, mostly by name, but in some cases only by title.

4) The last e-mail was sent to the available e-mail addresses roughly two weeks after the first e-mail. This e-mail was more personal and emphasised the importance of research for Icelandic companies.

The questionnaire was processed electronically and data processing was mostly automated. The coding procedure was relatively simple, as most of the questions were closed. The few open-ended questions were easily coded, as they focused on a number range. This is discussed further in the next chapter.

In short, the data gathering process emphasised the importance of minimising error. Weaknesses regarding sample size were addressed by additional measures to increase the response rate. And although the sample was a non-probability sample, it did address the purpose of the study.

3.4.7 External validity

The sample procedure and data gathering approach was in essence about external validity. It was based on a six-step approach suggested by Churchill (1995). (1) The first step was to define the population. The target population chosen was SMEs in Iceland. (2) The second step was to identify the sampling frame, which then determined some of the other steps, as few databases were available for the research. The sampling frame consisted of 560 SMEs found in two different databases. (3) The third step was to select the sampling procedure. Because of a typically low response rate in similar studies, retention of all companies in the sampling frame was necessary, rendering the procedure non-probabilistic, based on convenience and judgment. (4) The fourth step was to determine the sample size. It was estimated more than 86 responses would be needed, which indicated the response rate had to be higher than in similar studies, at least 15%. (5) The fifth step
was to select the sample elements, which in this case were basically the same elements used to define the target population. (6) The last step was to discuss the data gathering process, which was estimated to be somewhat easier than past surveys, as it was electronically-based and therefore eliminated some possible processing errors.

In conclusion, one may argue external validity is limited because of the non-probability sample. However, non-probability samples are common in corporate research (for example, Brett, 2000; Tanner, 2005), as sampling procedures are not as easy as when the population consists of individuals. When probability samples are used, non-observation error tends to be large (for example, Lindgren, 2001). Therefore, it is questionable whether probability samples are better than non-probability samples when it comes to estimating the total error. A sampling error is recognised in the design, but the bias is probably positive regarding the survey, as the over-representation of ‘large’ medium-sized companies might better fit the purpose of the study than other companies. The most important conclusion is all measures were followed in the sampling procedures, as far as the research situation allowed, to increase the external validity of the research.
Chapter 3 summary – Methodology

This journey through the methodology of this study was necessary preparation for sending out the questionnaire and for the true empirical work of the thesis. The chapter provides the arguments for ‘how’ and ‘what’ has been done, and even ‘why’ from a philosophical and methodological point of view. The main objective was to construct a questionnaire that could be used to gather information about boards and organisational performance.

The main points from this chapter are:

- The research paradigm adapted in this thesis is realism, although with clear references to positivism and theoretical criticism from Popper (2002).
- A multi-theoretical perspective is adopted in this research, with focus on agency theory, stewardship theory, resource dependency theory, and stakeholder theory.
- The model applied in this study is based on three propositions linking the board of directors to organisational performance.
- This study uses mixed methods, the survey method for the quantitative approach, and interviews and focus groups for a qualitative approach.
- The research is framed as an exploratory study, although reflecting more causal and descriptive types of studies.
- The construct validity is emphasised in the operationalisation of the concepts, as the instruments are adapted from sources that have validated and published them in peer-reviewed journals.
- The internal validity of the study is emphasised in the design of the survey, which follows the recommendations of Churchill (1995).
- The external validity of the study is emphasised in the sampling procedure, which is based on a sample defined by convenience and judgment.
- The survey tool consists of approximately 100 items, sent to 560 SMEs in Iceland via e-mail, to CEOs and chairmen of these companies.

The next chapter presents the conclusion validity of the research, and a detailed analysis and discussion of the results.
Chapter 4 – Results and analysis

This chapter presents the original empirical work of the thesis. The purpose of the chapter is to analyse and discuss the results of the questionnaire. The chapter focuses on statistical techniques and discusses some of the criteria for using and interpreting the statistical analysis. The previous chapters planted the seeds for this chapter, the harvest of that work. It represents the core of the thesis and the climax of the research effort, as it brings primary data results into the discussion, so hypotheses developed in previous chapters can be tested and discussed.

Figure 4.1: Stepwise analyses of results.

1. Introduction
2. Literature review
3. Methodology
4. Results and analysis
5. Conclusions

4.1. Examine data
4.2. Purify instruments
4.3. Estimate model
4.4. Interpret results
4.5. Validate model

Adapted from Hair et al. (2006).

This chapter analyses the data and the results. The framework for analysis is adapted from Hair et al. (2006) for stepwise analysis of survey data. The first step is to examine the data for normality. The second step is to purify the instrument and test its reliability. The third step is to estimate the model by testing the propositions set forth in the previous chapter. The fourth step is to interpret the results and their implications, and the last step is to validate the results. These steps are presented in sections of this chapter (figure 4.1).
4.1 Examining the data

Not everything that can be counted counts, and not everything that counts can be counted.

Albert Einstein (1879 - 1955)

Statistical analysis tends to focus on counting elements. The dilemma, to paraphrase Einstein from the above quotation, is whether what counts can really be counted. Examining the data helps researchers determine what can be counted, a step usually overlooked (Hair et al., 2006). Hair et al. (2006, p. 35) have argued that careful analysis of data leads to better prediction and more accurate assessment of dimensionality.

Figure 4.1.1: Approach to examining data.

<table>
<thead>
<tr>
<th>4.1. Examine data</th>
<th>4.1.1. Examine response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2. Purify instruments</td>
<td>4.1.2. Descriptive statistics</td>
</tr>
<tr>
<td>4.3. Estimate model</td>
<td>4.1.3. Non-response bias</td>
</tr>
<tr>
<td>4.4. Interpret results</td>
<td>4.1.4. Treatment of missing data</td>
</tr>
<tr>
<td>4.5. Validate model</td>
<td>4.1.5. Treatment of outliers</td>
</tr>
<tr>
<td></td>
<td>4.1.6. Test for normality</td>
</tr>
</tbody>
</table>

Based on Hair et al. (2006).

This section focuses on the descriptive aspects of the research, looking at the data to determine its relevance. The format of the section is based on Hair et al. (2006) and their approach to data examination (figure 4.1.1). The first step is to discuss and examine the response rate. The second step is to explore the descriptive data. The third step is to discuss missing data. The fourth step focuses on the treatment of missing data. The fifth step discusses implications of outliers, and the final step focuses on testing normality. The section is concluded with a summary of the discussion.
4.1.1 Response rate

In the research design it was anticipated the data gathering process might prove to be difficult. It was also noted in the discussion of the sample, the response rate would have to be greater than comparable studies, to ensure enough responses were received for statistical analysis. The goal was a response rate of 15% or higher.

The data collection was carried out late October to December 2006. The process turned out to be as difficult as anticipated. As was noted in section 4.3.6, the motivation process for respondents was planned as four rounds. The first e-mail sent to CEOs resulted in less than 30 responses. This was a major concern because it had been estimated roughly half the responses would be received in the first round. The second round, with another e-mail sent out, turned out to be equally disappointing, and it was estimated the process would probably not net more than 50-60 responses. The last two rounds were done in the same week. People in the sample received a postcard on a Monday morning, and the last e-mail, a more personalized e-mail, was sent out on Wednesday morning. It was in this round the majority of responses were received. A week later a last e-mail message was added to the planned process, to set a deadline for answering the questionnaire. Only few answers were received in that round. The process started on the 15\textsuperscript{th} of October, and the final date to answer the questionnaire was the 15\textsuperscript{th} of December. It was estimated relatively few answers would be received after this period, as the busy holidays were approaching.

The responses collected were 126 in total. Two turned out to be unusable because they were from public rather than private companies, and two were shown to be duplications, meaning respondents had answered the questionnaire twice. Therefore 122 viable responses were collected. Twenty-four answers were from chairmen, and 98 from CEO’s. This was a major concern, as it was evident the process of gathering responses from chairmen had failed, with only a 4.3% response rate, compared to a 17.5% response rate for CEOs.

Only six companies could be identified as having both chairman and CEO responses. A comparison was made using names of companies when provided,
number of employees, turnover, ownership, and size of board, as it was estimated responses of both CEO and chairman would be very similar on these points. From this comparison it was estimated 116 responses were collected from different companies. As the sample consisted of 560 companies, the overall company response rate was roughly 21%.

Table 4.1.1: Response rates of the study.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEOs</td>
<td>17.5%</td>
</tr>
<tr>
<td>Chairmen</td>
<td>4.3%</td>
</tr>
<tr>
<td>Companies</td>
<td>20.5%</td>
</tr>
</tbody>
</table>

This response rate is comparable to other studies in the field, which also typically suffer from low response rates (Forbes and Milliken, 2003). Some have pointed out the expected response rate for executives in the upper echelons is much lower, typically in the range of 10-12% (Geletkanycz, 1998; Hambrick et al., 1993; Koch and McGrath, 1996). This is similar in research on SMEs (Schulze et al., 2001; MacDougall and Robinson, 1990; Heuvel et al., 2006). Given the company numbers involved here, the response rate is consistent with or higher than that experienced by other DBA students at Henley Management College (Lindgren, 2001; Brett, 2000; Tanner, 2005).

The response rate from CEOs was as expected, and exceeded the goal of a 15% response rate. Most surveys in the field of corporate governance rely on CEO answers (Gabrielson and Huse, 2002). The response rate of chairmen was, however, very low, as might have been anticipated because of problems in execution of the data collection. The responses from chairmen were too few to make any meaningful comparison with the CEO responses.

Table 4.1.2: Responses of CEOs and chairmen.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>24</td>
<td>19.7%</td>
</tr>
<tr>
<td>CEO</td>
<td>98</td>
<td>80.3%</td>
</tr>
<tr>
<td>Total</td>
<td>122</td>
<td>100%</td>
</tr>
</tbody>
</table>
It was estimated although some response bias could be anticipated from CEOs in comparison with chairmen, both were good informants for survey purposes. The argument was because the research unit was the board of directors, both types of respondents should equally be able to respond to the questions, which is supported with the findings of Huse (1993). The six responses, where both CEO and chairman had answered the questionnaire, were compared, and turned out to be very similar.

The importance of the board tended to be slightly higher for chairmen than CEOs, as might be expected in a survey based on self-evaluation rather than peer evaluation (Huse, 1993). The responses of the CEOs and chairmen were therefore combined, using CEO responses where two were received for one company. The six cases where both respondents had replied were therefore eliminated, reducing the total number of responses to 116 cases. This final sample was used for further analysis.

Descriptive statistics for company size and industries indicate that the respondents represent the target sample. Furthermore the descriptive elements of the sample were compared to other similar studies (Heuvel et al., 2006; Lervik et al., 2005), which indicated that the profile of the SMEs was similar to profiles in other studies (section 4.1.2).

This subsection has focused on the response rate. The overall response rate was roughly 21%, similar to, if not higher than, comparable studies. The next section uses the 114 cases (two cases were eliminated in the data examination process, sections 4.1.4 and 4.1.5) to picture the data from a descriptive point of view.

4.1.2 Descriptive statistics
The first step in understanding the data is to look at it in descriptive terms (Hair et al., 2006). In other words, to count some of the basic variables which indicate elements of the sample. Using the literature as a guide, several descriptive categories were included in the questionnaire to establish the external context. The three variables chosen were size of company, industry, and ownership category.
These variables are discussed again in the third section of this chapter, where the hypotheses are examined.

Figure 4.1.2: Descriptive elements.

In addition, for descriptive purposes, three elements describing the boards are discussed in this section: size of board, number of women on boards, and number of independent directors. The structure of this section, therefore, can be outlined in terms of company elements and board elements (figure 4.1.2).

4.1.2.1 Company size in number of employees
The question of company size was open in the questionnaire, but was recoded later into categories. The reason for making number of employees an open question was to match CEO and chairman responses. Five size-groups were used for categorization, the same as employed by Lervik et al. (2005) for Norwegian SMEs. Opinions differ as to what the cut-off size of SMEs should be. The European definition, standard in the European Union, uses a cut-off of less than 250 employees, as followed, for example, by Wiklund and Shephard (2003). Others define SME size up to 500 employees (Warwood and Roberts, 2004).

Seven companies had more than 500 employees, and could, therefore, either have been categorized as a special group (Lindgren, 2001), or eliminated. The argument for eliminating those respondents would be to maintain the focus on SMEs.
However, the counter-arguments to include them were: (1) the research was exploratory, and because of the sampling procedures generalisation was not a high priority, (2) it was possible to test for the implication of company size in the study, and (3) it was important to keep the number of responses as high as possible to increase the effectiveness of the statistical analysis. Furthermore, it was estimated that if the responses were drastically different according to size, those cases would prove to be outliers. The responses were, therefore, included in the category of companies with 200 or more employees, as there were only seven in the group of 200 – 499 employees. The categories were then congruent with Lervik et al. (2005). Moreover, it should be noted in Iceland companies with more than 200 employees are considered large companies, although perhaps not so in the international sphere. This discussion is revisited in the third section of this chapter.

The results of frequency analysis showed most companies were in the size group of 50-199 employees, 37%, or 42 cases. Other categories had considerably lower representation (table 4.1.3). Interestingly, the size groups could be split into two nearly equal-sized categories around the cut-off point of 50 employees, with 48% having less than 50 employees, and 52% with 50 or more employees.

### Table 4.1.3: Frequencies of company size categories.

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>11</td>
<td>9.6</td>
<td>9.8</td>
<td>9.8</td>
</tr>
<tr>
<td>11-29</td>
<td>26</td>
<td>22.8</td>
<td>23.2</td>
<td>33.0</td>
</tr>
<tr>
<td>30-49</td>
<td>17</td>
<td>14.9</td>
<td>15.2</td>
<td>48.2</td>
</tr>
<tr>
<td>50-199</td>
<td>42</td>
<td>36.8</td>
<td>37.5</td>
<td>8.7</td>
</tr>
<tr>
<td>200-</td>
<td>16</td>
<td>14.0</td>
<td>14.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>98.2</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>2</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>114*</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The descriptive presentation has 114 cases as two misfit cases were removed from the sample (see later sections).

The mean of the sample was 100 employees, a large number compared to Heuvel et al. (2006), where the mean was 33 employees from a sample of 199 companies. This indicated the sample consisted on average of rather large SMEs, compared to the Belgian sample of Heuvel et al. (2006).
4.1.2.2 Industries

Four industries were selected, reduced from eight or nine categories in comparable studies (Lervik et al., 2005; Tanner, 2005). The four categories were finance and property, service, manufacturing, and retail and wholesale. The frequencies are shown in table 4.1.4. Companies in the finance and property category constituted 11% of the total responses, manufacturing 20%, retail 34%, and service 35%. The implication of industry categories is further discussed in the third section of this chapter.

Table 4.1.4: Frequencies of industry categories.

<table>
<thead>
<tr>
<th>Valid</th>
<th>Finance and property</th>
<th>Service</th>
<th>Manufacturing</th>
<th>Retail</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>12</td>
<td>40</td>
<td>23</td>
<td>39</td>
<td>114</td>
</tr>
<tr>
<td>Percent</td>
<td>10.5</td>
<td>35.1</td>
<td>20.2</td>
<td>34.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Cumulative Percent</td>
<td>10.5</td>
<td>45.6</td>
<td>65.8</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

These industry categories were similar to those used by Huse et al. (2007) in the Norwegian context. The distribution in that research was finance and property (10%), service (32%), manufacturing (35%) and other (23%). The higher proportion of manufacturing companies reflected the difference between the business sectors in Norway and Iceland, where Norway has a much stronger manufacturing base according to national statistics.

4.1.2.3 Ownership

The share of the largest owner was divided into three categories: 0-20%, 21-49% and >50%. There is debate in the literature as to how to categorize ownership. La Porta et al. (1999) use two categories, widely-held companies, and ultimate owners, with the cut-off point 20% of the shares. Schulze et al. (2001) reduce the cut-off point for family run companies to 15%. Franks et al. (2001), however, use 25%, 50%, and 75% ownership in their classification. The position taken in this study was to follow La Porta et al. (1999) on the <20% barometer for widely-held companies, but adding the >50% to indicate clear majority ownership.
Half the companies turned out to be majority-owned by one person. On the other hand, only 14% had such dispersed ownership the largest owner held less than 20% of the total shares (table 4.1.5). This was to be expected, as SMEs usually have concentrated ownership (Heuvel et al., 2006).

Interestingly enough, although half the companies had one clear majority shareholder, only 37% of respondents designated their company a family firm (table 4.1.6).

**Table 4.1.5: Frequencies of ownership categories.**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-20</td>
<td>15</td>
<td>13.2</td>
<td>14.0</td>
<td>14.0</td>
</tr>
<tr>
<td>21-49</td>
<td>40</td>
<td>35.1</td>
<td>37.4</td>
<td>51.4</td>
</tr>
<tr>
<td>&gt;50</td>
<td>52</td>
<td>45.6</td>
<td>48.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>93.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>7*</td>
<td>6.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Seven respondents did not answer this question.

**Table 4.1.6: The frequency of family firms.**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>36.8</td>
<td>36.8</td>
<td>36.8</td>
</tr>
<tr>
<td>no</td>
<td>63.2</td>
<td>63.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A definition of ‘family firm’ was not provided, as different definitions are used generally (Ward, 1998). However, the definition by Ward and Handy (1988, p. 290) is widely accepted in the Icelandic context. Huse et al. (2007) posed a similar question in the Norwegian context and found 32% of the companies in their sample were considered family firms.

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14 Based on a web search on mbl.is, a web site for leading newspaper in the country, for the concept “family firm” (Icel.: fjölskyldufyrirtæki). If more than 50% of the ownership is held by one family it is a clear sign of a family business.
4.1.2.4 Size of boards

Turning to the size of the boards, some interesting results emerged as the whole scale of board sizes was examined. By far the most frequent board size was 3 persons, 38%, and 5 persons, 33% (table 4.1.7). Other sizes were much less common. The average board size was 4.03. As the companies were small, it was anticipated board sizes would also be small. The sample was equally split between 1-3 directors, and >4 directors.

The average size of the board, 4.03, was larger than Belgian firms in the study by Heuvel et al. (2006), in which it was 3.6. The average size of companies in this sample was larger, which could explain why the average size of the board was also larger.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>1</td>
<td>5.3</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>7.0</td>
<td>7.0</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>37.7</td>
<td>37.7</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>6.1</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>3.3</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>4.4</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>.9</td>
<td>.9</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>.9</td>
<td>.9</td>
</tr>
<tr>
<td>10 or more</td>
<td>2</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.1.2.5 Women on boards

Women had seats on boards in 41% of the companies (table 4.1.8). In 25% of cases only one woman was on the board. Some 14% of companies had more than one woman on the board. The sample could be split into two groups: boards without women (59%), and boards with women (41%).

There were .74 women on boards of companies in the sample, or 18% of all board members. This indicated there were fewer women on Icelandic boards than
Norwegian boards, as Huse et al. (2007) report the average number of women on Norwegian boards as 1.59.

Table 4.1.8: Frequencies of women on boards.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Cumulative Valid</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>67</td>
<td>58.8</td>
</tr>
<tr>
<td>1</td>
<td>29</td>
<td>25.4</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>7.0</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>5.3</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>.9</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>.9</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>1.8</td>
</tr>
</tbody>
</table>

| Total     | 114   | 100.0            |

4.1.2.6 Independent directors

As pointed out in the operationalisation process, independence according to the Icelandic corporate governance code is rather strict, as it does not allow any financial, business, or family ties. Although the code is directed at registered companies, 44% of the companies in this study considered themselves to have at least one independent board member (table 4.1.9). Some 22% of the boards had one independent director, and another 22% of boards had more than one independent director. The sample contained 56% of companies without independent directors, and 44% with independent directors.

Table 4.1.9: Frequencies of independent directors.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Cumulative Valid</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>64</td>
<td>56.1</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>21.9</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>11.4</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>.9</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>.9</td>
</tr>
</tbody>
</table>

| Total     | 114   | 100.0            |

217
4.1.2.7 Descriptive elements of boards and companies

A first glance at the descriptive data, without indicating any relationships, gave a clearer picture of the sample. A comparison with two similar studies, one by Heuvel et al. (2006) in Belgium, and the other by Huse et al. (2007) in Norway, showed some similar characteristics in their samples. The average size of the companies and size of the boards was larger in the Icelandic context than the Belgian context. The industry distribution and number of family businesses in the Icelandic sample was similar to the Norwegian sample. This indicated the Icelandic SME sample was not that different from SME samples in other national contexts.

4.1.3 Non-response bias

Non-response bias is a subset of non-observation errors and non-sampling errors, as is described in section 3.4 and figure 3.4.2, based on the work of Churchill (1995). Non-response errors result from failure to obtain information from some of the sample group, as designed in the survey (Churchill, 1995). Such errors can result from the failure of respondents to fill out the questionnaire either in full or in part. As was noted in section 4.3.6, this type of error was discussed regarding response failure by chairmen. As it turned out concerns were justified, as their response rate was only 4.3%. This resulted in a different approach to analysis than originally planned, with the responses of CEOs and chairmen subsequently being merged. The merged sample is discussed below in regard to non-response error.

As discussed in section 4.1.1, the response rate, measured as a percentage of total companies, was 21%. That left as much as 79% open for non-response errors. Non-response bias can be significant in research studies, especially with a low response rate (Churchill, 1995). The question remains whether non-respondents differed from actual respondents. There are several routes available to try to estimate whether bias is cause for concern, for instance comparing early responses to late-arriving responses (Churchill, 1995). As this survey was distributed electronically over a relatively short period of time, this approach was considered of little value. Observation of other studies with low response rate in the corporate governance literature (Geletkanycz, 1998; Hambrick et al., 1993; Koch and McGrath, 1996; Schulze et al., 2001; Heuvel et al., 2006) and other DBA theses at Henley...
Management College (Tanner, 2005; Lindgren, 2001) concluded this issue was either generally disregarded, or noted as a limitation of the research.

An examination of the distribution between company sectors on the one hand, and the distribution of company sizes in the total population and the sample on the other, could be argument for non-response bias. However, size distribution was as anticipated from the original sampling, and the industry groups large enough to test for differences.

The non-response bias was noted as a limitation of this research. As the goal was not generalisation to the wider population, but rather to use sample results to make some observations about the target population, this was not of great concern in this research.

### 4.1.4 Treatment of missing data

Another problem of a non-response nature is the question of missing data, where respondents fail to answer all questions posed in the survey. Missing data can be a source of hidden non-response bias (Hair et al., 2006). However, missing data is quite common in questionnaires (Hair et al., 2006). If cases must be deleted because of missing data in some variables, this can cause a reduction in sample size available for analysis.

Missing data can result from data entry error when transcribing results from paper to computer (Churchill, 1995). As this survey was conducted electronically, and all entries were made first-hand by the respondents, this type of failure did not occur. The missing data was examined from both the variable perspective and the case perspective.

Running analysis-frequencies on items from 2.1 to 5.25 showed only three variables were missing more than 2 responses: items 3.10 (4 missing), 5.13 (5 missing), 5.17 (3 missing), and 5.25 (4 missing). The non-response answers were therefore only 4.3% of the total on the worst item, 5.13. Different criteria exist to evaluate what may be considered as too much missing data. The strictest criterion argues 10% of a
variable or an item can be considered as too much missing data (Brett, 2000). Others argue for more flexibility in regard to missing data. Hair et al. (2006) argue up to 30% may not be too excessive. Bryman and Cramer (1994) suggest a variable could have data missing up to 50% and still be retained. The percentages of missing data in this research are much lower than any of these criteria, and therefore all are retained for the study.

There is no cause for concern about missing data on the descriptive variables or composition variables either. Item 1.5, CEO years in office, missed 4 responses (3.5%), item 6.1, number of employees, missed 3 responses (2.6%), and items 6.4 to 6.6 about ownership, missed 6 to 8 responses (5.2% – 7%). This was as anticipated, as information about ownership might have been considered too private to reveal. From a statistical perspective, data missing on these items did not exceed even the strictest criterion for missing data (Brett, 2000).

Looking at the missing values from a case perspective, only three cases missed more than three responses on items 2.1 to 5.25. Those were case 104 with 5 missing responses (6%), case 25 with 7 missing responses (8.4%), and 12 with 29 missing responses (35%). A further look at the descriptive items showed case 12 had again missed the most responses (4), making the total missing answers 33. Case 104 missed one more answer, but case 25 did not miss any more answers. Four other cases missed more than one item: cases 13, 52, 74, and 106 each missed three items. These were not cause for concern at this point, unlike case 12. A further look at case 12 showed all answers were alike, indicating the respondent did not seriously consider his responses. Therefore it was appropriate to exclude that case from further study and delete it from the sample. This brought the total study sample down to 115. This further lowered the missing values on items, and item 5.13 subsequently had 4 missing values (3.5%), this being the worst case.

There is no common guideline for what to do in the case of missing data, although it is stressed any decision should take into account both empirical and theoretical considerations (Hair et al., 2006; Bryman and Cramer, 1997). Pallant (2005) notes SPSS offers three main approaches: excluding cases list-wise, excluding cases pair-
wise, and replacing with a mean. The list-wise approach excludes a case totally from the analysis, and the pair-wise approach excludes a case only if it is missing data required for a specific analysis. The third choice comes with the following notation: “This option should NEVER be used, as it can severely distort the results of your analysis, particularly if you have a lot of missing values” (Pallant, 2005, p. 53). It could further be argued this option (replacing with a mean value) should be used cautiously when the sample is small, and missing values constitute a high percentage of the total sample.

As pointed out earlier, this research had very few missing values, both in actual number and as a percentage of the total sample. Therefore, the third option of “mean substitution” was considered. The advantage of the third option was all variables could be used, as missing data is substituted by the mean of the total population. There are also other methods of substitution, for instance using “linear-trend-at-point,” which is a mean substitution based on the mean of nearby points, with a specified number of valid values above and below the missing value (Hair et al., 2006). The latter approach is considered a better approximate (Hair et al., 2006).

The argument for using the “mean substitution” approach is missing values can be considered random in the total dataset (Hair et al., 2006). There are several tests to for randomness in the missing data, for example, simply looking at the data graphically for systematic missing data (Brett, 2000), checking correlation between recorded dichotomous variables (Hair et al., 2006), and Chi-square testing in conjunction with a comparison of actual frequencies (Bryman and Cramer 1994). The simple test of looking at the data graphically was chosen in this research, given the low rate of missing data. The analysis indicated there was no systematic bias in the missing data, and it could be concluded data were missing randomly.

As for treating the missing data, there was an argument for substitution with the means. Hair et al. (2006) note there are three disadvantages using this approach: (1) it invalidates the variance estimates derived from the standard variance formula by understating the true variance in the data, (2) the actual distribution of values is distorted by substituting the mean for the missing value, and (3) this method
depresses the observed correlation, because all missing data in one and the same index/variable/scale/items set will have a single constant value. Given the missing number of values was low in this study, such concern is of less importance. The advantage of not having to delete more cases or items was overwhelming, and therefore it was decided to substitute missing values with the means in further data analysis.

4.1.5 Treatment of outliers and extremes

Outliers are another issue for consideration when dealing with data. Outliers are observations that distinctly differ from the majority of cases in the sample. In other words, they have values well above or well below the majority of the other cases (Pallant, 2005). There is considerable debate in the literature as to how to view outliers. Christiensen and Raynor (2003) argue outliers are an important element for theory building, as the differences are more interesting than the similarities. Hair et al. (2006) state outliers can influence and bias the results of statistical analysis, and therefore should be controlled for by the researcher. It is recognised here the purpose of analysing and controlling outliers was first and foremost for statistical purposes.

Outliers can be characterised as either beneficial or problematic (Hair et al., 2006). It depends on the context in which they are viewed. Beneficial outliers may be indicative of characteristics of the population undiscovered without them included in the analysis. Therefore they should be retained for analysis. Another view is outliers can be so different they are not representative of the population and therefore work against the statistical purposes of the analysis. Such outliers should be considered harmful or problematic (Hair et al., 2006).

Outliers may be categorized both as outliers and extremes (Pallant, 2005). The ‘extremes,’ or rather ‘extreme outliers,’ are so called because their values fall either greatly below or above the majority of other cases. The values of extreme outliers are more than 3 box-lengths from the 25th percentile – a box indicating the range in which the central 50% of observations fall (SPSS, 2007). Outliers are treated differently by various analysts. Some argue extreme values should be removed from
the dataset (Pallant, 2005). Others, however, are more lenient, and suggest outliers be changed to less extreme values to retain these items within the sample for data analysis (Tabachnick and Fidell, 2001).

The simplest method of detecting outliers is to look at graphic versions of the data, histograms and box-plots, and isolate cases sitting on their own on the edges, in the extremes (Pallant, 2005). If the same cases appear several times as outliers, they could be deemed harmful outliers (Hair et al., 2006).

**Table 4.1.10: Analysis of outliers and extremes.**

<table>
<thead>
<tr>
<th>Item</th>
<th>Outliers - cases</th>
<th>Extremes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6</td>
<td>18</td>
<td>41</td>
<td>2</td>
</tr>
<tr>
<td>2.8</td>
<td>102</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>2.9</td>
<td>110</td>
<td>86</td>
<td>93</td>
</tr>
<tr>
<td>2.10</td>
<td>30</td>
<td>86</td>
<td>93</td>
</tr>
<tr>
<td>2.12</td>
<td>79</td>
<td>58</td>
<td>28</td>
</tr>
<tr>
<td>2.15</td>
<td>58</td>
<td>72</td>
<td>28</td>
</tr>
<tr>
<td>3.4</td>
<td>28</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>3.5</td>
<td>61</td>
<td>49</td>
<td>1</td>
</tr>
<tr>
<td>4.4</td>
<td>48</td>
<td>84</td>
<td>34</td>
</tr>
<tr>
<td>4.9</td>
<td>36</td>
<td>41</td>
<td>2</td>
</tr>
<tr>
<td>4.10</td>
<td>22</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>4.11</td>
<td>41</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4.12</td>
<td>41</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4.14</td>
<td>22</td>
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<td>1</td>
</tr>
<tr>
<td>4.15</td>
<td>4</td>
<td>78</td>
<td>2</td>
</tr>
<tr>
<td>4.19</td>
<td>86</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4.20</td>
<td>69</td>
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<td>1</td>
</tr>
<tr>
<td>4.21</td>
<td>74</td>
<td>53</td>
<td>69</td>
</tr>
<tr>
<td>4.22</td>
<td>86</td>
<td>47</td>
<td>2</td>
</tr>
<tr>
<td>4.23</td>
<td>78</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4.24</td>
<td>100</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4.25</td>
<td>109</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4.27</td>
<td>78</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>5.9</td>
<td>88</td>
<td>95</td>
<td>4</td>
</tr>
<tr>
<td>5.18</td>
<td>21</td>
<td>10</td>
<td>53</td>
</tr>
<tr>
<td>5.19</td>
<td>70</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>5.20</td>
<td>85</td>
<td>93</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>16</td>
<td>1</td>
</tr>
</tbody>
</table>

In graphic analysis of the data, several outliers were identified. Twenty-seven items showed potential outliers, in all 53 outliers, and 9 of them extreme. The cases with
extreme outliers were case 1 (item 3.5), case 31 (item 5.20), case 34 (item 4.4), case 53 (item 5.18), case 69 (item 4.21), and cases 28 and 93 with two extreme values (case 28 on item 2.12 and 2.15, and case 93 on item 2.9 and 2.10).

After careful consideration case 93 was deleted from the sample as the respondent had obviously answered all the questions with the same response. That brought the sample down to 114 cases.

Although other approaches are possible to identify outliers, for example using univariate, bivariate, and multivariate perspectives (Hair et al., 2006), no other tests for outliers were carried out at this point. Outliers are considered again in section 4.2, after factor analysis was carried out.

**4.1.6 Testing for normality**

The most fundamental premise of multivariate analysis is the distribution should be considered ‘normal’ (Hair et al., 2006). Normal distribution implies a bell-shaped curve, with the greatest frequency of cases in the center. Evaluations are based on the assumption if a variable is multivariate normal, it is also univariate normal, although the reverse need not be true (Hair et al., 2006).

There are several ways to test normality (Hair et al., 2006). In this research it was decided to look at the distribution of each item: (a) looking at the histogram to visually estimate whether the distribution mimics normal distribution, (b) looking at the normal probability plot to see if the data follows a straight diagonal line and, (c) assessing kurtosis – the peakedness or flatness of the distribution – and the skewness – the uniformity or heavy-tail tendency of the distribution to one side or the other.

This analysis for items 2.1 to 5.25, showed ten items of possible concern. Those items were: 2.5, 2.9, 3.4, 3.5, 4.4, 4.14, 4.15, 4.20, 5.18, and 5.19, and noted as possible ‘troublemakers’ in the analysis. They were, however, left untouched until further analysis had been completed on the sample. The distribution of all other items was normal.
4.1.7 Summary of data examination
The analysis of descriptive statistics, missing data, and outliers and extremes, resulted in the following conclusions:

- Missing data were missing completely at random. It is recommended such missing values be substituted with means (Hair et al., 2006).
- Two cases were deleted because of multiple missing responses and homogenous answers.
- The sample proved to be normally distributed, making it ideal for multivariate analysis (Hair et al., 2006).
- There were several outliers and extremes. These cases were retained in the sample for further analysis.

In this section, the focus has been on preliminary analysis of the data to check how appropriate the sample is for multivariate statistical analysis. In the next section, further analysis is done for valuating scales, factors, and multicollinearity.
4.2 Purifying the data

*It seems to me that philosophical investigation, as far as I have experience of it, starts from that curious and unsatisfactory state of mind in which one feels complete certainty without being able to say what one is certain of.*

Bertrand Russell (1872-1970)

Testing propositions and hypotheses is the scientific means to investigate philosophical certainty. It is a deductive approach to science. This thesis has been solely philosophical in nature until this chapter, although built upon sound empirical literature. This section takes the investigation a step further, so as to explore whether evidence in fact supports the proposed thesis.

*Figure 4.2.1: Overview of the purification process.*

The second step in the approach of Hair et al. (2006) for analysing the data, is purifying the instruments. The approach to the purification process is discussed in the first section, then different scales are examined, and finally multicollinearity is discussed, before concluding comments are presented on the purification process (figure 4.2.1).
4.2.1 Approach for purifying instruments

The instruments or scales used in this study were all adopted from other research, as was noted in the operationalisation process. All scales have been tested previously in published research in respected journals, as well as derived from theory. This approach increased the probability of the scales being a good measurement of the phenomena in question, as is pointed out in Section 3.2. Therefore, it was expected most of the scales would present high alphas as in previous studies.

The approach taken for purification of scales was twofold. First, the inter-item correlations and Cronbach alphas for the scales were tested. Second, factor analysis was used to examine the scales on a scale-to-scale basis.

Coefficient alpha or Cronbach alpha is a technique for detecting measurement error due to lack of internal consistency in responses on a given scale. There are different perspectives in the literature of what represents an acceptable level of internal consistency. Cramer (1994) suggests a Cronbach alpha should be preferably above .80. Others have argued a Cronbach alpha above .70 is sufficient for any measurement (Churchill, 1979; Nunnally and Bernstein, 1994; Kline, 1994). Still others believe the minimum acceptable level for Cronbach alpha is .60 in some cases (Nunnally and Bernstein, 1994; Caruana et al., 1994). There is less confusion about inter-item correlation. Hair et al. (2006) suggest the inter-item correlation should be above .3.

The purification process consists of removing items if the Cronbach alpha is too low for the intended scale. A low value on a scale’s Cronbach alpha indicates the chosen items poorly represent the underlying factor (Bryman and Cramer, 1994). The aim of the purification process is to remove the item with the lowest correlation, as items with the highest average correlation are the most valuable (Nunnally and Bernstein, 1994). Some researchers suggest the starting point should be items with a lower correlation score than .50 (Caruana et al., 1994; Nunnally and Bernstein, 1994). The approach reduces the number of items on a scale, which in turn lowers the reliability, as the acceptable alpha is dependent upon the number of items in the scale (Peterson, 1994; Foreman and Money, 2004). Churchill (1995)
recommends a broad scale should be from 4 to 8 items. This study had a wide spectrum of scale sizes, from 3-item scales to 15-item scales.

The factor analysis was used in this study for two purposes. First, it was used to check whether items belonging to certain scales designed to measure specific things, actually loaded on different factors. This was tested from the perspective of Exploratory Factor Analysis (EFA) as well as using elements of Confirmatory Factor Analysis (CFA). EFA is data driven and an inductive approach while CFA is theory driven and more related to positivism and deductive approaches (Hair et al., 2006). As the factors were made out of already determined variables adapted from other studies the CFA approach would have been sufficient. The CFA approach is, however, usually used with Structural Equation Modelling (SEM) and the AMOS software, which was not used in this research. Some of the outcomes needed for rigorous CFA are very hard to come by without the AMOS software and therefore an approach more in terms with EFA was used in the factor analysis, although exploring the factors both from the theoretical perspective and the more inductive approach. Secondly, the factor analysis was used to summarise information from a large number of variables into a smaller number of variables or factors (Hair et al., 2003). This is sometimes called component analysis (Hair et al., 2006).

Six points were used as guiding criteria for the analysis: (1) The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy should be larger than .5 (Hair et al., 2006). (2) Factors were selected on the basis of Eigenvalues larger than 1. (3) The loading of items on the factors was expected to be higher than .40. Hair et al., (2003, p. 366) state their guideline for business research is +/ .30 considered acceptable, +/ .50 moderately important, and +/ .70 very important. (4) The variance explained by the factors was expected to be higher than 60%. Hair et al. (2003) note 60% as a rule of thumb, but not an absolute rule, as lower variance may be acceptable depending on research objectives. (5) The factors need to make sense from a theoretical or logical perspective, meaning labelling them should be fairly straightforward. (6) It is important to leave the original scales intact for the purpose of validating previous research and comparison with other studies. This concept also plays a role in determining which items are included in the factors. Churchill
(1995) noted this is a good reason for retaining original items if they were developed from theory.

The following analysis was conducted on each questionnaire section, and the scales within those sections. The first was ‘process,’ second ‘authority,’ third ‘performance,’ and the fourth ‘roles.’

4.2.2 Purifying process scales
All scales in this section were adopted without alteration from Zahra and Pearce (1992), except the last scale regarding information, which was adopted from Lervik et al., (2005). Zahra and Pearce (1992) developed three scales to measure board processes: (1) a three-item scale of efficiency (Cronbach alpha of .78), (2) a three-item scale for decision (Cronbach alpha of .81), and (3) a five-item scale for style (Cronbach alpha of .77). The information scale had five items (Cronbach alpha not given).

4.2.2.1 Efficiency
The efficiency scale consisted of three items, measured on a seven-point scale from poor to excellent. Reliability of the scale showed the Cronbach alpha was .810 for the three items, with 111 cases included in the analysis (listwise deletion for missing values – no other possibility given in SPSS for this analysis). Factor analysis showed all items had inter-correlation above .3, a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of .703, that is above .6 level, and the Bartlett’s test of sphericity was significant at .000 (should be .05 or smaller).

<table>
<thead>
<tr>
<th>Table 4.2.1: The importance of efficiency items.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale Mean if Item Deleted</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>2.1 Deliberation</td>
</tr>
<tr>
<td>2.2 Meetings</td>
</tr>
<tr>
<td>2.3 Organisation</td>
</tr>
</tbody>
</table>
All three items in the scale proved to be important, although the Cronbach alpha would have increased if items 2.1 or 2.2 were deleted (table 4.2.1). All items were kept in the scale.

Only the first component had an Eigenvalue over 1, implying a one-factor solution (table 4.2.2). The Eigenvalue for component 1 was 2.190, explaining 73% of the variance. All items had factor loadings higher than .80 (table 4.2.3).

<table>
<thead>
<tr>
<th>Comp</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1</td>
<td>2.190</td>
<td>72.983</td>
</tr>
<tr>
<td>2</td>
<td>.473</td>
<td>15.777</td>
</tr>
<tr>
<td>3</td>
<td>.337</td>
<td>11.239</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

The three items were reduced to one factor for further analysis. The new variable was named Process - Efficiency. It proved to be of normal distribution, although with one possible outlier (case 93). The scale and elements are found in table 4.2.3 above.

<table>
<thead>
<tr>
<th>Process Efficiency - Items</th>
<th>Alpha</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness (CR)</th>
<th>Kurtosis (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Thoroughness of deliberations</td>
<td>.810</td>
<td>4.730</td>
<td>.111</td>
<td>-.375 (.229)</td>
<td>-.131 (.455)</td>
</tr>
<tr>
<td>2.2 Frequency and length of meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3 Board’s organisation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.2.2 Decision

The decision scale consisted of three items, measured on a seven-point scale. Measuring the reliability of the scale showed the Cronbach alpha was .363 for the three items, with 113 cases included in the analysis. That is far below the minimum level of reliability of .6 (Nunnally and Bernstein, 1994). This indicated the three items did not form a scale. The third item (2.6 impulsive/deliberate) turned out to be the problem, as the other two items showed high correlation without it (table 4.2.4).
Table 4.2.4: The importance of decision items.

<table>
<thead>
<tr>
<th></th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Del.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4 decisions fast-slow</td>
<td>10.47</td>
<td>2.930</td>
<td>.224</td>
<td>.367</td>
<td>.247</td>
</tr>
<tr>
<td>2.5 decisions informed</td>
<td>10.23</td>
<td>2.464</td>
<td>.537</td>
<td>.363</td>
<td>-.384(a)</td>
</tr>
<tr>
<td>2.6 decisions impulsive</td>
<td>11.57</td>
<td>3.944</td>
<td>-.023</td>
<td>.103</td>
<td>.709</td>
</tr>
</tbody>
</table>

a The value is negative due to a negative average covariance among items.

As was outlined in the operationalisation process in chapter 3, the third item was tested as to whether it represented a reverse scale. This exercise did improve the Cronbach alpha to .393, however, it was well below the accepted level. Further analysis of outliers and extremes did not improve the item correlation. Item 2.6 was therefore eliminated from the scale. Cronbach alphas for the other two items were .709 for 113 cases. Therefore, further analysis was conducted with only two items in the scale.

Factor analysis showed the items had inter-correlation above .3, but a KMO of .5, lower than the .6 level, and Bartlett’s significance at .000. Only the first component had an Eigenvalue over 1, implying a one-factor solution. The Eigenvalue for component 1 was 1.528, explaining 76% of the variance (table 4.2.5). Both items had factor loadings higher than .87. Although the KMO rule of thumb was violated, it was decided to retain the factor for further analysis.

Table 4.2.5: Factor analysis of decision scale.

<table>
<thead>
<tr>
<th>Comp.</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>1.528</td>
<td>76.399</td>
</tr>
<tr>
<td>2</td>
<td>.472</td>
<td>23.601</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

The two items were reduced to one factor for further analysis. The new variable was named Process - Decision. The distribution proved to be tailed to the left, with two possible outliers (cases 93 and 28). In accord with the more lenient approach to outliers (Pallant, 2005; Tabachnick and Fidell, 2001), the values were made less extreme, and moved one point upwards. This approach considerably improved the distribution towards normality. The scale and elements are found in table 4.2.6.
Table 4.2.6: Process - Decision scale.

<table>
<thead>
<tr>
<th>ProcDecision - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4 The board’s decision process is slow/quick</td>
<td>.874</td>
</tr>
<tr>
<td>2.5 The board’s decision process is uninformed/informed</td>
<td>.874</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness (CR)</th>
<th>Kurtosis (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.709</td>
<td>5.800</td>
<td>.088</td>
<td>-.647</td>
<td>.173</td>
</tr>
</tbody>
</table>

4.2.2.3 Style of decision-making

The style scale consisted of five items, measured on a seven-point scale between two extremes. Measuring the reliability of the scale showed a Cronbach alpha of .343 for the three items, with all 114 cases included in the analysis. That is far below the minimum level of reliability of .6 (Nunnally and Bernstein, 1994). This indicated the five items did not form a scale. The fifth item (2.11 supportive/non-supportive) turned out to be the problem, as the other four items did correlate (table 4.2.7).

Table 4.2.7: The importance of style items.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7 style regressive</td>
<td>19.52</td>
<td>5.544</td>
<td>.502</td>
<td>.468</td>
<td>-.022(a)</td>
</tr>
<tr>
<td>2.8 style timid</td>
<td>19.94</td>
<td>6.501</td>
<td>.435</td>
<td>.298</td>
<td>.099</td>
</tr>
<tr>
<td>2.9 style hostile</td>
<td>18.42</td>
<td>7.449</td>
<td>.246</td>
<td>.459</td>
<td>.245</td>
</tr>
<tr>
<td>2.10 style discourage</td>
<td>19.05</td>
<td>5.077</td>
<td>.528</td>
<td>.578</td>
<td>-.087(a)</td>
</tr>
<tr>
<td>2.11 style support</td>
<td>21.18</td>
<td>11.119</td>
<td>-.379</td>
<td>.232</td>
<td>.773</td>
</tr>
</tbody>
</table>

a The value is negative due to a negative average covariance among items.

Therefore, the fifth item was tested for reverse scale. The concerns about items being reverse coded were discussed in section 3.2. Recoding the item improved the Cronbach alpha to .758, which is above the accepted level. Item 2.11 was still the weakest link in the scale, although not as disturbing (table 4.2.8).

Table 4.2.8: Importance of style items – with reversed coded item 2.11.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7 style regressive</td>
<td>19.52</td>
<td>5.544</td>
<td>.502</td>
<td>.468</td>
<td>-.022(a)</td>
</tr>
<tr>
<td>2.8 style timid</td>
<td>19.94</td>
<td>6.501</td>
<td>.435</td>
<td>.298</td>
<td>.099</td>
</tr>
<tr>
<td>2.9 style hostile</td>
<td>18.42</td>
<td>7.449</td>
<td>.246</td>
<td>.459</td>
<td>.245</td>
</tr>
<tr>
<td>2.10 style discourage</td>
<td>19.05</td>
<td>5.077</td>
<td>.528</td>
<td>.578</td>
<td>-.087(a)</td>
</tr>
<tr>
<td>2.11 style support</td>
<td>21.18</td>
<td>11.119</td>
<td>-.379</td>
<td>.232</td>
<td>.773</td>
</tr>
</tbody>
</table>
Factor analysis showed the items had inter-correlation above .3, although item 2.11 was lower in three of four. The KMO was .701, higher than the .6 level, and Bartlett’s significance was .000. Only the first component had an Eigenvalue over 1, implying a one-factor solution. The Eigenvalue for component 1 was 2.564, explaining 51% of the variance (table 4.2.9). This result indicated the scale was not very good, as it could only explain 51% of the variance. The problem item was still 2.11. Removing that item from the factor analysis provided a four-item factor explaining 60% of the variance, with the lowest factor loading above .6 (table 4.2.10).

Table 4.2.9: Factor analysis for the style scale.

<table>
<thead>
<tr>
<th>Comp</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>2.385</td>
<td>59.625</td>
</tr>
<tr>
<td>2</td>
<td>.900</td>
<td>22.512</td>
</tr>
<tr>
<td>3</td>
<td>.420</td>
<td>10.504</td>
</tr>
<tr>
<td>4</td>
<td>.294</td>
<td>7.359</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

Table 4.2.10: Process - Style scale.

<table>
<thead>
<tr>
<th>Process-Style - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7 In dealing with the CEO the board is regressive/progressive</td>
<td>.840</td>
</tr>
<tr>
<td>2.8 In dealing with the CEO the board is timid/aggressive</td>
<td>.623</td>
</tr>
<tr>
<td>2.9 In dealing with the CEO the board is hostile/friendly</td>
<td>.706</td>
</tr>
<tr>
<td>2.10 In dealing with the CEO the board is discouraging/encouraging</td>
<td>.890</td>
</tr>
<tr>
<td>Alpha</td>
<td>Mean</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>.773</td>
<td>5.322</td>
</tr>
</tbody>
</table>

The four items were reduced to one factor for further analysis. The new variable was named Process - Style. The distribution proved to be normal, with one possible outlier (case 93). The scale and elements are found in table 4.2.10.
4.2.2.4 Information

The information scale consisted of five items, measured on a seven-point scale between disagree and agree. The reliability of the scale showed Cronbach alpha was .726 for the five items, with all 114 cases included in the analysis. This represented acceptable reliability (Nunnally and Bernstein, 1994), and indicated the five items did form a scale (table 4.2.11).

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.12 info flow</td>
<td>17.04</td>
<td>20.556</td>
<td>.476</td>
<td>.328</td>
<td>.685</td>
</tr>
<tr>
<td>2.13 info scrutinize</td>
<td>17.92</td>
<td>17.560</td>
<td>.636</td>
<td>.461</td>
<td>.618</td>
</tr>
<tr>
<td>2.14 info finding</td>
<td>18.96</td>
<td>18.697</td>
<td>.458</td>
<td>.296</td>
<td>.694</td>
</tr>
<tr>
<td>2.15 info questioning</td>
<td>17.12</td>
<td>18.870</td>
<td>.611</td>
<td>.454</td>
<td>.635</td>
</tr>
<tr>
<td>2.16 info critique</td>
<td>18.57</td>
<td>21.238</td>
<td>.297</td>
<td>.133</td>
<td>.754</td>
</tr>
</tbody>
</table>

Factor analysis showed the items had inter-correlation above .3, although item 2.16 was lower in three out of four. The KMO was .706, higher than the .6 level, and Bartlett’s significance was .000. The Eigenvalue for component 1 was 2.477, explaining 50% of the variance (table 4.1.12). Four items had factor loadings higher than .6, and item 2.16 had factor-loading of .468. By excluding item 2.16 the more than 58% of the variance could be explained and all the factor-loadings were higher than .67. Item 2.16 was therefore deleted from the factor and a four item factor for information was constructed.

Table 4.2.12: Factor analysis for the information scale.

<table>
<thead>
<tr>
<th>Comp</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>2,335</td>
<td>58,365</td>
</tr>
<tr>
<td>2</td>
<td>.802</td>
<td>20,038</td>
</tr>
<tr>
<td>3</td>
<td>.503</td>
<td>12,571</td>
</tr>
<tr>
<td>4</td>
<td>.361</td>
<td>9,026</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

The four items were reduced to one factor for further analysis. The new variable was named Process - Information. The distribution proved to be normal, with one possible outlier (case 28), which was smoothed to the next value above it. The scale and elements are found in table 4.2.13 above.
Table 4.2.13: Process – Information scale.

<table>
<thead>
<tr>
<th>Process Information - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information flows efficiently in due time to our board members via formal and informal channels</td>
<td>.742</td>
</tr>
<tr>
<td>Our board members carefully scrutinize information prior to meetings</td>
<td>.836</td>
</tr>
<tr>
<td>The board is usually active in finding their own information in addition to the reports from management</td>
<td>.676</td>
</tr>
<tr>
<td>The board is often asking discerning questions in connection with suggestions initiated by management</td>
<td>.792</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness (CR)</th>
<th>Kurtosis (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.754</td>
<td>4.689</td>
<td>.099</td>
<td>.027</td>
<td>-.351</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.226)</td>
<td>(.449)</td>
</tr>
</tbody>
</table>

4.2.2.5 Discussion of process scales

Four scales were examined as part of the process variable. The scale for efficiency turned out to be the only scale where everything went ‘by the book.’ The information scale was a concern as the factor only explained 50% of the variance, and not the 60% required by Hair et al (2003), and item 2.16 had less than .5 factor loading, although it did not violate the .40 rule of thumb (Hair et al., 2003). The problem with item 2.16 might have been the wording of the question, as ‘critical’ could mean both ‘judgmental’ as well as ‘important.’ A further study of the item might reveal ambiguity about the question, or some other factor weakening the item in the scale. The item was excluded from the scale. The scale for style was somewhat problematic, as it turned out item 2.11 had reverse coding, although this was not mentioned in the discussion of the original instrument constructed by Zahra and Pearce (1991). After the coding of the item had been reversed, although it fit better in the scale it was still the weakest link. Furthermore, the factor explained only 51% of the variance with item 2.11 included, but 60% without it. This implied the item should at the very least not be reverse coded in future, or perhaps could be eliminated from the scale, as it was in this research. The decision scale turned out to be the most problematic. Item 2.6 simply did not fit into the scale, reverse coded or not. The understanding of ‘impulsive’ vs. ‘deliberate’ could have been the issue, as ‘impulsive’ could indicate either ‘doing things without planning’ or a more ‘entrepreneurial’ type of decision style, while ‘deliberate’ could indicate either ‘serious thinking’ or a more stale type of decision style, afraid of taking action. It is
not possible to determine precisely what was wrong with the item, other than the reverse coding confusing respondents. All the scales were taken to the next step of the analysis, discussed in section 4.3.

### 4.2.3 Purifying board roles

All scales in this section were garnered from different sources. The strategy role portion used insight from top management research (Kanji and Sá, 2001; Kanji, 2002), taking corporate governance research into consideration. The monitoring and service scales were adopted from Carpenter and Westphal (2001) and Heuvel et al. (2006). They presented recent insights from research on board tasks.

A factor analysis on all board role items with Eigenvalue of 1 gave a five-factor solution, with a clear strategy role factor, service and resource factor, value factor, and two monitoring factors. The five factors explained 72% of the variance. A better three-factor solution resulted in a clear strategic role factor (with value, vision, mission and strategy included), a service and resource factor, and a three-item monitoring factor. These three factors explained 63% of the variance. One item, 5.15 - The board determines management’s responsibility - loaded equally on the strategy factor and the monitoring factor, with under .5 factor loading in both cases (table 4.2.14).

Therefore a clear distinction between the scales chosen for exploring the role of the board was established. The three factors were theoretically distinct as the strategy factor related to stewardship theory, monitoring factor to agency theory and the resource and advice factor to resource dependency theory as was discussed in Chapter 2, Sections 2.1 to 2.4. Each of the three-factors will be discussed in the next subsections.

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strategy</td>
</tr>
<tr>
<td>5.4 vision future</td>
<td>.832</td>
</tr>
<tr>
<td>5.6 vision confidence</td>
<td>.825</td>
</tr>
</tbody>
</table>
4.2.3.1 Strategic role

The strategic role consisted of 14 items, measured on a seven-point scale from very little to very much. Kanji’s and Sá (2001) and Kanji’s (2002) construct for leadership excellence has four components which theoretically can be separated. Table 4.2.15 shows Cronbach alphas reported by Kanji and Sá (2001) and those for this study.

Table 4.2.15: Strategic role compared to the original scale.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Reported Alphas</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kanji and Sá (2001)</td>
<td>This Study</td>
</tr>
<tr>
<td>Values</td>
<td>.844</td>
<td>.923</td>
</tr>
<tr>
<td>Vision</td>
<td>.736</td>
<td>.930</td>
</tr>
<tr>
<td>Mission</td>
<td>.790</td>
<td>.912</td>
</tr>
<tr>
<td>Strategy</td>
<td>.906</td>
<td>.921</td>
</tr>
</tbody>
</table>

Measurement of the reliability of the scale showed Cronbach alpha .958 for the fourteen items, with 106 cases included in the analysis (listwise deletion for missing values). All items were relevant and important (table 4.2.16).
Table 4.2.16: Importance of strategic role items.

<table>
<thead>
<tr>
<th>Corrected Item-Total Correlation</th>
<th>Scale Mean if Item Del.</th>
<th>Scale Variance if Item Deleted</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Del.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>57.73</td>
<td>257.820</td>
<td>.721</td>
<td>.956</td>
</tr>
<tr>
<td>5.1 values meanings</td>
<td>57.50</td>
<td>258.024</td>
<td>.720</td>
<td>.956</td>
</tr>
<tr>
<td>5.2 values decision</td>
<td>57.82</td>
<td>252.834</td>
<td>.798</td>
<td>.954</td>
</tr>
<tr>
<td>5.3 vision systems</td>
<td>57.44</td>
<td>250.363</td>
<td>.851</td>
<td>.953</td>
</tr>
<tr>
<td>5.4 vision confidence</td>
<td>58.00</td>
<td>255.505</td>
<td>.788</td>
<td>.955</td>
</tr>
<tr>
<td>5.5 vision communication</td>
<td>57.82</td>
<td>251.196</td>
<td>.836</td>
<td>.953</td>
</tr>
<tr>
<td>5.6 vision confidence</td>
<td>57.49</td>
<td>253.395</td>
<td>.852</td>
<td>.953</td>
</tr>
<tr>
<td>5.7 mission purpose</td>
<td>57.24</td>
<td>253.972</td>
<td>.802</td>
<td>.954</td>
</tr>
<tr>
<td>5.8 mission commitment</td>
<td>57.69</td>
<td>257.435</td>
<td>.786</td>
<td>.955</td>
</tr>
<tr>
<td>5.9 mission current</td>
<td>57.97</td>
<td>253.342</td>
<td>.807</td>
<td>.954</td>
</tr>
<tr>
<td>5.10 strategy policies</td>
<td>57.17</td>
<td>264.123</td>
<td>.704</td>
<td>.957</td>
</tr>
<tr>
<td>5.11 strategy change</td>
<td>57.17</td>
<td>264.123</td>
<td>.704</td>
<td>.957</td>
</tr>
<tr>
<td>5.12 strategy guide</td>
<td>57.04</td>
<td>260.837</td>
<td>.658</td>
<td>.951</td>
</tr>
<tr>
<td>5.13 strategy resourc emp</td>
<td>57.04</td>
<td>260.837</td>
<td>.658</td>
<td>.951</td>
</tr>
<tr>
<td>5.14 strategy perfmonitor</td>
<td>57.01</td>
<td>262.752</td>
<td>.732</td>
<td>.956</td>
</tr>
</tbody>
</table>

Factor analysis showed all items had inter-correlation above .3. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was .919, above the .6 level, and Bartlett’s test of sphericity significant at .000 (should be .05 or smaller). The Eigenvalue for the first component 1 was 9.104, explaining 65% of the variance (table 4.2.17). All items had factor loadings higher than .69 (table 4.2.18).

The factor was named Strategic role. Fourteen items were reduced to one factor for further analysis. The distribution turned out to be normal. The scale and the elements are found in table 4.2.18.

Table 4.2.17: Factor analysis for strategic scale.

<table>
<thead>
<tr>
<th>Comp.</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>2</td>
<td>1.005</td>
<td>7.182</td>
</tr>
<tr>
<td>3</td>
<td>.826</td>
<td>5.899</td>
</tr>
</tbody>
</table>
Table 4.2.18. Strategic role scale.

<table>
<thead>
<tr>
<th>Strategic Role - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 The board develops shared meaning and interpretation of reality.</td>
<td>.756</td>
</tr>
<tr>
<td>5.2 The board uses organisational values to guide decision making.</td>
<td>.746</td>
</tr>
<tr>
<td>5.3 The board puts in place reinforcement systems consistent with organisational values and principles.</td>
<td>.805</td>
</tr>
<tr>
<td>5.4 The board creates a compelling vision of the future of the organisation.</td>
<td>.885</td>
</tr>
<tr>
<td>5.5 The board communicates the vision effectively.</td>
<td>.832</td>
</tr>
<tr>
<td>5.6 The board inspires confidence in the vision.</td>
<td>.872</td>
</tr>
<tr>
<td>5.7 The board identifies the organisation’s purpose.</td>
<td>.881</td>
</tr>
<tr>
<td>5.8 The board generates commitment among all members for the chosen purpose.</td>
<td>.833</td>
</tr>
<tr>
<td>5.9 The board keeps the mission current.</td>
<td>.833</td>
</tr>
<tr>
<td>5.10 The board develops policies and strategies consistent with the organisation’s mission, vision, and values.</td>
<td>.843</td>
</tr>
<tr>
<td>5.11 The board anticipates change.</td>
<td>.755</td>
</tr>
<tr>
<td>5.12 The board guides change.</td>
<td>.768</td>
</tr>
<tr>
<td>5.13 The board monitors resources and uses feedback to review strategies.</td>
<td>.692</td>
</tr>
<tr>
<td>5.14 The board monitors organisational performance and uses feedback to review strategies.</td>
<td>.762</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness (CR)</th>
<th>Kurtosis (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.958</td>
<td>4.440</td>
<td>.119</td>
<td>-.300 (.235)</td>
<td>-.665 (.465)</td>
</tr>
</tbody>
</table>

4.2.3.2 Monitoring role

The monitoring role consisted of five items, measured on a seven-point scale from very little to very much. Measuring the reliability of the scale showed a Cronbach alpha of .724 for the five items, with 112 cases included in the analysis. Item 5.18 - The board defers to the CEO’s judgment on final strategic decisions - did, however, decrease the reliability. The Cronbach alpha would have been .782 had it not been included (table 4.2.19).

Table 4.2.19: Importance of monitoring items.
Factor analysis showed all items with inter-correlation above .3, except item 5.18, which had a lower value in all cases. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was .704, that was above the .6 level, and Bartlett’s test of sphericity was significant at .000. The factor analysis gave a two-factor solution with item 5.18 as a stand-alone factor, explaining 20% of the variance. A one-factor solution had only a .217 loading. Item 5.18 was therefore deleted from the scale, and only four items remained in the new scale. Item 5.18 was one of the original items in the three-item scale of Carpenter and Westphal (2001). For the four item scale the Eigenvalue for the first component was 2.479, explaining 62% of the variance (table 4.2.20). All items had factor loadings higher than .72 (table 4.2.21).

Table 4.2.20: Factor analysis for the monitoring scale.

<table>
<thead>
<tr>
<th>Comp.</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Var.</td>
</tr>
<tr>
<td>1</td>
<td>2.479</td>
<td>61.970</td>
</tr>
<tr>
<td>2</td>
<td>.655</td>
<td>16.385</td>
</tr>
<tr>
<td>3</td>
<td>.587</td>
<td>14.680</td>
</tr>
<tr>
<td>4</td>
<td>.279</td>
<td>6.965</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

The second factor, referring to roles as tasks, was named Monitoring role. Four items were reduced to one factor for further analysis. The distribution turned out to be normal, with one possible outlier (case 93). The scale and the elements are found in table 4.2.21.

Table 4.2.21: Monitoring role scale.

<table>
<thead>
<tr>
<th>Monitoring Role - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.15</td>
<td>The board determines management’s responsibility.</td>
</tr>
</tbody>
</table>
The board monitors top management strategic decision-making.

The board formally evaluates the CEO’s performance.

The board determines salary/compensation of CEO and top management team.

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness (CR)</th>
<th>Kurtosis (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.782</td>
<td>4.699</td>
<td>.125</td>
<td>-.291 (.228)</td>
<td>-.558 (.453)</td>
</tr>
</tbody>
</table>

### 4.2.3.3 Resource and Advice role

The third factor in board role analysis from the preliminary factor analysis was what had originally counted as two scales, the advice scale, and the resource scale. This resource and advice scale was made up of six items, items 5.20 – 5.25, and was measured on a seven-point scale from very little to very much. The reliability of the scale showed a Cronbach alpha of .865 for the six items, with 110 cases included in the analysis (table 4.2.22).

**Table 4.2.22: Importance of resource and advice items.**

<table>
<thead>
<tr>
<th></th>
<th>Scale Mean if Item Del.</th>
<th>Scale Variance if Item Del.</th>
<th>Corrected Item-Total Correl.</th>
<th>Squared Multiple Correl.</th>
<th>Cronbach Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.20 advice ceo assistance</td>
<td>22.57</td>
<td>42.632</td>
<td>.691</td>
<td>.507</td>
<td>.842</td>
</tr>
<tr>
<td>5.21 advice sounding board</td>
<td>23.25</td>
<td>40.595</td>
<td>.620</td>
<td>.455</td>
<td>.849</td>
</tr>
<tr>
<td>5.22 advice on strategy</td>
<td>23.08</td>
<td>39.489</td>
<td>.645</td>
<td>.438</td>
<td>.845</td>
</tr>
<tr>
<td>5.23 resources reputation</td>
<td>23.58</td>
<td>38.411</td>
<td>.694</td>
<td>.532</td>
<td>.836</td>
</tr>
<tr>
<td>5.24 resources networking</td>
<td>23.36</td>
<td>37.481</td>
<td>.741</td>
<td>.564</td>
<td>.827</td>
</tr>
<tr>
<td>5.25 resources access</td>
<td>23.78</td>
<td>37.860</td>
<td>.613</td>
<td>.405</td>
<td>.854</td>
</tr>
</tbody>
</table>

Factor analysis showed all items with inter-correlation above .3. The Kaiser-Meyer-Olkin measure of sampling adequality (KMO) was .864, that was above the .6 level, and Bartlett’s test of sphericity significant at .000. Factor analysis gave a one-factor solution. The first component had an Eigenvalue of 3.628, explaining 60% of the variance (table 4.2.23). All items had factor loadings higher than .72 (table 4.2.24).

**Table 4.2.23: Factor analysis for resource and advice scale.**

<table>
<thead>
<tr>
<th>Comp.</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>3.628</td>
<td>60.473</td>
</tr>
<tr>
<td>2</td>
<td>.724</td>
<td>12.061</td>
</tr>
</tbody>
</table>
From the three-factor solution, the third factor was named Resource and Advice role. Six items were reduced to one factor for further analysis. The distribution turned out to be normal, with one possible outlier (case 93). The scale and the elements are found in table 4.2.24.

**Table 4.2.24: The resource and advice role.**

<table>
<thead>
<tr>
<th>Resource-Advice Role - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.20 The CEO solicits board assistance in the formulation of corporate strategy.</td>
<td>.797</td>
</tr>
<tr>
<td>5.21 Directors are a &quot;sounding board&quot; on strategic issues.</td>
<td>.747</td>
</tr>
<tr>
<td>5.22 The board provides advice and counsel to the CEO on strategic issues.</td>
<td>.762</td>
</tr>
<tr>
<td>5.23 The board builds organisational reputation.</td>
<td>.799</td>
</tr>
<tr>
<td>5.24 The board focuses on networking and company.</td>
<td>.835</td>
</tr>
<tr>
<td>5.25 The board provides access to extra resources.</td>
<td>.720</td>
</tr>
<tr>
<td>Alpha</td>
<td>.782</td>
</tr>
<tr>
<td>Mean</td>
<td>4.655</td>
</tr>
<tr>
<td>SD</td>
<td>.118</td>
</tr>
<tr>
<td>Skewness (CR)</td>
<td>-.484 (.230)</td>
</tr>
<tr>
<td>Kurtosis (CR)</td>
<td>.058 (.457)</td>
</tr>
</tbody>
</table>

**4.2.3.4 Discussion of role-task scales**

Factor analysis using all 25 items related to tasks resulted in a three-factor solution. The three factors were the strategic role, monitoring role, and resource and advice role. They were supported both in theory literature and also empirically in this study. The strategic role was based on a scale borrowed from leadership literature, a broader measure than previously used in research on corporate governance. The high alpha and factor analysis both proved the instrument adaptable to board studies. The monitoring role was based on two different instruments. One item (5.18) turned out to have little correlation with the other items in the scale and was eliminated. This item was one of the original items in the scale adapted from Carpenter and Westphal (2001), which was used as the basis for the monitoring instrument. The problem may have been with the wording of the question ‘The board defers to the CEO’s judgment on final strategic decisions,’ as this phrasing
could indicate either just a passive approach by the board, or merely a rubber stamp function. Further analysis of the instrument might define the problem. The resource and advice role factor reflects two theoretical roles. High correlation between the items indicated they could be combined into one single factor. This single factor could be relabelled either ‘support’ or ‘service,’ as the items were of a supportive nature and served the CEO. However, the difficulty with these labels was their various meanings in the literature, so this approach might only have added to the confusion. Therefore, the resource and advice role was used for this factor. This analysis of board tasks in this study has developed three important factors for future investigation.

4.2.4 Purifying authority

Authority is another scale adopted from Zahra and Pearce (1992). It is a scale measuring power, consisting of 15 items (Cronbach alpha of .79-.86), measured on a seven-point scale from very little to very much. Reliability measurement of the scale showed the Cronbach alpha was .907 for the 15 items, with 107 cases included in the analysis (listwise deletion for missing values). This indicated changes regarding how the scale was used, which required respondents to evaluate the power of board compared to the power of the CEO, were not problematic. All of the items showed high correlation (table 4.2.25).

Factor analysis showed most items had inter-correlation above .3, however, items 3.8 and 3.9 had scores lower than .3 in the inter-correlation matrix. Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was .869, that is above the .6 level, and Bartlett’s test of significance was .000 (should be .05 or smaller). Three components had an Eigenvalue over 1, implying a three-factor solution. However, testing with a two-factor solution gave better results, as the distinction between factor loadings was more clear. The Eigenvalue for component 1 was 6.737, explaining 45% of the variance. The Eigenvalue for component 2 was 1.739, explaining 12% of the variance. The two-factor solution, therefore, explained 57% of the variance (table 4.2.26).

Table 4.2.25: Importance of items in authority scale.
<table>
<thead>
<tr>
<th>Item Description</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 authority by law</td>
<td>63.05</td>
<td>243.969</td>
<td>.636</td>
<td>.637</td>
<td>.900</td>
</tr>
<tr>
<td>3.2 authority structure</td>
<td>62.42</td>
<td>252.472</td>
<td>.638</td>
<td>.673</td>
<td>.900</td>
</tr>
<tr>
<td>3.3 authority expenditure</td>
<td>62.78</td>
<td>251.591</td>
<td>.637</td>
<td>.526</td>
<td>.900</td>
</tr>
<tr>
<td>3.4 authority divestments</td>
<td>61.96</td>
<td>255.074</td>
<td>.654</td>
<td>.735</td>
<td>.900</td>
</tr>
<tr>
<td>3.5 authority acquisitions</td>
<td>61.36</td>
<td>268.347</td>
<td>.464</td>
<td>.593</td>
<td>.905</td>
</tr>
<tr>
<td>3.6 authority goals</td>
<td>62.05</td>
<td>253.385</td>
<td>.674</td>
<td>.622</td>
<td>.899</td>
</tr>
<tr>
<td>3.7 authority policy</td>
<td>62.84</td>
<td>245.984</td>
<td>.709</td>
<td>.681</td>
<td>.897</td>
</tr>
<tr>
<td>3.8 authority successors</td>
<td>63.73</td>
<td>242.822</td>
<td>.650</td>
<td>.616</td>
<td>.899</td>
</tr>
<tr>
<td>3.9 authority new CEO</td>
<td>62.07</td>
<td>253.862</td>
<td>.453</td>
<td>.408</td>
<td>.907</td>
</tr>
<tr>
<td>3.10 authority performance</td>
<td>64.11</td>
<td>247.648</td>
<td>.638</td>
<td>.622</td>
<td>.900</td>
</tr>
<tr>
<td>3.11 authority strategy</td>
<td>63.11</td>
<td>247.063</td>
<td>.724</td>
<td>.592</td>
<td>.897</td>
</tr>
<tr>
<td>3.12 authority technology</td>
<td>63.88</td>
<td>250.145</td>
<td>.618</td>
<td>.538</td>
<td>.900</td>
</tr>
<tr>
<td>3.13 authority compensation</td>
<td>62.68</td>
<td>254.219</td>
<td>.500</td>
<td>.338</td>
<td>.905</td>
</tr>
<tr>
<td>3.14 authority charity</td>
<td>64.38</td>
<td>249.654</td>
<td>.537</td>
<td>.509</td>
<td>.904</td>
</tr>
<tr>
<td>3.15 authority stakeholders</td>
<td>63.72</td>
<td>254.373</td>
<td>.525</td>
<td>.474</td>
<td>.904</td>
</tr>
</tbody>
</table>

The two-factor solution revealed four items loaded on both factors, with higher loadings than .4. These were 3.11, 3.7, 3.3, and 3.1. Furthermore, two items, 3.9 and 3.13, had factor loadings lower than .5. These two items were deleted as they were not theoretically clear with regard to the distinction between the two factors. The two-factor solution indicated a theoretical distinction between the two factors, one to do with financial outcome issues, and the other with a more process orientated direction of the company (Brett, 2000). The first factor was named Authority - Finance. Six items were reduced to one factor for further analysis. The distribution proved to be normal, with one possible outlier (case 28). The scale and the elements are found in table 4.2.27.
Table 4.2.26: Factor analysis for authority scale.

<table>
<thead>
<tr>
<th>Comp</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Var.</td>
<td>Cumul. %</td>
</tr>
<tr>
<td>1</td>
<td>6.737</td>
<td>44.912</td>
<td>44.912</td>
</tr>
<tr>
<td>2</td>
<td>1.739</td>
<td>11.591</td>
<td>56.503</td>
</tr>
<tr>
<td>3</td>
<td>1.009</td>
<td>6.723</td>
<td>63.227</td>
</tr>
<tr>
<td>4</td>
<td>.976</td>
<td>6.506</td>
<td>69.733</td>
</tr>
<tr>
<td>5</td>
<td>.749</td>
<td>4.995</td>
<td>74.728</td>
</tr>
<tr>
<td>6</td>
<td>.690</td>
<td>4.601</td>
<td>79.329</td>
</tr>
<tr>
<td>7</td>
<td>.626</td>
<td>4.175</td>
<td>83.503</td>
</tr>
<tr>
<td>8</td>
<td>.540</td>
<td>3.599</td>
<td>87.103</td>
</tr>
<tr>
<td>9</td>
<td>.378</td>
<td>2.518</td>
<td>89.621</td>
</tr>
<tr>
<td>10</td>
<td>.361</td>
<td>2.407</td>
<td>92.028</td>
</tr>
<tr>
<td>11</td>
<td>.306</td>
<td>2.039</td>
<td>94.067</td>
</tr>
<tr>
<td>12</td>
<td>.286</td>
<td>1.904</td>
<td>95.971</td>
</tr>
<tr>
<td>13</td>
<td>.241</td>
<td>1.609</td>
<td>97.580</td>
</tr>
<tr>
<td>14</td>
<td>.199</td>
<td>1.330</td>
<td>98.910</td>
</tr>
<tr>
<td>15</td>
<td>.164</td>
<td>1.090</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

Table 4.2.27: Financial Authority scale.

<table>
<thead>
<tr>
<th>Authority Finance - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 How much formal authority or power has the board regarding changing company by-laws</td>
<td>.505</td>
</tr>
<tr>
<td>3.2 … regarding approving changes in capital structure</td>
<td>.830</td>
</tr>
<tr>
<td>3.3 … regarding decisions about capital expenditures</td>
<td>.506</td>
</tr>
<tr>
<td>3.4 … regarding decisions about future divestments</td>
<td>.876</td>
</tr>
<tr>
<td>3.5 … regarding decisions about future acquisitions</td>
<td>.833</td>
</tr>
<tr>
<td>3.6 … regarding establishing long-term goals</td>
<td>.660</td>
</tr>
</tbody>
</table>

From the two-factor solution, the second factor was named Authority - Direction. Seven items were reduced to one factor for further analysis. The distribution proved to be normal, with one possible outlier (case 41). The scale and its elements are found in table 4.2.28.

Table 4.2.28: Authority to Direct scale.
Furthermore, Authority was also kept intact as a scale and one factor, although it only explained 45% of the total variance (table 4.2.29).

**Table 4.2.29: The authority scale.**

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness (CR)</th>
<th>Kurtosis (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.907</td>
<td>4.496</td>
<td>.126</td>
<td>-.127 (.234)</td>
<td>.362 (.463)</td>
</tr>
</tbody>
</table>

The authority scale turned out to be a valid scale, despite changing its use in this study from the original study. High internal reliability indicated it was a good scale, although it only explained 45% of the variance in comparison with the 60% rule of thumb (Hair et al., 2003). Factor solutions with two and three factors were also possible. The two-factor solution was chosen because the factors could be explained in terms of distinct functions. The two-factor solution explained 57% of the variance and was therefore closer to the Hair et al. (2003) rule than the one-factor solution. Both the one- and the two-factor analysis were considered for the next step discussed in section 4.3.

**4.2.5 Performance**

The Performance instrument consisted of 27 items. In the design of the performance scale a logical distinction was indicated as follows: Corporate social responsibility (CSR) (8 items), Responsiveness for innovation (4 items) and Total performance (15 items), as based on the work of Lindgren (2001) and Tanner (2005). Although there was a logical and theoretical argument for maintaining the distinction between the three performance scales, a factor analysis was performed to test whether the
distinction would hold. Running the factor analysis with factor creation on Eigenvalue over 1 gave a solution of seven factors, explaining 70% of variance. The seven-factor solution was not interesting because there were too many factors, although the distribution of items made logical sense.

Table 4.2.30: Factor analysis of performance measures.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Factors</th>
<th>Factors</th>
<th>Factors</th>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Responsive</td>
<td>Sales &amp; quality</td>
<td>Development</td>
<td>CSR</td>
</tr>
<tr>
<td>4.25 perf resp decisions</td>
<td>.752</td>
<td>.692</td>
<td>.812</td>
<td>.862</td>
</tr>
<tr>
<td>4.24 perf resp threats</td>
<td>.715</td>
<td>.661</td>
<td>.759</td>
<td>.855</td>
</tr>
<tr>
<td>4.27 perf resp opportunity</td>
<td>.696</td>
<td>.550</td>
<td>.748</td>
<td>.805</td>
</tr>
<tr>
<td>4.12 perf competition</td>
<td>.660</td>
<td>.528</td>
<td>.730</td>
<td></td>
</tr>
<tr>
<td>4.26 perf resp resources</td>
<td>.623</td>
<td>.651</td>
<td>.697</td>
<td></td>
</tr>
<tr>
<td>4.15 perf diversity</td>
<td>.542</td>
<td>.682</td>
<td>.645</td>
<td></td>
</tr>
<tr>
<td>4.11 perf service</td>
<td>.496</td>
<td>.453</td>
<td>.430</td>
<td></td>
</tr>
<tr>
<td>4.22 perf quality</td>
<td>.471</td>
<td>.488</td>
<td>.488</td>
<td></td>
</tr>
<tr>
<td>4.21 perf share</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.23 perf empl satisf</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.20 perf sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.17 perf new service</td>
<td></td>
<td></td>
<td>.830</td>
<td>.739</td>
</tr>
<tr>
<td>4.16 perf change</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.18 perf develope</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2 csr env protection</td>
<td></td>
<td></td>
<td>.812</td>
<td>.862</td>
</tr>
<tr>
<td>4.3 csr comm involvement</td>
<td></td>
<td></td>
<td>.759</td>
<td>.855</td>
</tr>
<tr>
<td>4.7 csr sustainability</td>
<td></td>
<td></td>
<td>.748</td>
<td>.805</td>
</tr>
<tr>
<td>4.5 csr env responsible</td>
<td></td>
<td></td>
<td>.730</td>
<td></td>
</tr>
<tr>
<td>4.4 csr respected</td>
<td></td>
<td></td>
<td>.697</td>
<td></td>
</tr>
<tr>
<td>4.6 csr dev economy</td>
<td></td>
<td></td>
<td>.682</td>
<td></td>
</tr>
<tr>
<td>4.1 csr workforce</td>
<td></td>
<td></td>
<td>.645</td>
<td></td>
</tr>
<tr>
<td>4.8 csr health</td>
<td></td>
<td></td>
<td>.453</td>
<td></td>
</tr>
<tr>
<td>4.9 perf financial</td>
<td></td>
<td></td>
<td></td>
<td>.862</td>
</tr>
<tr>
<td>4.13 perf profitability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.14 perf cash</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.10 perf goals</td>
<td></td>
<td></td>
<td></td>
<td>.805</td>
</tr>
<tr>
<td>4.19 perf overall</td>
<td>.410</td>
<td>.471</td>
<td>.488</td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

The scree-plot indicated, however, a three- to five-factor solution might be better. The five-factor solution was chosen because (a) there were fewer factors, (b) the items had higher loadings, (c) there was a clearer distinction between the factors (table 4.2.30), and d) the variance explained was 62%.
The solution turned out differently from original expectations, but actually was more logical and had better theoretical support. The CSR factor refers to stakeholder theory and is based on the operationalisation process (Tanner, 2005). All the financial outcome elements loaded on the second factor (Brett, 2000; Larsen, 2007). The other three factors were a clear summary of process elements (Brett, 2000) of the performance instrument. Items regarding response to competitors and market forces loaded on one factor, which was called Responsiveness. The four items adapted from Bettis and Hitt (1995). Three items regarding change and development, items 4.16 – 4.18, loaded on the same factor, which was called development. Four items regarding sales, market share, employee satisfaction and quality, items 4.20 – 4.23, loaded on one factor, which was called sales and quality. At last, one variable loaded on more than one factor above .4, which was the only variable loading on more than one factors with so large loadings, was overall performance. The variable was kept as a single variable indicator called overall performance. This section explains in more detail the five different factors chosen for the analysis.

4.2.5.1 Corporate Social Responsibility

The factor analysis with a three-factor solution resulted in a clear corporate social responsibility scale, with the original eight items intact. The corporate social responsibility (CSR) scale consisted of eight items measured on a seven-point scale from very little to very much.

Measuring the reliability of the scale showed the Cronbach alpha was .851 for the eight items, with 112 cases included in the analysis (listwise deletion for missing values). All items were highly correlated (table 4.2.31).

Table 4.2.31: The importance of CSR scale.
The factor analysis showed all items had inter-correlation above .3, except item 4.8 with a constantly lower value. KMO measure of sampling adequacy was .828, above the .6 level, and Bartlett’s test of sphericity was significant at .000 (should be .05 or smaller). Only the first component had an Eigenvalue over 1, implying a one-factor solution. The Eigenvalue for component 1 was 4.027, explaining 50% of the variance (table 4.2.32). The two weakest items in terms of correlations, items 4.1 and 4.8, were deleted from the factor. The six remaining items explained 58% of the variance and all items had higher than .690 factor loadings.

Table 4.2.32: Factor analysis of CSR scale.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Del.</th>
<th>Scale Variance if Item Del.</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach Alpha if Item Del.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 csr health</td>
<td>33.71</td>
<td>57.939</td>
<td>.553</td>
<td>.447</td>
<td>.837</td>
</tr>
<tr>
<td>4.2 csr env protection</td>
<td>34.26</td>
<td>53.131</td>
<td>.706</td>
<td>.631</td>
<td>.818</td>
</tr>
<tr>
<td>4.3 csr community inv.</td>
<td>33.75</td>
<td>53.018</td>
<td>.683</td>
<td>.535</td>
<td>.821</td>
</tr>
<tr>
<td>4.4 csr respected</td>
<td>32.84</td>
<td>59.794</td>
<td>.598</td>
<td>.481</td>
<td>.834</td>
</tr>
<tr>
<td>4.5 csr env responsible</td>
<td>33.46</td>
<td>59.169</td>
<td>.638</td>
<td>.456</td>
<td>.830</td>
</tr>
<tr>
<td>4.6 csr dev economy</td>
<td>33.23</td>
<td>56.594</td>
<td>.599</td>
<td>.504</td>
<td>.832</td>
</tr>
<tr>
<td>4.7 csr sustainability</td>
<td>34.17</td>
<td>52.178</td>
<td>.670</td>
<td>.582</td>
<td>.823</td>
</tr>
<tr>
<td>4.8 csr workforce</td>
<td>33.34</td>
<td>61.217</td>
<td>.334</td>
<td>.137</td>
<td>.865</td>
</tr>
</tbody>
</table>

From the five-factor solution for performance, the first factor was named Performance-CSR. Six items were reduced to one factor for further analysis (table 4.2.33). The distribution turned out to be normal.

Table 4.2.33: Performance - CSR scale.
### Performance-CSR - Items

<table>
<thead>
<tr>
<th></th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2</td>
<td>Develops policies to protect the environment.</td>
</tr>
<tr>
<td>4.3</td>
<td>Is actively involved in the local community.</td>
</tr>
<tr>
<td>4.4</td>
<td>Is well respected by the local community.</td>
</tr>
<tr>
<td>4.5</td>
<td>Is environmentally responsible.</td>
</tr>
<tr>
<td>4.6</td>
<td>Develops the local economy.</td>
</tr>
<tr>
<td>4.7</td>
<td>Follows sustainability (corporate and social responsibility) policies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness (CR)</th>
<th>Kurtosis (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.854</td>
<td>4.775</td>
<td>.108</td>
<td>-.145 (.228)</td>
<td>-.620 (.453)</td>
</tr>
</tbody>
</table>

#### 4.2.5.2 Responsiveness

The factor analysis, with a five-factor solution, resulted in a scale of responsiveness (Bettis and Hitt, 1995) with three items from the main performance scale (Hart and Banbury, 1994). Interestingly enough, all items could be grouped under ‘responsiveness’. The responsiveness scale consisted of 7 items: all items from the responsiveness scale (4.24, 4.25, 4.26, and 4.27) and three items from the main performance scale (4.11, 4.12 and 4.15). All items were measured on a seven-point scale from very little to very much. Measuring the reliability of the scale showed the Cronbach alpha was .861 for the eight items, with 113 cases included in the analysis (table 4.2.34).

#### Table 4.2.34: The importance of responsiveness items.

<table>
<thead>
<tr>
<th></th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach’s Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.24 resp 1 threats</td>
<td>32.64</td>
<td>19,733</td>
<td>.621</td>
<td>.465</td>
<td>.843</td>
</tr>
<tr>
<td>4.25 resp 2 decisions</td>
<td>32.73</td>
<td>18,786</td>
<td>.731</td>
<td>.613</td>
<td>.828</td>
</tr>
<tr>
<td>4.26 resp 3 resources</td>
<td>32.98</td>
<td>18,375</td>
<td>.631</td>
<td>.454</td>
<td>.842</td>
</tr>
<tr>
<td>4.27 resp 4 opportunity</td>
<td>32.44</td>
<td>18,820</td>
<td>.659</td>
<td>.458</td>
<td>.837</td>
</tr>
<tr>
<td>4.11 perf 3 service</td>
<td>32.58</td>
<td>20,032</td>
<td>.538</td>
<td>.378</td>
<td>.853</td>
</tr>
<tr>
<td>4.12 perf 4 competition</td>
<td>32.36</td>
<td>18,823</td>
<td>.649</td>
<td>.509</td>
<td>.838</td>
</tr>
<tr>
<td>4.15 perf 7 diversity</td>
<td>32.21</td>
<td>18,722</td>
<td>.592</td>
<td>.401</td>
<td>.847</td>
</tr>
</tbody>
</table>

#### Table 4.2.35: Factor analysis for responsiveness scale.
Running a factor analysis showed the items had inter-correlation above .3. KMO measure of sampling adequacy was .844, is above the .6 level, and Bartlett’s test of sphericity was significant at .000. Running factor analysis with Eigenvalue over 1 gave a one-factor solution, explaining 55% of the variance and all items with factor-loadings above .650.

From the five-factor solution for performance, the second factor was named Performance Responsiveness. Seven items were reduced to one factor for further analysis. The distribution turned out to be normal. The scale and the elements are found in table 4.2.36.

Table 4.2.36: Performance –Responsiveness scale.

<table>
<thead>
<tr>
<th>Performance Responsiveness - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.11 Has achieved the desired service and/or product outcomes.</td>
<td>.652</td>
</tr>
<tr>
<td>4.12 Has a high competitive position.</td>
<td>.747</td>
</tr>
<tr>
<td>4.15 Will seek to diversify in the marketplace.</td>
<td>.702</td>
</tr>
<tr>
<td>4.24 Sense potential threats (legislative, political, technological, competitive, customer demands etc.)</td>
<td>.740</td>
</tr>
<tr>
<td>4.25 Conceptualise a response and make decisions and plans to meet threats.</td>
<td>.825</td>
</tr>
<tr>
<td>4.26 Reconfigure resources and implement necessary changes to meet threats.</td>
<td>.745</td>
</tr>
<tr>
<td>4.27 Sense new business or technological opportunities.</td>
<td>.768</td>
</tr>
</tbody>
</table>

4.2.5.3 Sales & Quality

The factor analysis, with a five-factor solution, resulted in a scale of sales and quality with items from Hart and Banbury (1994). The Sales and Quality scale consisted of 4 items: 4.20, 4.21, 4.22, and 4.23. All items were measured on a seven-point scale from very little to very much. Measuring the reliability of the
scale showed the Cronbach alpha was .723 for the eight items, with 114 cases included in the analysis. There was high correlation between the items (table 4.2.37).

**Table 4.2.37: The importance of sales & quality items.**

<table>
<thead>
<tr>
<th>Item Del.</th>
<th>Scale Mean if Item Del.</th>
<th>Scale Variance if Item Del.</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Del.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.20 perf 12 sales</td>
<td>16.68</td>
<td>5.867</td>
<td>.597</td>
<td>.635</td>
<td>.607</td>
</tr>
<tr>
<td>4.21 perf 13 m.share</td>
<td>16.94</td>
<td>5.704</td>
<td>.641</td>
<td>.647</td>
<td>.575</td>
</tr>
<tr>
<td>4.22 perf 14 quality</td>
<td>16.67</td>
<td>7.959</td>
<td>.414</td>
<td>.376</td>
<td>.714</td>
</tr>
<tr>
<td>4.23 perf 15 empl.satisf.</td>
<td>17.01</td>
<td>7.832</td>
<td>.415</td>
<td>.338</td>
<td>.713</td>
</tr>
</tbody>
</table>

Running a factor analysis showed that a two-factor solution was possible with the two sales items (4.20 and 4.21) loading on one factor and quality and employee-satisfaction (4.22 and 4.23) on another. As the one-factor solution failed the KMO test it was decided to split the factor into two factors, explaining 81% of the variance (table 4.2.38). The items factor loadings on the sales growth factor were above .910 (table 4.2.39) and above .83 on the quality factor (4.2.40).

**Table 4.2.38: Factor analysis for sales & quality scale.**

<table>
<thead>
<tr>
<th>Comp</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Var.</td>
<td>Cumul. %</td>
</tr>
<tr>
<td>1</td>
<td>2.185</td>
<td>54.614</td>
<td>54.614</td>
</tr>
<tr>
<td>2</td>
<td>1.042</td>
<td>26.046</td>
<td>80.660</td>
</tr>
<tr>
<td>3</td>
<td>.595</td>
<td>14.869</td>
<td>95.529</td>
</tr>
<tr>
<td>4</td>
<td>.179</td>
<td>4.471</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

Items 4.20 and 4.21 were related to sales growth and market share growth, the factor was therefore called Growth. The two items were reduced to one factor for further analysis. The distribution turned out to be normal, although one case (case 68) was smoothed to the next value above, as it was an extreme outlier. The scale and the elements are found in table 4.2.39.

**Table 4.2.39: Performance – Growth scale.**

<table>
<thead>
<tr>
<th>Performance Growth - Items</th>
<th>Factor loading</th>
</tr>
</thead>
</table>
Items 4.22 and 4.23 were related to employee satisfaction and high standard of quality in service and products, the factor was therefore called Satisfaction. The two items were reduced to one factor for further analysis. The distribution turned out to be normal. The Cronbach’s Alpha was .644 indicating it was not a very good scale and it was a question if the items should be forced into a scale. The scale was, however, kept as the two items explained 74% of the variance. The scale and the elements are found in table 4.2.40.

Table 4.2.40: Performance – Satisfaction scale.

<table>
<thead>
<tr>
<th>Performance Satisfaction - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.22 Has a high standard of quality in service and/or products.</td>
<td>.855</td>
</tr>
<tr>
<td>4.23 Has high employee satisfaction.</td>
<td>.836</td>
</tr>
</tbody>
</table>

4.2.5.4 Development

The factor analysis, with a five-factor solution, resulted in a scale of development with items from Hart and Banbury (1994). The Development scale consisted of 3 items: 4.16, 4.17 and 4.18, all related to introduce and develop new products or services. All items were measured on a seven-point scale from very little to very much. Measuring the reliability of the scale showed the Cronbach alpha was .795 for the three items, with 114 cases included in the analysis. There was high correlation between the items (table 4.2.41).

Running a factor analysis showed the items had inter-correlation above .3. KMO measure of sampling adequacy was .697, is above the .6 level, and Bartlett’s test of sphericity was significant at .000. Running factor analysis with Eignevalue over 1 gave a one-factor solution, explaining 71% of the variance and all items with factor-loadings above .81. The three items were reduced to one factor for further analysis. The distribution turned out to be normal. The scale and the elements are found in table 4.2.42.
Table 4.2.41: The importance of development items.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.16 perf 8 change</td>
<td>10.02</td>
<td>8.46</td>
<td>.636</td>
<td>.421</td>
<td>.728</td>
</tr>
<tr>
<td>4.17 perf 9 newservice</td>
<td>9.85</td>
<td>7.155</td>
<td>.686</td>
<td>.476</td>
<td>.668</td>
</tr>
<tr>
<td>4.18 perf 10 develop</td>
<td>10.38</td>
<td>7.777</td>
<td>.600</td>
<td>.363</td>
<td>.763</td>
</tr>
</tbody>
</table>

Table 4.2.42: Performance – Development scale.

<table>
<thead>
<tr>
<th>Performance Development - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.16 Will change its existing products and services.</td>
<td>.842</td>
</tr>
<tr>
<td>4.17 Will introduce new services and/or products next year.</td>
<td>.873</td>
</tr>
<tr>
<td>4.18 Will have an active services and/or product development programme.</td>
<td>.815</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>.795</td>
<td>5.041</td>
<td>.125</td>
<td>-.502</td>
<td>-.412</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(CR)</td>
<td>(CR)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-.226)</td>
<td>(.449)</td>
</tr>
</tbody>
</table>

4.2.5.5 Financial performance

Factor analysis with a three-factor solution resulted in a clear financial scale. The underlying items could be grouped under financial performance. The financial performance scale consisted of four items, all items from the main performance scale (4.9, 4.10, 4.13, and 4.14). All items were measured on a seven-point scale from very little to very much. Measuring the reliability of the scale showed a Cronbach alpha of .883 for the four items, with 114 cases included in the analysis (table 4.2.43).

Running a factor analysis showed all items had inter-correlation above .3. KMO measure of sampling adequacy was .785, that is above the .6 level, and Bartlett’s test of sphericity was significant at .000. The Eigenvalue for component 1 was 3.008, explaining 75% of the variance (table 4.2.42). All items had factor loadings higher than .70 (table 4.2.44).

Table 4.2.43: The importance of financial performance items.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Del.</th>
<th>Scale Variance if Item Del.</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.13 perf profitability</td>
<td>16.32</td>
<td>10.203</td>
<td>.809</td>
<td>.714</td>
<td>.833</td>
</tr>
<tr>
<td>4.14 perf cash</td>
<td>15.70</td>
<td>13.432</td>
<td>.655</td>
<td>.432</td>
<td>.882</td>
</tr>
<tr>
<td>4.9 perf financial</td>
<td>16.11</td>
<td>11.819</td>
<td>.856</td>
<td>.773</td>
<td>.806</td>
</tr>
</tbody>
</table>
From the five-factor solution for performance, the third factor was named Performance Finance. Four items were reduced to one factor for further analysis. The distribution turned out to be normal, although with two potential outliers (case 4 and case 53). The scale and the elements are found in table 4.2.45.

**Table 4.2.44: Factor analysis for financial performance scale.**

<table>
<thead>
<tr>
<th>Comp.</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>3.008</td>
<td>75.190</td>
</tr>
<tr>
<td>2</td>
<td>.486</td>
<td>12.160</td>
</tr>
<tr>
<td>3</td>
<td>.359</td>
<td>8.986</td>
</tr>
<tr>
<td>4</td>
<td>.147</td>
<td>3.663</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

**Table 4.2.45: Financial performance scale.**

<table>
<thead>
<tr>
<th>Performance Finance - Items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.9 Has a strong financial performance.</td>
<td>.927</td>
</tr>
<tr>
<td>4.10 Achieves its goals.</td>
<td>.845</td>
</tr>
<tr>
<td>4.13 Has high profitability.</td>
<td>.900</td>
</tr>
<tr>
<td>4.14 Has a positive cash flow.</td>
<td>.790</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness (CR)</th>
<th>Kurtosis (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.883</td>
<td>5.421</td>
<td>.098</td>
<td>-.667 (.226)</td>
<td>-.105 (.449)</td>
</tr>
</tbody>
</table>

**4.2.5.6 Overall Performance**

One item, 4.19 - Overall performance, was eliminated from the factors, as it loaded equally on Competitiveness performance and Financial performance at the .50 level. It can therefore be labelled an overall performance measure. The variable is normally distributed. The mean and the standard deviation of the variable are shown in table 4.2.40.

**Table 4.2.46: Overall performance – one item.**

<table>
<thead>
<tr>
<th>Mean</th>
<th>SD</th>
<th>Skewness (CR)</th>
<th>Kurtosis (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.70</td>
<td>.089</td>
<td>-.756</td>
<td>.721</td>
</tr>
</tbody>
</table>
The six performance factors, Responsive performance, Growth performance, Satisfaction performance, Development performance, Financial performance, and CSR performance, are, however, the best measures of overall performance. They indicate different aspects of performance as financial outcome measures, process measures, and stakeholder measures. They meet the requirement of the survey to develop a broad measure for performance to understand how the board of directors can relate to performance.

4.2.6 Multicollinearity
The final step in the examination of the data before hypothesis testing was to look at the collinearity. This approach is critical to multivariate analysis, as it explains how independent variable effects can be accounted for by other independent variables in the analysis (Palludan, 2005). Collinearity is a technique to measure the relationship between two independent variables. Multicollinearity is a way to explore whether a single independent variable is highly correlated to a set of other independent variables.

The criteria for the test were that two independent variables have complete collinearity if their correlation coefficient is 1, and complete lack of collinearity if the correlation coefficient is 0 (Hair et al., 2006). Collinearity is said to occur already at a correlation level of .30, although substantial collinearity is generally indicated at .90 and above (Hair et al., 2006). Tabacnich and Fidell (2001) suggest if the correlation is above .70 between two independent variables, consideration should be given to removing one. The higher the collinearity, the harder it becomes to separate the effects of each variable. Therefore, the ideal situation is independent variables with little correlation between them, but instead high correlation to the dependent variables. It is important to check for collinearity and its impact on the results (Hair et al., 2006).

Three approaches are generally used by researchers to check for collinearity (Hair et al., 2006). These are (1) a graphic approach looking at the scatterplot, (2) an examination of the correlation matrix, and (3) the variance inflation factor (VIF), a
measure of tolerance, or the degree of variability of the chosen independent variable not explained by other independent variables (Hair et al., 2006).

Running linear regression on SPSS showed collinearity was not a problem, as no bivariate correlation was above 650. There was, however, one exception, and that was between the Monitoring role and the Strategic role, where the correlation was .732, which is above the standard of .70 of Tabachnick and Fidell (2001). Looking more closely at factor analysis, it was clear item 5.15 - Determining the manager’s responsibility - loaded highly on both the Strategic role factor and the Monitoring role factor. When the item was deleted from the Monitoring role factor, the correlation between the Strategic role factor and the Monitoring role factor was lowered to .662, but at the same time correlation was .966 with the old Monitoring role factor with item 5.15 included. The new three-item factor had a Cronbach alpha of .752, compared to .782 on the four-item scale. It was decided to keep two versions of the Monitoring role factor. The argument for keeping the old one for further analysis was item 5.15 was from the original scale (Churchill, 1995).

Further exploration of multicollinearity uses the VIF and the tolerance values. If the tolerance value is very small (less than .10) it indicates the variable’s correlation with other variables is high, while a high VIF (there is an inverse relationship, 1-R², between VIF and tolerance) in excess of 10 would express the same (Pallant, 2005). Here all variables had tolerance higher than .27 and VIF below 3.60, except one variable, the Monitoring role variable. The tolerance was .05, while the VIF value was 20.58, indicating high multicollinearity. The modified Monitoring role factor with three items also showed high multicollinearity, although to a lesser extreme (t = .06 and VIF = 16.55).

The problem with multicollinearity was therefore noted, and it was accepted this would limit the use of the Monitoring role factor in multivariate analysis. The multicollinearity of the Monitoring role factor makes perfect sense from a theoretical perspective, as monitoring is considered the main role of the board, and a fundamental role by law (Drucker, 1954; Fama and Jensen, 1983; Lubatkin, 2007). One would expect it would be more difficult to eliminate the monitoring role.
of the board, as opposed to their other roles and functions. The design of the study
did in fact consider this effect, and therefore there would still be use for the
Monitoring role factor in further analysis of the data.

The scatter-plot and the normal probability plot were used for a preliminary check
for outliers within the multicollinearity analysis, and furthermore Cook’s distance
was looked at as recommend by Pallant (2005). According to Tabachnick and Fidell
(2001), a case is a potential problem if Cook’s distance is larger than one. Neither
the graphic analysis nor Cook’s distance indicated any problems with outliers. In
other words, no outliers that could significantly influence the results were found at
this point.

4.2.7 The purification process
Noting Bertrand Russell’s quote at the beginning of this section, the purification
process has increased the certainty of elements previously conceptualized but which
suffered from lack of empirical support. The roles of the board are a good example.
The purification process has established items related to a certain concept do in fact
load on the same factor. This is an important step, not least in regard to the strategic
role, which was based on an instrument adapted from different sources in the
literature. This instrument has now been validated in the corporate governance
context.

Otherwise, the emphasis of this section was to check the reliability of scales
adopted from previously published research, and modify these scales according to
their results as factors. A summary of the factors is in table 4.2.47. Furthermore, a
check of normality in distribution and collinearity was carried out to assess whether
the data was acceptable for multivariate analysis. The results turned out to be
positive.

Table 4.2.47: Summary of factors in the study.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Alpha</th>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic role</td>
<td>.958</td>
<td>14</td>
<td>4.440</td>
<td>.119</td>
<td>-.300/.235</td>
<td>-.665/.465</td>
</tr>
<tr>
<td>Monitoring role</td>
<td>.782</td>
<td>4</td>
<td>4.699</td>
<td>.125</td>
<td>-.291/.228</td>
<td>-.558/.453</td>
</tr>
<tr>
<td>Resource &amp; Advice role</td>
<td>.782</td>
<td>6</td>
<td>4.655</td>
<td>.118</td>
<td>-.484/.230</td>
<td>.058/.457</td>
</tr>
<tr>
<td>Authority - Finance</td>
<td>.866</td>
<td>6</td>
<td>5.187</td>
<td>.110</td>
<td>-.632/.227</td>
<td>.224/.451</td>
</tr>
<tr>
<td>Category</td>
<td>Value</td>
<td>N</td>
<td>Average</td>
<td>Standard Deviation</td>
<td>t-Value</td>
<td>p-Value</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------</td>
<td>----</td>
<td>---------</td>
<td>--------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Authority - Direction</td>
<td>.907</td>
<td>7</td>
<td>4.496</td>
<td>.126</td>
<td>-.127/.234</td>
<td>.362/.463</td>
</tr>
<tr>
<td>Process - Efficiency</td>
<td>.810</td>
<td>3</td>
<td>4.730</td>
<td>.111</td>
<td>-.375/.229</td>
<td>-.131/455</td>
</tr>
<tr>
<td>Process - Decision</td>
<td>.709</td>
<td>2</td>
<td>5.800</td>
<td>.088</td>
<td>-.647/.227</td>
<td>.173/.451</td>
</tr>
<tr>
<td>Process - Style</td>
<td>.773</td>
<td>4</td>
<td>5.322</td>
<td>.071</td>
<td>-.208/.226</td>
<td>-.501/.449</td>
</tr>
<tr>
<td>Process - Information</td>
<td>.754</td>
<td>4</td>
<td>4.689</td>
<td>.099</td>
<td>.027/.226</td>
<td>-.354/.449</td>
</tr>
<tr>
<td>Performance - CSR</td>
<td>.854</td>
<td>6</td>
<td>4.775</td>
<td>.108</td>
<td>-.145/.228</td>
<td>-.620/.453</td>
</tr>
<tr>
<td>Performance - Responsiveness</td>
<td>.861</td>
<td>7</td>
<td>5.427</td>
<td>.068</td>
<td>-.304/.227</td>
<td>-.293/.451</td>
</tr>
<tr>
<td>Performance - Development</td>
<td>.795</td>
<td>3</td>
<td>5.041</td>
<td>.125</td>
<td>-.502/.226</td>
<td>-.412/.449</td>
</tr>
<tr>
<td>Performance - Growth</td>
<td>.857</td>
<td>2</td>
<td>5.649</td>
<td>.103</td>
<td>-.658/.226</td>
<td>.132/.449</td>
</tr>
<tr>
<td>Performance - Satisfaction</td>
<td>.644</td>
<td>2</td>
<td>5.592</td>
<td>.079</td>
<td>-.444/.227</td>
<td>-.564/.451</td>
</tr>
<tr>
<td>Performance - Finance</td>
<td>.883</td>
<td>4</td>
<td>5.421</td>
<td>.098</td>
<td>-.667/.226</td>
<td>-.105/.449</td>
</tr>
</tbody>
</table>

The next section examines the actual testing of propositions, using correlation, single regression, and stepwise multivariate analysis.
4.3 Testing hypotheses

A thinker sees his own actions as experiments and questions - as attempts to find out something. Success and failure are for him answers above all.

Friedrich Nietzsche (1844 - 1900)

Research in the paradigms of realism and positivism concerns experiments to test beliefs or relevant theories (Popper, 2002). No matter the outcome, something needed to be understood and explained. If the outcome agrees with the theory and the related proposition, it helps to verify the theory in a positivist sense (Popper, 2002). If it does not, it needs to be explained. However, clear explanations are hard to find, so often it becomes a matter of proposing some relevant explanation that may require further research. The purpose of this section is to test the hypotheses.

Figure 4.3.1: Overview of the testing process.

<table>
<thead>
<tr>
<th>4.1. Examine data</th>
<th>4.3.1. Approach to testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2. Purify instruments</td>
<td>4.3.2. Testing tasks as roles and performance</td>
</tr>
<tr>
<td>4.3. Estimate model</td>
<td>4.3.3. Testing authority and performance</td>
</tr>
<tr>
<td>4.4. Interpret results</td>
<td>4.3.4. Testing process and performance</td>
</tr>
<tr>
<td>4.5. Validate model</td>
<td>4.3.5. Testing composition and performance</td>
</tr>
<tr>
<td></td>
<td>4.3.6. Testing context and performance</td>
</tr>
<tr>
<td></td>
<td>4.3.7. The testing process</td>
</tr>
</tbody>
</table>

In this section the relationships between variables are tested as they are set forth in the hypotheses. The approach used is correlation analysis and regression analysis, which is discussed in the first part of this section. The following subsections will focus on the actual testing of the main hypotheses. The last part is a summarisation of the results (figure 4.3.1).
4.3.1 Approach to testing

Two main approaches are used for testing the hypotheses of this thesis, correlation analysis, and regression analysis. This is approach is similar to the one used in other doctorate work (for example Lindgren, 2001; Tanner, 2005).

Correlation analysis simply assesses the relationship between two variables, without controlling for the effects of other variables. It is particularly useful in exploring relationships between variables that were not hypothesised, and when comparing and relating the results to previous research, where other sets of variables were employed (Hair et al., 2003). This approach was used here as a first step in checking the relationships between independent board variables, and the dependent organisational performance variables. However, the bivariate correlation analysis was only used for an overview, as the proposition guided the testing, and a more focused approach of single regressions tested the propositions. The correlation analysis can be found in the appendix.

Multiple regression analysis is a more sophisticated technique to evaluate the impact of several independent variables on a given dependent variable. When examining the relationship between one of the independent variables and the dependent variables, all other variables in the model are controlled for (Hair et al., 2003). In this research stepwise regression is used for testing the research model from an exploratory perspective. A stepwise multiple regression is a sequential approach in which the strongest correlation forms the basis of the model, and a set of independent variables are added or deleted from the model with the aim of strengthening the relationship with the dependent variable (Hair et al., 2003). In the automated approach, the computer selects the variables based on the strongest relationship. It is also possible to choose the sequence manually based on theory (Pallant, 2005). A mixture of both the manual and automated approach was used in the following analysis, as the manual choices were based on theory where the strongest relationship was likely to exist (for example Zahra and Pearce, 1989; Johnson et al., 1996). Therefore, the stepwise approach begins with roles and organisational performance. The other basic concepts are then added, starting with the process variables, then composition variables, and finally the contingency
variables. The process is automated for each concept. The SPSS program calculates the role with the strongest relationship to organisational performance as the first model, and then adds the other roles if they can strengthen the relationship between the independent and the dependent sides of the equation. As this approach only allowed one dependent variable, the process was repeated for all four dependent variables.

The strength of the relationships can be interpreted with the help of rules of thumb developed by Hair et al. (2003, p. 282). A very strong relationship is between .91-1.00 (negative or positive), high relationship is between .71-.90, moderate relationship is between .41-.70, small but definite relationship is between .21-.40 and a correlation coefficient size between .01-.20 can be interpreted as slight, almost negligible. The interpretation is, however, relative as it depends on the nature of the relationship how strong it can expected to be (Pallant, 2005).

The following discussion begins with simple single regression equations run against the four dependent variables, and finally uses stepwise regression to find the strongest relationship and minimise the effect of multicollinearity.

### 4.3.2 Testing tasks as roles and performance

The first test for relationships between variables is based on the first main hypothesis of this thesis. The hypothesis simply states:

H1. *There is a positive relationship between the level of role importance and company performance.*

In other words, the hypothesis indicates a relationship between the task function of the board and the performance of the organisation (figure 4.3.2)

*Figure 4.3.2: The relationship between board tasks and performance.*
As a result of the factor analysis, the concepts of board tasks were operationalised into three roles: strategic role, monitoring role, and resource and advice role (R&A role). The results of the factor analysis were similar to the results of the conceptualisation process, the only difference was the resource role and advice role were combined into one factor. The initial proposition can therefore be restated in terms of the three relationships (figure 4.3.3):

H1.
(a) There is a positive relationship between the level of strategic role and performance.
(b) There is a positive relationship between the level of monitoring role and performance.
(c) There is a positive relationship between the level of resource and advice role and performance.

Figure 4.3.3. Board roles and organisational performance.

Furthermore, a fourth hypothesis can be stated which implies of the three board roles, the strategic role has the strongest relationship to performance (Carpenter and Westphal, 2001).

(d) There is a relatively stronger relationship between the level of strategic role and performance, than between the other two roles and performance.

The first step in the approach for testing relationships between variables used in this thesis was to run a single linear regression. Items for measuring organisational performance were reduced to six factors in the data reduction process: Financial performance, Responsive performance, Development performance, Growth performance, Satisfaction performance and CSR performance. Furthermore, a single item variable for overall performance was identified. Therefore, seven
different runs were done for each role factor. The following subsection discusses the test for each role factor.

### 4.3.2.1 Resource and advice role - Performance

The resource and advice role was tested against seven measures of performance. Figure 4.3.4 describes the proposed relationships being tested and table 4.3.1 provides an overview of the results.\(^{15}\)

**Figure 4.3.4: Relationships between R&A role and performance measures.**

![Diagram showing relationships between R&A role and performance measures.]

**Table 4.3.1: Relationship between Resource and advice role and Performance.**

<table>
<thead>
<tr>
<th>Performance</th>
<th>R(^2)</th>
<th>Sig F</th>
<th>B</th>
<th>Stand Beta</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall performance</td>
<td>.035*</td>
<td>.050</td>
<td>.144</td>
<td>.187</td>
<td>.050</td>
</tr>
<tr>
<td>Financial performance</td>
<td>.014</td>
<td>.224</td>
<td>.110</td>
<td>.117</td>
<td>.224</td>
</tr>
<tr>
<td>Responsive performance</td>
<td>.132**</td>
<td>.000</td>
<td>.212</td>
<td>.363</td>
<td>.000</td>
</tr>
<tr>
<td>Development performance</td>
<td>.100**</td>
<td>.001</td>
<td>.342</td>
<td>.316</td>
<td>.001</td>
</tr>
<tr>
<td>Growth performance</td>
<td>.097**</td>
<td>.001</td>
<td>.277</td>
<td>.311</td>
<td>.001</td>
</tr>
<tr>
<td>Satisfaction performance</td>
<td>.029</td>
<td>.073</td>
<td>.117</td>
<td>.172</td>
<td>.073</td>
</tr>
<tr>
<td>CSR performance</td>
<td>.073*</td>
<td>.004</td>
<td>.253</td>
<td>.270</td>
<td>.004</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).

\(^{15}\) The grey colour of the font indicates the null proposition cannot be rejected.
The results indicate the null hypothesis can be rejected in all cases, except between the Resource and advice role and Financial and Satisfaction performance. The results are significant at the .01 level for all other relationships except in the case of Overall performance, which is significant at the .05 level. However, the effect ($R^2$) is only marginal. The relatively strongest is Responsive performance and the weakest Overall performance.

4.3.2.2 Monitoring role - Performance
The Monitoring role was tested against seven measures of performance. Figure 4.3.5 describes the proposed relationships tested, and table 4.3.2 provides an overview of the results.

Figure 4.3.5: Monitoring role and performance measures.

Table 4.3.2: Relationship between the Monitoring role and Performance.

<table>
<thead>
<tr>
<th>Performance</th>
<th>$R^2$</th>
<th>Sig F</th>
<th>B</th>
<th>Stand Beta</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall performance</td>
<td>.047*</td>
<td>.021</td>
<td>.156</td>
<td>.218</td>
<td>.021</td>
</tr>
<tr>
<td>Responsive performance</td>
<td>.171**</td>
<td>.000</td>
<td>.221</td>
<td>.414</td>
<td>.000</td>
</tr>
<tr>
<td>Development performance</td>
<td>.089**</td>
<td>.001</td>
<td>.296</td>
<td>.299</td>
<td>.001</td>
</tr>
<tr>
<td>Growth performance</td>
<td>.051*</td>
<td>.016</td>
<td>.189</td>
<td>.227</td>
<td>.016</td>
</tr>
<tr>
<td>Satisfaction performance</td>
<td>.033</td>
<td>.056</td>
<td>.114</td>
<td>.181</td>
<td>.073</td>
</tr>
<tr>
<td>CSR performance</td>
<td>.055*</td>
<td>.013</td>
<td>.204</td>
<td>.235</td>
<td>.013</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).
In the case of the Monitoring role, the null hypothesis can be rejected at the .01 significance level for Responsive and Development performance, and the .05 level for the other measures, except Satisfaction which cannot be rejected. However, the effect ($R^2$) is weak. It is relatively the strongest for Responsive performance, and almost negligible in the other cases. Even so, the proposition there is a relationship between the Monitoring role and Organisational performance is supported.

4.3.2.3 Strategic role and Performance

From the theoretical discussion it can be argued of the three roles, the strategic role should have the strongest correlation with performance. The Strategic role was tested against seven measures of performance. Figure 4.3.6 describes the proposed relationships tested, and table 4.3.3 provides an overview of the results.

Figure 4.3.6: Strategic role and performance measures.

Table 4.3.3: Relationship between the Strategic role and Performance.

<table>
<thead>
<tr>
<th>Performance</th>
<th>$R^2$</th>
<th>Sig F</th>
<th>B</th>
<th>Stand Beta</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall performance</td>
<td>.084**</td>
<td>.003</td>
<td>.229</td>
<td>.290</td>
<td>.000</td>
</tr>
<tr>
<td>Financial performance</td>
<td>.102**</td>
<td>.001</td>
<td>.308</td>
<td>.320</td>
<td>.001</td>
</tr>
<tr>
<td>Responsive performance</td>
<td>.226**</td>
<td>.000</td>
<td>.276</td>
<td>.475</td>
<td>.000</td>
</tr>
<tr>
<td>Development performance</td>
<td>.096**</td>
<td>.001</td>
<td>.337</td>
<td>.310</td>
<td>.001</td>
</tr>
<tr>
<td>Growth performance</td>
<td>.093**</td>
<td>.001</td>
<td>.278</td>
<td>.305</td>
<td>.001</td>
</tr>
<tr>
<td>Satisfaction performance</td>
<td>.131**</td>
<td>.000</td>
<td>.247</td>
<td>.361</td>
<td>.000</td>
</tr>
<tr>
<td>CSR performance</td>
<td>.152**</td>
<td>.000</td>
<td>.363</td>
<td>.390</td>
<td>.000</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).
The null hypothesis could be rejected at the .01 significance level in all cases, when the relationships between the Strategic role and the seven performance measures were tested. Furthermore, they were notably stronger relationships than when the other two roles were tested. In agreement with Hair et al. (2003), there is a small but definite relationship between the Strategic role and Responsiveness. The other relationships were minimal. This result supports proposition P1, there is a positive relationship between the strategic role of the board and performance.

4.3.2.4 Stepwise analysis of board roles and performance
Stepwise regression, to test the relationship between board roles and performance, including all roles simultaneously, is a more sophisticated method to explore the relationship between roles and performance. As indicated when the multicollinearity between the roles was discussed, a simple regression with multiple independent variables was not appropriate. With stepwise regression this problem was solved, as the process itself chooses variables with the strongest relationship. From an explorative perspective it is a method to model the relationship.

Table 4.3.4: Stepwise model of roles and Competitive performance.

<table>
<thead>
<tr>
<th>Best model</th>
<th>R²</th>
<th>Sig F</th>
<th>B</th>
<th>Stand Beta</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic role</td>
<td>Overall performance</td>
<td>.094*</td>
<td>.002</td>
<td>.229</td>
<td>.290</td>
</tr>
<tr>
<td>Strategic role</td>
<td>Financial performance</td>
<td>.118**</td>
<td>.000</td>
<td>.302</td>
<td>.344</td>
</tr>
<tr>
<td>Strategic role</td>
<td>Responsive performance</td>
<td>.224**</td>
<td>.000</td>
<td>.277</td>
<td>.473</td>
</tr>
<tr>
<td>Strategic role</td>
<td>Development performance</td>
<td>.114**</td>
<td>.000</td>
<td>.368</td>
<td>.338</td>
</tr>
<tr>
<td>Strategic role</td>
<td>Growth performance</td>
<td>.112**</td>
<td>.001</td>
<td>.305</td>
<td>.335</td>
</tr>
<tr>
<td>Strategic role</td>
<td>Competitive performance</td>
<td>.131**</td>
<td>.000</td>
<td>.250</td>
<td>.362</td>
</tr>
<tr>
<td>Strategic role</td>
<td>CSR performance</td>
<td>.155**</td>
<td>.000</td>
<td>.371</td>
<td>.394</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).

The multiple stepwise regressions clearly showed the strongest relationship was between the strategic role and all the seven performance measures. The other two roles, monitoring, and resource and advice, neither strengthened nor added to the relationships. The Fama and Jensen (1983) model helps to explain this, as the Monitoring role exemplifies ratification and monitoring, while the Strategic role...
exemplifies initiation and implementation. Furthermore, this relates to the
distinction between monitoring and directing in the definition of corporate
governance (Cadbury, 2002), and the distinction between conformance and
performance (Tricker, 1994). The distinction between the Resource and advice role
and the Strategic role can be argued theoretically, although it might not be as simple
to distinguish between the two roles in practice. The approach of some researchers
(Carpenter and Westphal, 2001; Heuvel et al., 2006), to cluster both roles under
‘service,’ and to pay only limited attention to strategy, emphasises the problem of
multicollinearity in regards to conceptualisation. The first step of this analysis
shows, however, that the Strategic role is the most important of the three roles in
relationship with performance.

4.3.2.5 Conclusions about roles

The conclusion from testing the relationship between roles as tasks and
Organisational performance showed simple single regression supports the
propositions proposed earlier.

H1.
(a) There is a positive relationship between the level of strategic role and
performance.
(b) There is a positive relationship between the level of monitoring role and
performance.
(c) There is a positive relationship between the level of support role and
competitive performance and CSR performance.
(d) There is a relatively stronger positive relationship between the level of
strategic role and performance than between the monitoring and support
roles and performance.

Stepwise multivariate regression, including only the three role factors, showed the
Strategic role had the strongest relationship with the performance measures, and
because of multicollinearity the other factors were excluded from the model.
Therefore propositions H1a and H1d can be supported, with stepwise analysis
controlling for the other two roles.

4.3.3 Testing Authority and Performance

The authority (or power) of the board was measured with the 15-item scale tested
and validated by Zahra and Pearce (1991). The factor was included in the study as
an alternative method to measure the involvement of the board. Figure 4.3.7 describes the proposed relationships tested, and table 4.3.5 provides an overview of the results.

Figure 4.3.7: Authority of the board and performance measures.

Table 4.3.5: Authority of the board and Performance.

<table>
<thead>
<tr>
<th>Performance</th>
<th>R²</th>
<th>Sig F</th>
<th>B</th>
<th>Stand Beta</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall performance</td>
<td>.000</td>
<td>.834</td>
<td>.017</td>
<td>.021</td>
<td>.834</td>
</tr>
<tr>
<td>Financial performance</td>
<td>.001</td>
<td>.802</td>
<td>.023</td>
<td>.025</td>
<td>.802</td>
</tr>
<tr>
<td>Responsive performance</td>
<td>.057*</td>
<td>.013</td>
<td>.151</td>
<td>.239</td>
<td>.013</td>
</tr>
<tr>
<td>Development performance</td>
<td>.006</td>
<td>.411</td>
<td>.095</td>
<td>.080</td>
<td>.411</td>
</tr>
<tr>
<td>Growth performance</td>
<td>.000</td>
<td>.983</td>
<td>-.002</td>
<td>-.002</td>
<td>.983</td>
</tr>
<tr>
<td>Satisfaction performance</td>
<td>.011</td>
<td>.248</td>
<td>.079</td>
<td>.104</td>
<td>.284</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).

The results show the null proposition cannot be rejected in any of the seven cases at the .05 significance level, except in the case of Responsive performance although the relationship is marginal. The Authority of the board was also run with the two-factor solution with the same result. This gave a somewhat puzzling result, as more powerful boards indicated more active boards, both in regard to monitoring and strategy (Zahra and Pearce, 1991). The factor analysis indicated the sample boards
were powerful in regards to Financial Authority (mean = 5.187) and Authority to Direct (mean = 4.496). Agency theory would support the proposition powerful boards would have a relationship, although stewardship theory might not, as interference by the board could reflect on the work of the CEO (Donaldson, 1990). Furthermore, this could indicate when the board and the CEO share power, organisational performance improves (Herman, 1981; Vance, 1983; Wood, 1983; Zahra and Pearce, 1991).

In conclusion, from testing the relationship of Authority of the board on performance, there is no support for hypothesis H4.

**H4.** The proposition there is a positive relationship between the level of board authority and organisational performance is **not supported**.

Including the authority effect in stepwise regression had only a marginal effect. As the Authority instrument had been included in the study primarily for contingency purposes, it was then excluded from further analysis in this study.

### 4.3.4 Testing process and performance

The test for relationships between processes and performance was based on the second main proposition of this thesis. The proposition states:

**H2.** There is a positive relationship between the process of boards and company performance.

The board process was operationalised with four different concepts, determined through factor analysis. The four factors were: Efficiency of the board, Decision, Style, and Information. The propositions to be tested were (figure 4.3.8):

**H2.**
(a) There is a positive relationship between the level of efficiency of the board and organisational performance.
(b) There is a positive relationship between the decision process and organisational performance.
(c) There is a positive relationship between the style of the board and organisational performance.
(d) There is a positive relationship between the level of information and organisational performance.

Figure 4.3.8. Board Process and Organisational performance.

To test the nature of the relationship, the method of linear regression was used in seven runs, with different dependent variables for the company performance variable.

4.3.4.1 Efficiency of boards - Performance

The Efficiency of the board was tested against four measures of Organisational performance. Figure 4.3.9 describes the proposed relationships being tested, and table 4.3.6 gives an overview of the results.

Figure 4.3.9: The relationship between Process Efficiency and Performance.
Table 4.3.6: The relationship between Process Efficiency and Performance.

<table>
<thead>
<tr>
<th>Performance</th>
<th>R²</th>
<th>Sig F</th>
<th>B</th>
<th>Stand Beta</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall performance</td>
<td>.161**</td>
<td>.000</td>
<td>.329</td>
<td>.401</td>
<td>.000</td>
</tr>
<tr>
<td>Financial performance</td>
<td>.110**</td>
<td>.000</td>
<td>.300</td>
<td>.332</td>
<td>.000</td>
</tr>
<tr>
<td>Responsive performance</td>
<td>.215**</td>
<td>.000</td>
<td>.280</td>
<td>.464</td>
<td>.000</td>
</tr>
<tr>
<td>Development performance</td>
<td>.088*</td>
<td>.002</td>
<td>.334</td>
<td>.297</td>
<td>.002</td>
</tr>
<tr>
<td>Growth performance</td>
<td>.032</td>
<td>.059</td>
<td>.169</td>
<td>.189</td>
<td>.059</td>
</tr>
<tr>
<td>Satisfaction performance</td>
<td>.099**</td>
<td>.001</td>
<td>.224</td>
<td>.314</td>
<td>.001</td>
</tr>
<tr>
<td>CSR performance</td>
<td>.050*</td>
<td>.019</td>
<td>.222</td>
<td>.225</td>
<td>.019</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).

In the case of Efficiency of the board, the null hypothesis can be rejected in all cases of performance, except Growth performance. All the others can be rejected at the .01 level, and CSR performance at the .05 significance level. That indicates there is support for proposition H2 (a) there is a positive relationship between the efficiency of the board and performance. The Efficiency of the board shows the relatively strongest correlation with Responsive performance, and the least with CSR performance.

This result supports the general theoretical view of agency theory, stewardship theory, and most other theories, except managerial hegemony theory, in that a well functioning board should have value for the corporation (Zahra and Pearce, 1989; Fama and Jensen, 1983; Donaldson, 1990). Boards need to use their limited time well to have any ramification on performance (Lorsch and Carter, 2004).

4.3.4.2 Decision-Making on boards and Performance

The Decision factor within the Process concept was tested against four measures of Organisational performance. Figure 4.3.10 describes the proposed relationships being tested and table 4.3.7 gives an overview of the results.
In the case of Decision making on the board, the null hypothesis could be rejected at the .01 significance level for Overall and Responsive, Development and Satisfaction performance, and at the .05 level for Financial performance. In the case of Growth and CSR performance, the null proposition could not be rejected at the .05 level. Decision-process at board shows the strongest correlation with Responsive performance, although only a very limited relationship.

*Figure 4.3.10: Decision making on boards and Performance.*

*Table 4.3.7: Decision process on boards and Performance.*

<table>
<thead>
<tr>
<th>Performance</th>
<th>$R^2$</th>
<th>Sig F</th>
<th>B</th>
<th>Stand Beta</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall performance</td>
<td>.098**</td>
<td>.001</td>
<td>.318</td>
<td>.312</td>
<td>.001</td>
</tr>
<tr>
<td>Financial performance</td>
<td>.044*</td>
<td>.026</td>
<td>.234</td>
<td>.210</td>
<td>.026</td>
</tr>
<tr>
<td>Responsive performance</td>
<td>.174**</td>
<td>.000</td>
<td>.323</td>
<td>.417</td>
<td>.000</td>
</tr>
<tr>
<td>Development performance</td>
<td>.058*</td>
<td>.010</td>
<td>.344</td>
<td>.241</td>
<td>.010</td>
</tr>
<tr>
<td>Growth performance</td>
<td>.026</td>
<td>.087</td>
<td>.190</td>
<td>.162</td>
<td>.087</td>
</tr>
<tr>
<td>Satisfaction performance</td>
<td>.159**</td>
<td>.000</td>
<td>.359</td>
<td>.398</td>
<td>.000</td>
</tr>
<tr>
<td>CSR performance</td>
<td>.018</td>
<td>.163</td>
<td>.163</td>
<td>.133</td>
<td>.164</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).*

The result supports the stewardship theory mantra the board and the CEO should collaborate for the best results for the organisation (Donaldson, 1990). The lack of support for the relationship with CSR performance is puzzling, as one would assume better collaboration between the board and the CEO would have a positive
effect on other stakeholders. On the other hand, it could indicate the more shareholder-focused perspective of stewardship theory (Donaldson, 1990).

4.3.4.3 Style of boards and Performance

The Style factor within the Process concept was tested against four measures of Organisational performance. Figure 4.3.11 describes the proposed relationships tested, and table 4.3.8 gives an overview of the results.

In the case of Style of the board, the null hypothesis could be rejected in all cases of performance at the .01 significance level, except Growth and Financial performance where it could be rejected at the .05 level. The null hypothesis could not be rejected.
in the case of CSR performance. Style of board decisions showed the strongest correlation with Responsive performance, a small but definite relationship (Hair et al., 2003).

The result is similar to that of Decision, and the interpretation is basically the same in that it reflects the shareholder perspective of stewardship theory rather than a more stakeholder-oriented view.

4.3.4.4 Information flow to boards and Performance

The Information factor was tested against the four measures of Organisational performance. Figure 4.3.12 describes the proposed relationships tested and table 4.3.9 gives an overview of the results.

Figure 4.3.12: Information and Organisational performance.

Table 4.3.9: The relationship between Information and Performance.

<table>
<thead>
<tr>
<th>Performance</th>
<th>$R^2$</th>
<th>Sig F</th>
<th>B</th>
<th>Stand Beta</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall performance</td>
<td>.039*</td>
<td>.036</td>
<td>.176</td>
<td>.197</td>
<td>.036</td>
</tr>
<tr>
<td>Financial performance</td>
<td>.020</td>
<td>.138</td>
<td>.138</td>
<td>.140</td>
<td>.138</td>
</tr>
<tr>
<td>Responsive performance</td>
<td>.140**</td>
<td>.000</td>
<td>.255</td>
<td>.375</td>
<td>.000</td>
</tr>
<tr>
<td>Development performance</td>
<td>.086*</td>
<td>.002</td>
<td>.367</td>
<td>.293</td>
<td>.002</td>
</tr>
<tr>
<td>Growth performance</td>
<td>.032</td>
<td>.058</td>
<td>.184</td>
<td>.178</td>
<td>.058</td>
</tr>
<tr>
<td>Satisfaction performance</td>
<td>.103**</td>
<td>.001</td>
<td>.254</td>
<td>.320</td>
<td>.001</td>
</tr>
<tr>
<td>CSR performance</td>
<td>.062*</td>
<td>.008</td>
<td>.270</td>
<td>.249</td>
<td>.008</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).
In the case of Information to the board, the null hypothesis could be rejected in the cases of Responsive, Development, Satisfaction and CSR performance at the .01 significance level, and at the .05 level for Overall performance. It could not be rejected in the cases of Growth and Financial performance. The correlation with Responsive and Satisfaction performance were relatively strongest, although very small (Hair et al., 2003).

The result is rather puzzling, as one would expect a better-informed board to lead to better financial performance, as the better the board is at scrutinizing financial figures, the better it is able to tackle finance related issues. The relationship with Responsiveness may be reflected back to Porter (1998), who claims better-informed companies will be more competitive. Furthermore, it may be assumed a well-informed board could better consider stakeholder issues than less well-informed boards.

**4.3.4.5 Conclusions about processes**

The conclusion from testing the relationship of process variables to performance in single regression indicated there was support for hypothesis H2, although not in the case of performance measures.

H2.
(a) There is a positive relationship between the level of efficiency of the board and performance.
(b) There is a positive relationship between the level of decision-making on the board and overall performance, financial performance and competitive performance.
(c) There is a positive relationship between the level of the style of board decisions and overall performance, financial performance and competitive performance.
(d) There is a positive relationship between the level of information to the board and competitive performance and CSR performance.

A stepwise multivariate regression, including only the role factors and the process factors, showed, however, only Efficiency and Decision influenced the relationship with the performance measures. The effects of the other relationship were excluded because of multicollinearity. Therefore propositions H2a and H2b can be supported,
with the stepwise analysis controlling for the roles and processes (more about the stepwise regression in section 4.3.7).

### 4.3.5 Composition and Performance

The main research effort in research on boards of directors has been to test the relationship between composition of boards and performance (Zahra and Pearce, 1989; Huse, 2005; Finkelstein and Mooney, 2003). These attributes have been dubbed the ‘usual suspects’ (Finkelstein and Mooney, 2003). In this study there were three independent variables related to composition: board size, women on boards, and independence (see figure 4.3.13). The propositions regarding these three variables are discussed in Section 2.8.

*Figure 4.3.13: The relationship between composition and Performance.*

Table 4.3.10: The relationship between composition and Performance.

<table>
<thead>
<tr>
<th>Performance</th>
<th>Size of boards</th>
<th>Women</th>
<th>Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall performance</td>
<td>.043</td>
<td>.653</td>
<td>-.061</td>
</tr>
<tr>
<td>Financial performance</td>
<td>.085</td>
<td>.368</td>
<td>-.081</td>
</tr>
<tr>
<td>Responsive performance</td>
<td>-.061</td>
<td>.518</td>
<td>-.103</td>
</tr>
<tr>
<td>Development performance</td>
<td>.011</td>
<td>.912</td>
<td>-.024</td>
</tr>
<tr>
<td>Growth performance</td>
<td>-.135</td>
<td>.152</td>
<td>.000</td>
</tr>
<tr>
<td>Satisfaction performance</td>
<td>-.099</td>
<td>.293</td>
<td>-.054</td>
</tr>
<tr>
<td>CSR performance</td>
<td>.054</td>
<td>.572</td>
<td>-.033</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).*

The correlation between the three composition variables and the performance variables were tested with bivariate correlation. The results, presented in table 4.3.10, show the composition variables did not correlate with any of the performance variables, except independent directors correlated with Financial performance.
performance. This was further tested with composition variables as categorical variables, with the same results.

In conclusion, through testing the relationship of composition of the board with performance, it can be stated the null hypothesis cannot be rejected, except in the case of independence and financial performance. Therefore, there was only very limited support for hypothesis H3.

H3.
(a) There is a positive relationship between the size of board and performance is not supported.
(b) There is a positive relationship between number of women on boards and performance is not supported.
(c) There is positive relationship between number of independent directors on boards and financial performance is supported. There is no support for a positive relationship with competitive performance, CSR performance, and overall performance.

The results did support the conclusion of Dalton and Dalton (2005), who state results regarding composition of the board tend to be inconclusive and misguiding. The question is perhaps how much the structure of the board relates to the process and the role of board, as its direct relationship on performance leads down a very winding road (Zahra and Pearce, 1989).

A special stepwise regression was not run at this point, as the relationship between composition variables and performance variables was limited or non-existent.

4.3.6 Testing context and Performance
In this study there were three context variables used as control variables: company size, industries, and ownership (figure 4.3.14).

Figure 4.3.14: The relationship between context variables and Performance.
The correlation between the three context variables and the performance variables was tested with bivariate correlation. The results, presented in table 4.3.11, showed no significant relationships.

Table 4.3.11: The relationship between context variables and Performance.

<table>
<thead>
<tr>
<th>Performance</th>
<th>Size of comp.</th>
<th>Industries</th>
<th>Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall performance</td>
<td>0.127</td>
<td>0.182</td>
<td>0.005</td>
</tr>
<tr>
<td>Financial performance</td>
<td>0.120</td>
<td>0.208</td>
<td>-0.141</td>
</tr>
<tr>
<td>Responsive performance</td>
<td>0.059</td>
<td>0.537</td>
<td>-0.052</td>
</tr>
<tr>
<td>Development performance</td>
<td>0.030</td>
<td>0.755</td>
<td>-0.165</td>
</tr>
<tr>
<td>Growth performance</td>
<td>0.115</td>
<td>0.227</td>
<td>-0.072</td>
</tr>
<tr>
<td>Satisfaction performance</td>
<td>0.039</td>
<td>0.680</td>
<td>0.028</td>
</tr>
<tr>
<td>CSR performance</td>
<td>0.116</td>
<td>0.226</td>
<td>-0.138</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed). **Correlation is significant at the 0.001 level (two tailed).

Several researchers have found size of companies has a positive relationship with performance (Thomas et al., 1991; Thomas and Ramaswamy, 1996). It can also be argued larger companies have more leverage for corporate social responsibility than smaller firms, especially when the smallest firms have ten or less employees. There was, however, no significant relationship found between context variables and performance variables in this study.

4.3.7 Stepwise regression with all independent variables

The use of stepwise multivariate regression using all the independent variables, and testing the relationship with each of the dependent variables, was the final test of the propositions. This step was controlled for composition and context variables, in addition to the role and process factors. Generally the influence of composition and context variables on the model was marginal, as none of the variables strengthened the relationship with the performance measures (table 4.3.12).

The Strategic role was shown to be the most important independent variable as it was included in five out of seven runs with different performance measures. The

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16 Testing both with and without the Authority factors made no difference.
Strategic role was the only independent variable to be included in the case of Financial performance, Growth performance and CSR performance as the other variables did not strengthen the relationship in the stepwise regression. In the case of Satisfaction performance as dependent variable the strongest model turned out to be the Decision-process and the Strategic role together. In the case of Responsive performance the strongest model was made of Efficiency and Decision as well as the Strategic role. The relationship was small but definite relationship (Hair et al, 2003). In the case of Development performance it was Process-Style and the Monitoring role that made up the best model. At last, Efficiency of the board was alone the strongest model in relationship with Overall performance (table 4.3.12).

**Table 4.3.12: Stepwise regression with all the independent variables.**

<table>
<thead>
<tr>
<th>Best model</th>
<th>R²</th>
<th>Sig F</th>
<th>B</th>
<th>Stand Beta</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency of board</td>
<td>Overall performance</td>
<td>.174**</td>
<td>.000</td>
<td>.337</td>
<td>.417</td>
</tr>
<tr>
<td>Strategic role</td>
<td>Financial performance</td>
<td>.113**</td>
<td>.001</td>
<td>.300</td>
<td>.336</td>
</tr>
<tr>
<td>1. Efficiency</td>
<td>Responsive performance</td>
<td>.207**</td>
<td>.000</td>
<td>.275</td>
<td>.455</td>
</tr>
<tr>
<td>2. Efficiency/Strategic role</td>
<td></td>
<td>.278*</td>
<td>.000</td>
<td>.189/.177</td>
<td>.312/303</td>
</tr>
<tr>
<td>3. Efficiency/Strategy/Decision</td>
<td></td>
<td>.316*</td>
<td>.000</td>
<td>.127/.158/1.171</td>
<td>.211/279/.228</td>
</tr>
<tr>
<td>1. Style</td>
<td>Development performance</td>
<td>.117**</td>
<td>.001</td>
<td>.599</td>
<td>.342</td>
</tr>
<tr>
<td>2. Style/Monitoring</td>
<td></td>
<td>.147*</td>
<td>.000</td>
<td>.480/.226</td>
<td>.274/230</td>
</tr>
<tr>
<td>Strategic role</td>
<td>Growth performance</td>
<td>.089*</td>
<td>.003</td>
<td>.274</td>
<td>.298</td>
</tr>
<tr>
<td>1. Decision</td>
<td>Satisfaction performance</td>
<td>.153**</td>
<td>.000</td>
<td>.354</td>
<td>.392</td>
</tr>
<tr>
<td>2. Decision/Strategy</td>
<td></td>
<td>.204*</td>
<td>.000</td>
<td>.277/.169</td>
<td>.307/240</td>
</tr>
<tr>
<td>Strategic role</td>
<td>CSR performance</td>
<td>.150**</td>
<td>.000</td>
<td>.376</td>
<td>.388</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (two tailed); **Correlation is significant at the 0.001 level (two tailed).

The interpretation is the same as in section 4.3.2.4 from a theoretical perspective, as the results seem to support the assumptions of stewardship theory (Donaldson, 1990). By controlling for composition variables and context variables, the models have, however, been made more robust, as the relationship between the board of directors and organisational performance cannot be explained with either the ‘usual suspects’ or the usual contextual factors. The process variables and the role variables turned out to be the most important variables in relationship with Organisational Performance in this study.
4.3.8 The testing process

Referring to Nietzsche’s quote at the beginning of this section, the test of relationship in this research has provided some interesting findings. The most important is the main hypothesis of this thesis has been supported, as the research indicates boards of directors do have a positive relationship with organisational performance. The relationship was indicated with the independent variables of process factors, and role as tasks factors. Using Composition and Authority, as independent variables, did not help to support the hypothesis (figure 4.3.15).

*Figure 4.3.15: Main hypotheses tested in the research.*

More precisely, the Strategic role, Monitoring role, Efficiency, Style and Decision, the five independent variables, supported the main proposition in relationship with different performance variables. A discussion of these variables can be found in the next section, where the results are interpreted in a broader view than has been done in this section.
4.4 Interpretation of the results

*Patience is necessary, and one cannot reap immediately where one has sown.*

Søren Kierkegaard (1813 – 1855)

The results in this chapter are promising, as they indicate a relationship between the role of the board and organisational performance. The long and winding road of the research process has therefore led to a fertile field. This section revisits some of the discussions from Chapter 2, the theoretical and empirical discussion in the literature review. The results are interpreted in light of theory and previous research, in order to understand the implications of the findings.

*Figure 4.4.1: Overview of the interpretation of results.*

<table>
<thead>
<tr>
<th>4.1. Examine data</th>
<th>4.4.1. The board and organizational performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2. Purify instruments</td>
<td>4.4.2. The role of the board</td>
</tr>
<tr>
<td>4.3. Estimate model</td>
<td>4.4.3. Theoretical implications</td>
</tr>
<tr>
<td>4.4. Interpret results</td>
<td>4.4.4. Concluding interpretation</td>
</tr>
<tr>
<td>4.5. Validate model</td>
<td></td>
</tr>
</tbody>
</table>

In this section the results from previous sections are discussed in a broader setting, focusing on their implications (figure 4.4.1). The structure of this section is partly based on the literature review. The first part examines the model of this study and the summary of results. The second part discusses the role of the board. The third part takes on a more theoretical interpretation. The last section concludes the interpretation.
4.4.1 The board and organisational performance

The main results from testing the propositions can be summarised as follows: There is a positive relationship between perceived role of the board and perceived organisational performance in SMEs in Iceland. Both roles as tasks and board processes showed a relationship with performance. The relationship varied slightly with different dependent organisational performance measures.\(^\text{17}\)

In the single regressions, several variables indicated a relationship with Financial performance: Monitoring role and Strategic role and Efficiency, Decision and Style within the process variables. In stepwise regression the Strategic role indicated the strongest relationship to financial performance (figure 4.4.2).

*Figure 4.4.2: Indicators of Financial performance – stepwise regression.*

\[ R^2 = .113 \]

The Strategic role showed also the single strongest relationship with Growth performance in the stepwise regression. The relationship was, however somewhat weaker (figure 4.4.3).

*Figure 4.4.3: Indicators of Financial performance – stepwise regression.*

\[ R^2 = .089 \]

\(^{17}\) As theoretical assumptions of agency theory, stewardship theory, resource dependency theory, stakeholder theory, and other theories all assume independent variables are predictors of dependent variables, that same assumption was adopted in this study. The assumption is emphasised here with the use of an arrow between variables, instead of just a line without an arrow indicating the direction of the relationship. The argument for doing this is it helps interpretation of the results. However, it is acknowledged the effect, or part of the effect, could flow in the opposite direction.
In the single regressions all the role factors and the process factors indicated a relationship with Responsive performance. None of the composition or contingency variables indicated such a relationship. In stepwise regression a model with three independent factors emerged as the strongest, that is the Strategic role, the Decision-process and the Efficiency process (figure 4.4.4).

Figure 4.4.4: Indicators of responsive performance – stepwise regression.

Similarly it was the Strategic role and the Decision process that indicated the strongest model in relationship with Satisfaction performance (figure 4.4.5), which was a measure of the standard of quality and employee satisfaction. The relationship was small but definitely a relationship (Hair et al., 2003).

Figure 4.4.5: Indicators of satisfaction performance – stepwise regression.

On the other hand neither the Strategic role or the Decision process made up the strongest model relating to Development performance. Instead the Monitoring role and the Style process showed the strongest relationship to Development performance in stepwise regression (figure 4.4.6). This is interesting as the
underlying performance variables emphasise innovation. The reason might be that innovation usually comes from the front line rather than the top (Porter, 1988; Drucker, 1954). There is, however, very little difference between the Monitoring role and the Strategic role although the former is a little bit stronger in terms of this relationship while the latter is excluded because of multicollinearity.

*Figure 4.4.6: Indicators of development performance – stepwise regression.*

In single regression there were indications of a relationship by several variables to the Corporate Social Responsibility performance measure: Monitoring role, Resource and Advice role, Strategic role, Efficiency and Information. Stepwise regression indicated, however, the strongest relationship was between the strategic role and CSR performance, when controlled for other variables (figure 4.4.7).

*Figure 4.4.7: Indicators of CSR performance – stepwise regression.*

The single variable indicator of overall performance loaded equally on Financial performance and Competitive performance, but not on CSR performance. All the role and process factors indicated a relationship. None of the variables for composition or contingency showed a relationship. Stepwise regression indicated the strongest relationship between Efficiency and Overall performance (figure 4.4.8).
The results raise several points. First of all, the relationships are generally weak. Only in Responsive and Satisfaction performance is the coefficient higher than .20, indicating a small but definite relationship (Hair et al., 2003). In the other cases the relationship would be considered almost negligible according to Hair et al. (2003). A weak relationship would be expected, however, as the influence of the CEO and other employees would be significant. It would have been more surprising if the relationship was very strong, as that would imply that most variation in performance could be explained by board factors rather than for example CEO and other employee factors. However, the proposition that there is a relationship between the board of directors and organisational performance is supported. Secondly, the difference between performance measures needs to be addressed. As was noted in the factor analysis, the measures concern different aspects of performance. Previous research has focused mainly on narrow financial outcome measures. Responsive, Development, Growth, Satisfaction and CSR performance are closer to process measures (Brett, 2000), and focused on specific aspects of performance. Thirdly, there is a difference between the independent factors that relate to different performance measures. Clearly, the strongest factor is the Strategic role factor, which is the leading variable in all cases, except in Development and Overall performance. The Strategic role is, however, the second strongest variable in that case of Overall performance, explaining some .189 of the variance. There is, however, high collinearity of .769, and Efficiency is a stronger indicator. On one hand, it is possible to argue one item measure of performance will not give as good a picture of the relationship between the board and organisational performance as a multi-item instruments. On the other hand, many theorists have argued a well-organised board should have a positive influence on the organisation (Drucker, 1974). The strong influence of the Strategic role is the most significant result of testing the hypotheses, indicating it is the primary reason for the boards’
positive relationship to organisational performance as well as other aspects of performance.

Lastly, the question of context needs to be examined at this point. This study focused on SMEs in Iceland. In the discussion of the sampling frame in Chapter 3, it was argued this study was exploratory in nature, and generalisation was not the primary purpose, as the cultural context and non-probability sampling frame seriously limited such interpretation. On the other hand, the reason for sampling SMEs was the belief the relationship between boards and organisational performance would be stronger (Huevel et al. 2006). That raised the question whether the relationship existed in larger corporations, an issue for further research.

### 4.4.2 The role of the board

What boards actually do is an important issue addressed in corporate governance literature (Tricker, 1994). Hung (1998) provides a link between roles and theories (section 2.1), where eight different theoretical roles were identified. A study of the literature isolated two main functions of the board labelled as monitoring (or controlling), and directing (Cadbury, 2002; Berghe and Baelden, 2004). In the literature review, four roles were conceptualised and operationalised for the purpose of this study: Monitoring role, Strategic role, Resource acquisition role, and Advice role. Some researchers (for example Westphal, 1999; Huevel et al., 2006) have used the label Service role for all roles for direction (e.g. Strategic role, Resource acquisition role, and Advice role). This study, therefore, expands research into the direction function of the board, especially in regard to the Strategy role, as a much broader measure of strategy was adopted for this study. The factor analysis resulted in three clear factors: Monitoring role, Strategic role, and Resource and Advice role. The last two roles loaded on one factor. The study concluded the boards in this sample had three main roles.

The three roles isolated by factor analysis represent empirical support for those suggested by other researchers, who often used different labels (Zahra and Pearce, 1989; Demb and Neubauer, 1992; Lorsch and Carter, 2004; Christensen and Westenholz, 1999). Furthermore, the results support findings of other researchers
within the context of small and medium-sized firms and family firms (Deakins et al., 2000; Gabrielsson and Winlund, 2000; Johannisson and Huse, 2000; Mustakallio et al., 2002).

All three roles are important, as the means of the roles were high in all cases (table 4.4.1). The monitoring role seemed to be the most important role, as it had the highest mean, although the difference between the monitoring role and the resource and advice role was not significant. The difference between the strategic role and the other roles, although very small, was statistically significant, indicating there was more focus on the other two roles. This was interesting, as Heuvel et al. (2006) found the service role more important than the control role in Belgian SMEs. The result of this study does not mean respondents think the strategic role is less important, just that they seem to focus less on it. This was surprising in view of the strong relationship the strategic role has with organisational performance.

Table 4.4.1: The mean and standard deviation of the role factors.

<table>
<thead>
<tr>
<th>Roles</th>
<th>Alpha</th>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic role</td>
<td>.958</td>
<td>14</td>
<td>4.440</td>
<td>.119</td>
</tr>
<tr>
<td>Monitoring role</td>
<td>.782</td>
<td>4</td>
<td>4.699</td>
<td>.125</td>
</tr>
<tr>
<td>Resource- &amp; Advice role</td>
<td>.782</td>
<td>6</td>
<td>4.655</td>
<td>.118</td>
</tr>
</tbody>
</table>

The strategic role has usually been measured either with a one-item measure or only a few measures (Heuvel et al., 2006; Westphal and Carpenter, 2001), if measured at all. Furthermore, it is difficult to identify the theoretical background within the strategic literature for the items. In this study the Strategic role was emphasised using instruments for operationalisation adapted from the leadership literature (Kanji and Sá, 2001; Kanji, 2002). The scale proved to be robust, with an alpha of .958 (table 4.4.1) and all fourteen items loading on the factor, with .692 loadings or higher. Furthermore, the mean of 4.440 can be seen as an indication boards are heavily involved in the strategic role. This study supports research findings on the importance of the strategic role for boards (Demb and Neubauer, 1992; Tricker, 1994; Lorsch and Carter, 2004).

The positive relationship between the Strategic role and the performance measures supports the main proposition of this study, there is a positive relationship between
the board of directors and organisational performance. This is interesting, as this relationship has only limited support with empirical research from the process-based view, as far as the literature review could detect. It, however, supports the study of MacAvoy and Millstein (1998) that active boards do have influence on organisational performance. This has been accomplished with the use of broader measures than have been employed for the strategic role and organisational performance before in corporate governance research.

4.4.3 Theoretical implications
The problem formulation in the first chapter of this thesis included the claim the board has no value, and should not remain an organ within the organisation. This is the view of management hegemony theory. The results of the research have rejected the claim, if not ‘falsified’ it, as Popper (2002) would have put it, because of the positive relationship between the strategic role and all performance measures.

As for verification of theories, factor analysis supported the monitoring role of agency theory, the strategic role of stewardship theory, and the resource and advice role, which can be related to resource dependency theory. Furthermore, the relationship between the board and corporate social responsibility was an indicator of the stakeholder perspective. Therefore, it may be argued all theories emphasised as part of the multi-theoretical perspective have been at least partly verified. The need for a multi-theoretical perspective of the board reflects the various tasks and responsibilities of boards in general (Johnson et al., 1996; Stiles and Taylor, 2001; Huse, 2005).

There is, however, another way to interpret the results. In the words of Popper (2002, p. 67):

The critical attitude, the tradition of free discussion of theories with the aim of discovering their weak spots so that they may be improved upon, is the attitude of reasonableness, or rationality. It makes far-reaching use of both verbal argument and observation – of observation in the interest of argument, however.
The strength of the strategic role is odd according to agency theory. If the primary role of the board is to monitor, it can hardly be involved in strategy-making, as this would entail a need to monitor itself (Nowak and McCabe, 2003). This empirical implication for the research here is grounded in a grander misunderstanding of the roots of agency theory. This is important, as no other theory within corporate governance literature has come as close to being considered synonymous with a ‘corporate governance theory’ as agency theory (Lubatkin, 2007). It is important to be more critical of theories, even ones like the agency theory.

Agency theory is a response to the Berle and Means (1932) thesis on managerial control (a more detailed description of the theory can be found in Section 2.1). Their argument, however, has been lost in time. The core of their argument was ownership had become so dispersed owners could not control their corporation, and had lost interest in so doing. Jensen and Meckling (1976) developed the thesis as a conflict between CEOs and owners, where the CEOs needed to be controlled as they had other priorities, based on self-interest, from the owners. The solution to this problem was the board, an organ of control responsible for monitoring management. There are several problems associated with this viewpoint, as it can be argued the board is not a very effective tool for monitoring management. Lack of time, knowledge, information, a critical approach, and independence (Lorsch and Carter, 2004; Coffee, 2006; Lubatkin et al., 2007) are all factors making this a very difficult job for the board. It seemed not to be a very effective solution. However, that is another story. The issue here concerns in the fact the theses of Berle and Means (1932), and Jensen and Meckling (1976), are concerned with the problem of the separation of ownership from control (Lubatkin, 2007).

The implication of this issue, the problem of separation of ownership from control, usually goes unnoticed in corporate governance literature. Gomez-Mejia and Wiseman (2007) pointed out in a recent debate on agency theory Jensen and Meckling (1976) never intended their model to be applied to settings beyond large for-profit organisations operating in developed markets, with widely-diversified shareholding. Lubatkin’s (2007, p. 64) rather sarcastic response was:
Taken at face value, I take their comments to mean that the J/M model was not intended to apply to less-developed markets, which of course make up a large percentage of the world markets. I also take their comments to mean that the J/M model was not intended to apply to owner-controlled firms, or those public firms largely controlled by a few large block owners who, by virtue of their large stake in the firm, are not likely to be widely-diversified. [...] I take the Gomez-Mejia/Wiseman comment to mean that the J/M model was not intended to apply to family owned firms, which are by far the most common governance form of business organisation in all nations, including most nations with developed markets like the US. For similar reasons, I take this to mean that the J/M wasn’t intended to apply to hundreds of thousands of privately-held firms, and to public firms, once their managers become owners through compensation plans that entail stock and stock options. In short, if the only context that the J/M model is suited to explain is a small subset of all firms, then the model lacks generalizability and this represents a serious shortcoming.

The obvious answer is, if the theory is a solution to a problem which arises because of the separation of control and ownership, why should it apply when the problem does not exist, as for instance when owners can control the corporation because ownership is not so dispersed. Lubatkin (2007, p. 64) goes on: “Indeed, I am puzzled why this 28+ year old model continues to receive so much positive attention from scholars from all over the world, and why alternative governance explanations have not also attained similar legitimacy in the academic press.” Popper’s (2002) criticism of the scientific process could enlighten here: when the aim is to verify theories, which is easy in Popper’s view, theories are never challenged and never rejected. This is the crux of the theoretical problem in the corporate governance literature, the problem of verification.

The strong indication of a complex strategic role of the board, and the positive relationship of the strategic role to organisational performance, has nothing to do with agency theory. As Lubatkin (2007) pointed out, the context of SMEs and the concentration of ownership in the sample could explain this. The result of this research helps to reject agency theory in this context.

4.4.4 Concluding interpretation
The results of this thesis support the main proposition: the board does have a positive relationship with organisational performance. The result can help reject the
claim of management hegemony the board does not have any value. They also indicate agency theory in its purest form does not apply in this study. The monitoring role may hold relevance for agency theory. The strategic role, as the dual application of the two roles, contradicts the role of the board as interpreted by Fama and Jensen (1983), and introduced in section 1.2.1. The reason is simple: the board cannot monitor itself effectively (Drucker, 1974). Therefore, the empirical results of this thesis have both theoretical as well as practical implications.
4.5 Validating the results

*If the only tool you have is a hammer, you tend to see every problem as a nail.*

Abraham Maslow (1908 - 1970)

One of the main assumptions of the realist paradigm is triangulation increases the validity of the research and gives a better picture of reality (Easterby-Smith et al., 2002). A single research tool could identify a particular solution based solely on the function of the specific tool itself. The purpose of this last section of this chapter is to increase the conclusion validity of the research, with the help of qualitative research tools so as to supplement the quantitative technique used in this chapter.

*Figure 4.5.1: Overview of the validation section.*

The final step in the research work is the validation process, which focuses on generalisation of the results (Hair et al., 2006). Hair et al. (2006) argue the results should be duplicated with a different sample. In other words, the aim is to increase the external validity of the study. It is also possible to increase the conclusion validity by checking the internal validity of the study (Hair et al., 2003). This section, therefore, is divided into two parts. The first is about internal conclusion validity, while the second part focuses on external conclusion validity. The final section summarises the discussion (figure 4.5.1).
4.5.1 Internal conclusion validity

The approach adopted to increase the internal conclusion validity of the research was based on qualitative techniques. Several authors have noted triangulation enhances the conclusion validity of research (for example Jick, 1979; Curran and Downing, 1989; Bickman and Rog, 1997; Scandura and William, 2000). Three open-ended questions were sent to the respondents of the survey, asking about the main findings of the research. Fifteen responses were received, representing 13% of the sample used in the study. The main conclusions from the responses are discussed below.

The first question was about the three roles isolated in the factor analysis of this study, and whether they were a good description of the respondents’ boards. In short, all respondents thought the three roles were a good reflection of their boards in practice.

Respondent 7 noted:

Yes, this is a good description. The Monitoring role has been understood for long in Icelandic boards – as it is prescribed by law. The Strategy role and the Resource role have been of growing importance and the Advice role is and has been important, especially regarding the role of the chairman.

Respondent 9 noted:

Yes, the board decides the future of the company and is constantly re-examining the situation with the aim of developing the company toward different business environment.

The second question was based on the mean of the role factors, which indicated the monitoring role was the most important role of the board, although this contradicted the main finding the strategic role was predominantly related to organisational performance. Only three respondents agreed the monitoring role was indeed the most important. Other respondents stated the strategic role was considered the most important role of their board.

Respondent 11 noted:

Not necessarily, we regard strategy to be our most important factor.
Respondent 4 noted:

No, I think the most important role of the board is Strategy and Advice. The board is the representative of the owners and the owners themselves sit on the board. Therefore it is normal that they want to develop the strategy.

The third question was about the main conclusion of the research, why the strategic role had the strongest relationship with performance measures. Most respondents noted it is to be expected strategy relates to performance, although two respondents argued a well-functioning board, also taking the monitoring role seriously, should have the strongest tie to performance.

Respondent 12 noted:

Strategy is, by definition, a way to look forward. Management spends most of the time on daily problems. When managers sit down with the board much time is spent on looking ahead. The most valuable board is the one that looks ahead.

Respondent 2 noted:

If the board is qualified and does what it is supposed to do as well as it reflects a vision of professionalism and value creation it is obvious that if it puts work into strategy that it will result in better performance for the organisation.

Respondent 14 noted:

A board that takes the Strategic role seriously is more likely to be an active board which secures the future of the company. Many boards are relatively passive and let the companies get stuck in the mud for a long time. Managers are often too preoccupied with the daily routines but an active board can keep the necessary discussion about direction and future paths alive.

The responses to the open-ended question do validate the results, as the respondents generally agreed with the main conclusions of the research. Furthermore, the answers provide a richer understanding of the conclusions. The main point is, however, the qualitative approach has supported the conclusion of the quantitative approach, and therefore increased the internal validity of the results and their interpretation.
4.5.2 External conclusion validity

It is important for the purposes of generalisation to validate the results in a different context from the original sample (Hair et al., 2006). Easterby-Smith et al. (2002) and Jick (1979) note it is possible to increase this type of conclusion validity with the use of focus groups. Two focus groups, and comments from several individual experienced researchers in the corporate governance field, were used for this purpose. The discussions were not recorded, but a few main themes indentified and noted. The main conclusions from the responses are discussed below.

The only direct way for a board to influence organisational performance is through strategy, initiation and even implementation.

Several reviewers noted that boards only have direct influence on organisation performance throught the strategic role. Some examples were furthermore provided of boards, which did more than initiate strategy but also implemented strategy. This was considered to be most notable in mergers and acquisitions, as well as in green field investments. Examples of Icelandic companies where boards had taken such an active role were: Kaupthing, the largest bank in Iceland which has become the 7th largest bank in the Nordic region in record time; Bakkavor, a producer of fish products that conquered the British fresh food market and is becoming a global player in the industry; Baugur, which has grown from a local retail chain to a british empire in the toy and clothing industry in only six years. One of the reviewers argued strongly that the growth of these companies was based on this model of active boards, where the role of the chairman and the board was to think about and help to implement the growth strategy while the role of the CEO was more focused on managing the company.

The results indicate that Iceland and Icelandic boards are a special case and cannot be generalised to a larger, multinational population.

One reviewer argued that the results only showed that Iceland was a special case rather than indicating that the results could be generalised to a larger populations. It has, however, been noted that the generalisation of the results focused on the target population rather than the larger population, in other words the generalisation is for Icelandic companies as this thesis is grounded in the contingency perspective which
indicates that the emphasis of boards might be different in different legal and cultural context. Another reviewer argued, however, that similar results had been shown in Norway in several studies conducted by Professor Huse. He argued furthermore that Neubauer and Lank (1998) supported the results. They argued that the role of the board in family businesses should be ‘additive’ and ‘distinctive’. A third reviewer argued that the concept of generalisability was somewhat overemphasised in research as it was hard to find research that could truly be generalised as the samples are never truly random. He discussed the famous cultural studies of Hofstede in this context, which were made from results of one company and generalised on the larger population. The important thing is, however, to note, from the perspective of the researcher that the results are interesting either if Iceland is a special case or not. This research is a starting point. Further research should aim to detect differences between the Icelandic target population and other populations within different legal and cultural context.

The boards of entrepreneurial companies need to be more active than boards in larger companies that are in stable and mature industries.

Several reviewers noted that it was logical that role of boards in entrepreneurial companies was more active in terms of strategy than boards in larger companies would be, especially larger companies in stable and mature markets. The counter argument was, however, if that was not counterproductive for the board, as organisations in general need to be more entrepreneurial. One reviewer noted that maybe the results were showing the entrepreneurial spirit of small and growing companies, relating it to the prospector vision of companies in the terms of Miles and Snow (1994). The argument was that fast growing companies need the board to be active in terms of strategy as the board, as well as the CEO, need to be awake and able to recognise opportunities when the window of the opportunity is open. He noted that he had been sitting on such companies where the role of the board was not only to monitor the results of implementation but also to suggest possibilities for the road ahead. This would indicate that the generalisation of the results of the research applied to prospector companies. That is, however, something for further research to determine.
4.5.3 Conclusion validity

This fourth chapter of the thesis has in essence focused on conclusion validity, as Trochim (2001) interprets different aspects of validity. The conclusion validity rests in the analysis of the data (Trochim, 2001). This section, however, has attempted to increase the conclusion validity by posing open-ended questions to the respondents of the survey. This would encourage them to express themselves more freely by including focus group discussion, and professional opinions on the possibility of generalisation. Respondents to the survey agreed with the main conclusions of the research, and provided some explanation of the results which supplemented the more theoretical discussion in section 4.4. In short, the responses increased the internal conclusion validity of this study. The focus groups and the reviewers indicated that there was not any good argument for saying that the research was only describing SMEs in Iceland as researchers in other countries, like for example Norway, and researchers focusing on family businesses had come to a similar conclusion as the results of this study indicate. It can therefore be argued that the focus groups and the reviewers have increased the external conclusion validity of the study although generalisability is not an objective of the research as it is considered an exploratory research.

In summary, the conclusion validity is supported because respondents to the questionnaire could relate to the results and conclusions deduced from the analysis.
Summary of chapter 4 – Results and analysis

This chapter has focused on the results and the analysis of the survey method discussed in chapter 3. The chapter is the core of the thesis as it presents the empirical findings. It brings the discussion to a close, as the research problem has been tested and, in a way, solved. That was the objective of this chapter.

The main points from this chapter are:

- The dataset was approved for analysis, as the response rate was sufficient at 21%, including 114 cases to analyse, and the answers were normally distributed.
- All the instruments, with minor adjustments, were approved to be used in the analysis, as they had high alphas and items loaded on relevant factors.
- Three role factors were used in the analysis, two authority factors, three process factors and three performance factors, as well as single item variables.
- The main hypothesis was supported: There is a positive relationship between perceived role of the board and perceived organisational performance in SMEs in Iceland.
- The relatively strongest relationship was between the strategic role and the performance measures, although efficiency and decision, two process factors, strengthened the relationship and increased support for the main proposition.
- Management hegemony theory and agency theory were rejected in the context of this study.
- A qualitative approach for conclusion validation supported the results and the conclusions reached with quantitative techniques.

The following chapter is the concluding chapter of this thesis, where the contribution of this research is discussed in more detail.
Chapter 5. - Conclusions

This chapter represents both an ending and a beginning. It is the last chapter of this thesis, but only the end of the beginning of my research efforts in this field, which open the door for further research.

The chapter is designed partly to mirror Chapter 1, the introduction, as it picks up on some of the themes and questions proposed there. The triad of academic, practical, and personal implications of the thesis underlies the structure of this chapter as well (figure 5.1). The chapter will close those discussions.

Figure 5.1: The outline of the concluding chapter.

| 1. Introduction | 5.1. Academic implications |
| 2. Literature review | 5.2. Practical implications |
| 3. Methodology | 5.3. Personal implications |
| 4. Results and analysis | 5.4. Final words |
| 5. Conclusions |

This chapter builds on discussion from Chapter 4, as it further explores the implications of the results of the empirical analysis. The chapter is divided into four sections. The first section gives a broad perspective for estimating the academic contribution of the whole thesis. The second section concerns practical implications of the research for boards, CEOs, and organisations in general. The third section focuses on personal implications, the learning experience gained from the journey. It picks up the discussion from Chapter 1 and reflects on the research process. The chapter and thesis conclude with some final remarks.
5.1 Academic implications

*The empirical basis of objective science has thus nothing ‘absolute’ about it. Science does not rest upon solid bedrock. The bold structure of its theories rises, as it were, above a swamp. It is like a building erected on piles. The piles are driven down from above into the swamp, but not down to any natural or ‘given’ base.*

Karl Popper (1902-1994)

Theories tend to be perceived differently both in terms of their importance and relevance. All too often they are regarded as ‘absolute’. This study has questioned the wisdom of the application of traditional theories in the SME context. The strategic role of the board of directors was shown to be more important for organisational performance than previously assumed. This contradicts some major assumptions practitioners, academics, and regulators have focused on in the past.

*Figure 5.1.1: The outline of academic implications.*

This section focuses on the academic implications and contribution of this thesis, as perceived by the researcher (figure 5.1.1). The first part discusses the main contributions this research has made to the body of knowledge. The second part discusses some of the limitations of the study. The third part focuses on future research and the steps already taken in that direction. The last section summarises the discussion and the academic contribution of this thesis.
5.1.1 Main contributions

Precisely what a doctoral thesis is expected to deliver from an academic perspective seems surrounded by ambiguity (Dunleavy, 2003; Remenyi et al., 2002). It is generally agreed a doctoral thesis should contribute ‘to the body of knowledge’ (Remenyi et al., 2002). The extract of requirements for a PhD and DBA in the rules and regulations of Brunel University (as quoted by Remenyi et al., 2002, p. 16) state: (a) to show ability to conduct an original investigation; (b) to test ideas; (c) demonstrate broad knowledge and understanding of the relevant discipline and appropriate cognate subjects. The last indicator can be paraphrased as ‘know the literature,’ and the second as ‘use the methodology.’ What constitutes an original investigation is less clear. There are, however, two other clues in the Brunel University regulations. First, the thesis should make a distinct contribution to knowledge, and second, provide evidence of the candidate’s originality by the discovery of new facts or the exercise of critical power (Remenyi et al., 2002).

‘Contribution to knowledge’ is sometimes expressed as “something that was not known before but which is interesting and important” (Remenyi et al., 2002, p. 20). Remenyi et al. (2002, p. 20) suggest contribution to the body of knowledge should include one or more of the following: Extending our ability to understand phenomena, new ways of applying existing science or theories, creating new theories, rejecting invalid theories, providing unifying explanations for events and circumstances. Dunleavy (2003) points out university guidelines describe ‘originality’ in two ways. It can either be in the form of ‘discovery of new facts’ or display ‘independent critical power,’ or a combination of both. ‘New facts’ are the result of empirical research, an investigation of something not hitherto available (Dunleavy, 2003). ‘Independent critical power’ is presumably an indication the author can marshal a significant theoretical or thematic argument from a different perspective, although the criteria are nearly as vague as ‘originality’ (Dunleavy, 2003). From this discussion of the requirements for a doctoral thesis, it is not clear what to emphasise as a contribution to the ‘body of knowledge.’
This section focuses on points which may represent a contribution to the body of knowledge. The main points are (1) indication of board influence on performance, (2) indication of the role of boards in SMEs, (3) indication of the importance of the strategic role, (4) rejection of management hegemony and agency theory in the SME context, and (5) the importance of empirical study based on primary data from a Nordic country. Other possible contributions are discussed subsequently.

5.1.1.1 The relationship between boards and performance

This thesis started out by formulating the research question and the problem of corporate governance, as the proposition of rejecting the claim the board of directors has no value as an organ in the organisation. The claim was shown to have arguments and evidence supporting it, as well as theoretical support in management hegemony theory (for example Mace, 1971; Drucker, 1974; Lorsch and MacIver, 1989; Gillies, 1992; MacAvoy and Millstein, 2003). In effort to reject this claim, this research proposed to find some clear indication of a positive relationship between the board of directors and organisational performance (figure 5.1.2).

Figure 5.1.2: The board of directors and organisational performance.

The approach adapted in this research was grounded in the process-based view of the board. That view is widely accepted in the literature (for example Zahra and Pearce, 1989; Johnson et al., 1996; Stiles and Taylor, 2001; Carter and Lorsch, 2004) and was furthermore emphasised in the common ground of this research. The definition of corporate governance, which was based on Cadbury (2002), exemplifies the common ground for the discussion, claiming: Corporate governance is a system where the boards are the central actors as they monitor and direct organisations to positive performance.

Focusing on the process-based view of the board, several measures were used as independent variables: roles, authority, process, and composition. The concept of
organisational performance was explored and broadened from previous studies within the corporate governance literature. Organisational performance was measured with instruments for financial and process outcomes. To solve the problem formulated in Chapter 1 the relationship between the board of directors and organisational performance was tested, and the results can be summarised with the following figure.

Figure 5.1.3: Relationship between boards and organisational performance.

The first box in figure 5.1.3 indicates a slight positive relationship between the strategic role of the board and financial outcome measure for organisational performance. The second box indicates there is a small but definite relationship
between the independent variables of strategic role and efficiency and decision process and the responsive process measure for organisational performance as the dependent variable. The third box indicates a small but definite relationship between the independent variables of strategic role and decision process and performance measured as satisfaction of employees and with standard of quality. Therefore all these measures are indicators of a positive relationship between the board of directors and organisational performance.

This indication of a positive relationship between strategic role and organisational performance was further supported by qualitative techniques where respondents to the questionnaire answered open-ended questions. This support is exemplified by the answer from respondent 2, who noted:

If the board is qualified and does what it is supposed to do, meaning that it emphasises a vision of professionalism and value creation and works on strategy, it will result in better performance for the organisation.

Furthermore, the use of simple regressions indicated that boards have wide range of value as it influences different types of organisational performance measures. Six factors for organisational performance and one item measuring overall performance could be predicted with several of the independent variables. Although the relationships were not strong and often negligible the research shows there is indication of a wide effect on the complicated concept of organisation performance. Too strong relationship would have been more troublesome as it would indicate that other factors like CEO and other employees do not affect performance. While multicollinearity limits the analysis somewhat the results are important step in understanding the value creation of boards as a more complex phenomenon than a single effect on financial measures of organisational performance.

The results were achieved in the setting of small and medium-sized organisations and the cultural context of Iceland. This may be regarded as a limitation of the research, as it may affect the ability to generalise from the study. However, the argument for this study was to reject the claim boards have no value by finding
evidence that ‘some’ boards do in fact have a positive relationship with organisational performance. That objective has been achieved.

5.1.1.2 Empirical support for roles of boards in SME’s

The starting point of this thesis was to establish common ground based on definitions of corporate governance (for example Cadbury, 2002; Nørby, 2001). The common ground involved looking at corporate governance in terms of the board of directors and their role in monitoring and directing the company. The emphasis on ‘monitoring’ and ‘directing’ as functions of the board was based mostly on theory, and different theories, implying a multi-theoretical perspective. However, empirical support for these two functions is limited by the small number of process studies carried out (Gabrielson and Huse, 2005; Heuvel et al., 2006). This study provides empirical support for the monitoring and directing functions of the board, and therefore supports the definition of corporate governance.

The monitoring role refers to the monitoring function of the board, while the strategic role and the resource and advice role refer to the directing function of the board. These three roles have been empirically supported in this study with the use of factor analysis. From the perspective of internal consistency the three factors are very strong, with high Cronbach alphas. From the perspective of the strengths of factors there was a clear distinction between the three factors in terms of factor loadings, and the loadings of the items within each factor were very high (table 5.1.1)

Table 5.1.1: The three roles of the board as factors.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Alpha</th>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
<th>Max loading</th>
<th>Min loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic role</td>
<td>.958</td>
<td>14</td>
<td>4.440</td>
<td>.119</td>
<td>.885</td>
<td>.692</td>
</tr>
<tr>
<td>Monitoring role</td>
<td>.782</td>
<td>4</td>
<td>4.699</td>
<td>.125</td>
<td>.892</td>
<td>.727</td>
</tr>
<tr>
<td>Resource- &amp; Advice role</td>
<td>.782</td>
<td>6</td>
<td>4.655</td>
<td>.118</td>
<td>.835</td>
<td>.720</td>
</tr>
</tbody>
</table>

The high mean of these factors indicates boards do take these three roles seriously (table 5.1.1). Taking into account the respondents were mostly CEOs, who do not
have a seat on the board (although they attend board meetings) as determined by Icelandic law, the validity of these results should be more highly weighted than if directors themselves had answered.

The results support the literature review of Zahra and Pearce (1989), one of the main references in this study, as it is semantic work in the literature regarding the process-based view of the board. The results also support the work of Zahra and Pearce (1989), Johnson et al. (1996), Huse (2005) and others, indicating that each board has more than one role.

The board is multifunctional as it has multiple roles. This study has empirically supported those multiple board roles, which are: Monitoring role, Strategic role and Resource and Advice role. Although these roles have been empirically supported in the context of SMEs in Iceland, this study has increased our knowledge of what boards actually do, which is a major step in opening up the black box of the board. It is for further research to discover if and how boards in different cultural and organisational contexts perform these roles.

5.1.1.3 Empirical support for the strategic role of the board

As agency theory has often been used synonymously with governance theory, emphasising the monitoring function of the board (Lubatkin, 2007), while the directing function of the board, and especially the strategic role, has been disregarded. Some have argued the board has no strategic role, except in the case of crises (Stiles and Taylor, 2001), and others have argued it contradicts what the board should be doing (Jensen and Meckling, 1983). This study, however, supports the strategic role of the board as a general role. It also indicates the boards’ strategic role is the most important role in relationship to organisational performance.

This study emphasises the strategic role of the board using a much broader measure than previously used in corporate governance research. The instrument was adapted from the leadership literature (Kanji and Sá, 2001; Kanji, 2002) as it had been tested and validated in other contexts. This study has validated this instrument in the context of the board of directors. The high Cronbach alpha and factor loading
are evidence for validity. The validation in the context of board of directors may represent an academic contribution in itself. As supported by the items of the scale, the results using this instrument reject the assumptions of Jensen and Meckling (1983) the ‘initiation’ step in their theory is the responsibility of management. This study indicates ‘initiation’ is also part of what the board does. The broad measure of the strategic role here gives a much richer picture of what the strategic role of the board includes. The factor contains 14 items and can be split into four different factors including values, vision, mission, and strategy, as reflected in strategy literature (Kanji, 2002). The study provides, therefore, a much richer understanding of the strategic role of the board.

The strategic role became the most important variable measuring the effect of the board in the relationship between the board and organisational performance. The results show the variable is of utmost importance, not just for the purpose of this study, but for understanding what boards should be focusing on. If the strategy role of boards can contribute positively to organisational performance, the effort of regulators and agency theorists to limit the board to a monitoring device for management decisions may undermine this important role. This finding is by no means a small contradiction to the ‘common knowledge’ which often seems to drive corporate governance discussion. It may represent an important step for understanding the structural importance of the board of directors as an organ within the organisation. This important implication resulted from using a broad measurement of the strategic role of the board.

5.1.1.4 Theoretical support and rejection

The problem formulation introduced in the first chapter focused on rejecting the management hegemony theory. It was argued the main premise of that theory was actually the claim the board has no value in terms of organisational performance. The main proposition therefore focused on finding a positive relationship between the board of directors and organisational performance. The results of this study have indicated there is a positive relationship between the two concepts in the context of this study. Therefore, it is argued management hegemony theory can be rejected in this context.
The design of the study included both the monitoring role and the strategic role. The monitoring role is the role agency theory prescribes for the board, while the strategic role contradicts some of the assumptions of agency theory, as discussed above. As the study finds support for the monitoring role of the board, it therefore supports agency theory. On the other hand, the study also finds the strategic role to be important, in contradiction to agency theory. Furthermore, it has been argued the major assumptions of agency theory do not apply in this context, as the theory focuses on big organisations with dispersed ownership rather than SMEs with concentrated ownership (Lubatkin, 2007). This study rejects agency theory both empirically and theoretically in the context of this study.

Two of the original roles operationalised were actually found to be one single factor, called Resource and Advice role. The resource part is based on resource dependency theory, which claims the board provides resources to the organisation. This theoretical perspective was supported in the study as the Resource and Advice role emerged as a strong factor (table 5.1.1).

Last, but not least, the strong strategic role factor and its relationship with organisational performance has supported stewardship theory. Contrary to the assumptions of agency theory, stewardship theory indicates the board and management work together on strategy and other issues, and the primary role is not to monitor management. As there is only limited empirical support for stewardship theory, this result may be considered a major contribution to the stewardship theory literature.

The results would indicate this thesis has made a theoretical contribution within the corporate governance literature, as it has supported stewardship theory and resource dependency theory, while rejecting management hegemony theory and agency theory.
5.1.1.5 A Nordic study based on the process view of the board

Several scholars have called for more studies of boards of directors to further understand what happens in the black box (for example Zahra and Pearce, 1989; Tricker, 1994; Stiles and Taylor, 2001; Gabrielson and Huse, 2005). Studies have been called for in contexts other than the Anglo-Saxon context, as there have been only a handful of European studies focusing on the process rather than structure of the board (Huse, 2005). As a major Nordic study focused on the process-based view of the board, this study addresses this need.

This is an original study based on primary data, introducing new facts resulting from an empirical investigation into SMEs in Iceland. This is the first study in Iceland based on the process view of the board, and the first study after regulators introduced the Icelandic governance code in 2004. Previous studies have been opinion polls, focusing on descriptive statistics. This study has added a dimension based on the causal design of surveys. Indeed, very few studies based on the process view of the board have been done in Nordic countries, most in Norway and Sweden (for example Borch and Huse, 1993 and Gabrielson and Huse, 2002). Furthermore, few studies have focused on SMEs in Europe (Heuvel et al., 2006). This research introduces new facts unavailable anywhere else as a contribution to the body of knowledge.

5.1.1.6 Other contributions

The main contributions have been described above, although it is a matter of opinion what should be regarded as the main contribution of this thesis. Some other contributions made in this thesis may deserve to be mentioned, although they will not be discussed in detail. Some of these may have been mentioned already as part of the main contribution, but are stressed here by themselves in no special order.

*Process-based studies are better than structural-based studies.* This study applied both the structural-based view of the board and the process-based view of the board, which resulted in the composition variables not leading to any interesting results while the process variables, described as ‘process’ and ‘roles,’ proved to be very interesting. This study is therefore a methodological support for the process view.
A broad measure of organisational performance based on perception. This study used a broader measure for organisational performance than has been used in previous studies within the corporate governance field (Dalton et al., 1999; Coles et al., 2001). Furthermore it used subjective measures based on perception that have not been used much in the field, but which could prove to be a major supplement to future studies (Venkatraman and Ramanujam, 1986; Brett, 2000). The broad view of performance gives richer scope for interpreting the importance of the board (Hart and Banbury, 1994; Zahra and Pearce, 1991). This study is therefore innovative in terms of measurements.

Refining and validating tested instruments. The questions in the survey were based on instruments used by other researchers and published in respected journals (Zahra and Pearce, 1991; Carpenter and Westphal, 2001; Heuvel et al., 2006). These instruments were validated to some degree, and some refined for the analysis, which could prove important for future use. This study has therefore contributed to refining measurement instruments that can be used in future research.

The use of rigorous instrumentalism. Although the research paradigm was defined as realism, this study has followed the rigour of instrumentalism. Criticism of previous studies has somewhat focused on their lack of rigour (Bøhren and Ødegaard, 2003; Larcker et al., 2004; Heuvel et al., 2006). This study has used a stepwise approach recommended by Churchill (1995), Hair et al. (2006) and Hair et al. (2003) to make every step of the process as rigorous as possible, describing both mistakes as well as successes (Wacker, 2004). The approach of instrumentalism can, therefore, be regarded as a contribution by itself.

Formulation of the problem. Although the formulation of the problem seems obvious enough it can be regarded as an innovative approach to understanding theories and the literature. It is based on the ideas of Popper (2002) where theories may be ‘falsified’ rather then verified. By disproving the claim the board has no
value in terms of organisational performance, the focus of the study is different from previous studies that have sought to verify theories, primarily the agency theory. This approach to formulating problems may be a start for cleaning up the theoretical forest of the corporate governance literature (Popper, 2002). The problem formulation itself may, therefore, be regarded as a contribution.

*The definition of corporate governance.* At the beginning of the thesis some definitions of corporate governance were reviewed and then refined. It was argued the difference from previous definitions, as for example Cadbury (2002), was the difficulty detecting what corporate governance was not, making the definition weak. Therefore, the refined version was narrowed to reflect research efforts in the field. This refined definition has been supported empirically in this study, as well as in Heuvel et al (2006). It can, therefore, be argued the refined definition of corporate governance, on which this thesis is based, also makes a contribution.

*Classification of the literature.* A lot of effort was put into trying to classify the literature, as it is fragmented and contradictory. This effort was supported with the methodological discussion of paradigms, theories, models, and concepts and their classification (Patton, 2002; Silverman, 2005). Some classifications were used as a foundation, and reviewed and refined for further discussion, as in the case of Hung’s (1998) typology, Berghe and Balden (2004) roles dualism, and the integrated model of Zahra and Pearce (1989). The efforts to classify theories, models, and concepts in the literature may help further research (Weick, 1995) and be regarded as a contribution to the literature.

*Theorisation as a supplement to empiricism.* The methodology chapter focused heavily on paradigms and theories with the purpose of understanding what ‘good’ theory is (Wacker, 2004). The perspectives discussed in the first section of the methodology chapter, especially Popper’s (2002) arguments for theorising, have been used widely in this thesis, in the problem formulation and in discussions of the results. This approach has added a dimension to this thesis that makes it much more valuable, as it aims to scrutinize theories and not just verify them. This approach is alien to the corporate governance literature, although the field is badly in need of a
theoretical focus (Tricker, 2000; Stiles and Taylor, 2001). The approach of theorisation may, therefore, be regarded as a contribution.

First step to building a more complete research model. The difficulty faced in the beginning of this thesis was models in the literature were mainly theoretical, if one can use that word, as it implies they were simplified versions of specific theories, which they are not. They were multi-theoretical rather than empirically supported (Stiles and Taylor, 2001). Furthermore, it was evident in terms of taxonomy the classification was flawed, and the possibility of multicollinearity highly probable. Therefore, the study design became more exploratory than originally planned. The results of this exploratory approach have, however, provided a basis for a more robust model for future research. It is a step towards a more sophisticated research model based on empirical investigation and theorisation (Popper, 2002). This first step may be regarded as an academic contribution.

5.1.1.7 Reflecting on the contribution
The discussion at the beginning of this section pointed out the lack of clarity about what contribution a doctoral thesis should make, and ill-defined terms like ‘the body of knowledge’ (Remenyi et al. 2002). Using some of the key words from that discussion it is possible to argue this thesis may make a contribution to the ‘body of knowledge’ if the ‘contribution’ is measured in terms of ‘conducting an original investigation,’ ‘to test ideas,’ and ‘to demonstrate broad knowledge and understanding of the relevant discipline.’ In this research, a survey was made in a new setting, and relevant ideas based on a literature review were tested.

Using the phrase ‘something that was not known before but which is interesting and important,’ it can also be argued a contribution has been made by this research. The results about SMEs in Iceland were ‘not known before.’ The results are ‘interesting’ because they contradict the major theory in the field. Finding the strategic role is positively related to performance is important, as the focus of regulators and agency theories is to starve this role rather than to feed it. Reflecting on some other key words, the empirical evidence of three roles has ‘extended our ability to understand phenomena,’ which is the board of directors. The approach of using rigorous
instrumentalism in an empirical approach and theorisation for formulating the problem and rejecting theories may be described as ‘new ways of applying existing science or theories.’ The results of the study indicate ‘rejecting invalid theories’ was possible, as management hegemony theory and agency theory were in this context. One of the main contributions of this thesis was to find indications of the positive relationship between the board and organisational performance, which supports the existence of the board as an organ in the organisation, and therefore may provide a ‘unifying explanation for events and circumstances.’ This thesis did not attempt to ‘create a new theory.’ However, the results may be regarded as a first step to a more sophisticated research model.

The last key term in the argument for the contribution of this research is ‘independent critical power.’ This has been the underlying theme of this thesis. The researcher has taken risks that may be understood to demonstrate independence and critical power. The major risks were focusing on a relationship supported by limited evidence, researching SMEs in Iceland, adapting measures from other fields, and focusing on the strategic role of boards, which is generally negated by most theory in the field. Through review of the key terms related to the concept of ‘the body of knowledge,’ it may be argued this thesis has made a significant contribution.

5.1.2 Limitations of the research
There are several issues that can and should be regarded as limitations to the research. Some of these limitations will be discussed briefly below.

5.1.2.1 Cultural context
The research was conducted in Iceland, which may be regarded as a special case since it has structural elements of both the Germanic and Anglo-Saxon corporate governance system (Weimer and Pape, 1999). It is debatable how much results from such a cultural setting may be generalised to other contexts. However, plans have already been made to repeat the study in Denmark and Sweden to gain more external validity.
5.1.2.2 Organisational context
The research focused on small and medium-sized companies and results were interpreted and theories rejected in that context. Future research might explore whether the positive relationship between the board and organisational performance holds for larger companies, and whether the strategic role is as strong as in the case of SMEs. A study planned in Sweden is designed to include larger organisations.

5.1.2.3 Generalizability
The sampling method used was a non-probability approach, thus limiting the possibility to generalize from the target population. The choice of that approach was pragmatic. However, a more rigorous approach for sampling might increase the generalizability of future studies.

5.1.2.4 Key informant problem
The original survey design planned to ask both the CEO and the chairman the same questions, as the study was built around self-reporting instruments. The plan failed in practice, as there were too few responses from chairmen. It would have increased the validity of the study if two informants were to respond. It has to be noted, however, obtaining even one respondent from a top management team is a luxury. Obtaining two respondents could be more of a fantasy.

5.1.2.5 Reliability of self-reported instruments
This study employed self-reported instruments, as any other approach was not possible given the constraints of the research. The use of some ‘objective’ measures, especially in the case of organisational performance, would have increased the validity of the study in terms of triangulation. Both subjective and objective measures are to be used in the Swedish and the Danish studies.

5.1.2.6 Multicollinearity between variables
The issue of mulitcollinearity was expected to be a concern, as there was a problem with the theoretical models and concepts used in these models. Better definitions, based on taxonomy, need to be established for some of the concepts, for example the three roles, to measure the impact and importance of the three roles combined.
The multicollinearity problem resulted in a model with only one or two variables as independent variables. Efforts are being made to define the concepts more precisely in future research.

5.1.2.7 Measurement issues

Some of the instruments intended to measure process, such as Decision and Style (Zahra and Pearce, 1991), turned out to be problematic and violated some statistical requirements used in the analysis. However, these instruments were improved in the process of the study and some of their weaknesses identified. The work done in this thesis could therefore help to make those measurements more robust.

5.1.2.8 Main limitations

The main limitations of the research concern its generalizability. The cultural and organisational context of the study, and the sampling approach employed, limit application to a wider population. The problem formulation and problems with models and concepts in the literature were consistent with exploratory research, although the design model was more similar to descriptive and causal designs (Churchill, 1995). The results made it possible to support and reject theories in the context of the sample, which was the objective of the study. The results indicate important concepts and relationships upon which future research can be built.

5.1.3 Future research

From the start this study was regarded as a first step in a wider research effort. The original plan was to perform the study in two or three countries, but was clearly too ambitious for a doctoral study. As previously noted, there are plans to do the study in Denmark in association with Copenhagen Business School, and in Sweden in association with Active Owner Partners, a consulting group focusing on corporate governance. Some issues described here as potential future research will be considered in the extended research based on this thesis. Some fruitful areas for further research based on this thesis are described below.
5.1.3.1 Testing for the same relationships in different context
The cultural and organisational context has already been noted as being the major limitation of this study. Future research may increase the external validity of this study by testing the same concepts and relationship in a different context. More studies in the Germanic and Anglo-Saxon context may indicate how rare or frequent the Icelandic case is. Studies in larger corporations could indicate how or whether the relationship changes with size. A longitudinal study show how the role of board changes over time, with size and other external contingencies, and how the relationship with organisational performance evolves.

5.1.3.2 Testing interaction between variables for more complex models
As the problem formulation was simple, the study design used a classic model, with independent variables on one side and dependent variables on the other. It is possible to test some of the relationships between these variables to understand their interaction. This work was regarded as outside the scope of this thesis, as it may take the focus away from the main objective. Further research could focus on these intermediate relationships.

5.1.3.3 Expanding and improving the measurement for tasks
One of the principles for this research was to use instruments already developed, and alter them as little as possible. However, a broader measure for the roles, and more distinct measures to minimize the problem of multicollinearity, could be adopted. This research provides a solid platform to refine the measures to make classification between variables more like taxonomy than typology. Future studies testing the concepts to improve measurement would be a great service to the field.

5.1.3.4 Testing with subjective and objective measures of performance
This survey relied on subjective measures. Future studies could supplement the study design with objective measures to increase the validity of the results. Organisational performance measures based on perceptions are still regarded as inferior to objective measures, although they do have many advantages. Including objective performance measures would increase the possibility of publication in respected management journals.
5.1.3.5 Testing whether the roles change with different circumstances

The roles of the board indicated empirically with factor analysis provide a basis for understanding what boards actually do. It would be interesting to find out how the roles change, and whether, for example, the strategic role is more important in a business cycle downswing than upswing, or if it is related to the goals of the organisation, as in strategic outcome models developed by Miles and Snow (1994). Such research efforts could provide a much more detailed understanding of the role and value of the board.

5.1.3.6 Clustering boards with different role mixtures

One of the statistical techniques seriously considered for this research was cluster analysis. Cluster analysis has not been used in corporate governance research, at least none was found after a literature review. Cluster analysis is interesting in this context, as it could test whether boards do cluster, and provide some criteria to establish an empirical approach for classifying boards in terms of types. The typology of boards today assumes boards only adopt one role, when in fact they are more likely to have many roles, as this study indicates. Clusters with different mixtures of roles could increase the understanding of how and why boards differ.

5.1.3.7 The future of future research

Research in corporate governance has in some ways stumbled into a blind alley and not found its way out, as researchers continue to debate structural characteristics of boards, although that discussion seems to lead to nowhere (Daily et al., 2003). This research has challenged some major assumptions that have dominated the corporate governance field, by formulating the problem in an unusual way and adopting a different research method from the one that has led researchers into a blind alley. If research in corporate governance is to prevail, different research approaches and focus are needed than those used to date. It is not the task of the researcher to dictate what the purpose of the board should be, and it is naïve to assume all boards follow what often seems to be an irrational approach. Chandler (1962) pointed out forty-five years ago structure follows strategy, not the other way around, which could apply to boards as well.
Future research in the field of corporate governance has many things to discover to increase the understanding of the functions of the board of directors and its importance. The perceived fatigue in the field is not due to the subject of research, but rather the purpose and the approach to researching the subject.

5.1.4 Academic contribution

It has been argued in this section this thesis has made an academic contribution. The discipline required of researchers at a doctoral level has been applied, and an understanding achieved of the literature in the field of corporate governance and scientific methodology. The results of the research are interesting and important from both a theoretical and practical point of view. The research also provides a platform for further research that could broaden our knowledge of corporate governance.

This section has focused on the academic implications, mainly the contribution which the thesis has made to the body of knowledge. The next section focuses on the practical implications of the research.
5.2 Practical implications

In fact, we philosophers and ‘free spirits’ feel ourselves irradiated as by a new dawn by the report that the ‘old God is dead’; our hearts overflow with gratitude, astonishment, presentiment and expectation.

Friedrich Nietzsche (1844-1900)

If agency theory were not the dominant theory of corporate governance, and monitoring not perceived as the one and only role of the board, it would open wide new possibilities for boards in organisations. The existence and the value of the strategy role is not news to those who have focused on consulting boards (Charan, 1998; 2005; Hilb, 2006). For those grounding their work in empirical research, such news should ‘irradiate.’ The purpose of this section is to discuss the practical implications of the results for organisations. The DBA program requires the research to benefit business in some clear and concise manner. The following discussion is somewhat more consulting-orientated than previous discussions in this thesis.

Figure 5.2.1: The outline of practical implication.

The first part is a general discussion about the value of boards. The next three parts discuss the three factors which resulted from the study, and the practical implications of each of them. The last part concludes the section with a focus on the contingency perspective.
5.2.1 Valuable boards

The main purpose of this study was to find evidence for the value of the board. This was accomplished by showing a positive relationship between the board and organisational performance. The evidence indicates the arguments of management hegemony theory are invalid, at least in the context of this study. Boards can have other roles than rubber-stamping managerial decisions. The board meeting is simply not another word for the meeting of the family as Drucker (1954) worried about. Indeed, the study indicates boards are highly involved in initiating decisions. Boards can and should have value as an organ within the organisation.

The question is whether organisations are using the full potential of their boards. Lorsch and Carter (2004, p. 1) ask the reader at the beginning of their book: “Do you believe that the board performs anywhere near to its potential?” Their own answer is ‘no,’ despite all the effort of regulatory reforms (Lorsch and Carter, 2004). Coffee (2006) argues the blame game initiated by the media and regulators for corporate failure has focused too much on the board of directors, when the blame, at least partly, should fall on the gatekeepers. They are the true monitoring mechanism in the grand scheme of corporate governance. The blame game has in many ways paralysed the board. Boards are being structured in accordance with rules and regulations, and the process reduced to ticking boxes (Stiles and Taylor, 2001; Lorsch and Carter, 2004). It is the premise of institutionalism all boards should look and be the same. Agency theory seems to indicate the role of board is to monitor management, because managers are selfish and opportunist, and shareholders are so dispersed they are powerless. Institutionalism and agency theory are based on weak assumptions rejected in this study.

If boards do not perform anywhere near their potential, as Lorsch and Carter (2004) indicate, the board as an organ must be a waste of resources. The question then becomes, how can boards perform to the promise of their potential? This study indicates when boards adopt three roles they can influence organisational performance, and the strategic role is the predictor for performance. The results support the contingency perspective, stewardship theory, resource dependency
theory, and agency theory (figure 2.1.2). The premise of contingency theory is one size does not fit all. This is, indeed, the view emphasised by Lorsch and Carter (2004) (figure 5.2.1). Boards need to be rescued from the institutional perspective if they are to perform and deliver value for the organisation. This argument is further supported with the conclusion of Chandler (1962) noted above, that structure follows strategy in corporate development. The structural issues of the board should therefore be a result of decisions about what the purpose and the process of the board is to be. That purpose and processes should not be predetermined by institutionalism based on weak and often irrelevant assumptions. It is by means of contingency theory that boards can perform best and have real value.

Figure 5.2.2: The board as a system.

The results of this study indicate it is the strategic role that gives the board value. This does not mean it is the only valuable board role. The claim indicates, in the context of SMEs in Iceland, the strategic role is the most important in relation to organisational performance. The trap of concluding this is a special case should, however, be avoided. The limited scope of the study affects how broadly the results can be interpreted and generalized. It does not necessarily mean things are different in other situations. There is limited empirical evidence to reject such a claim.
because the strategic role is usually not measured as thoroughly as has been done in this study.

The practical question could also be ‘why?’ Why should boards be paralysed within the instrumentalist perspective if it renders the board irrelevant? Why should boards focus on the selfishness and the opportunism of management if that is really not an issue or the most important role the board can have? Why should boards be structured and have integrated processes based on the assumption shareholders are so dispersed they cannot control the organisation, when the opposite is true in far more cases? (La Porta et al., 1999; Lubatkin, 2007). The answer is ‘they should not,’ if the premise of corporate governance is boards should have value as organs within the organisation.

5.2.2 Implications for monitoring
This study has indicated the monitoring role is one of the three main roles of board in the context of the study, and the monitoring role is the one boards focus on the most. A comparison between the roles is, however, ambiguous, as the instruments for measuring the roles have different numbers of items and internal validity. It is interesting to note when respondents to the survey were asked to comment on the results, and whether the monitoring role was the most important role, most chose the strategic role as the most important, and when they talked about the monitoring role, they used it synonymously with regulations. This indicates it is the role of institutionalism as well as the role of agency theory.

The existence of the monitoring role and the strategic role within the same board highlights the classical controversy regarding the role of the board. A board cannot be both a decision-maker and at the same time an instrument to monitor its own decisions. It would seem the role has to be ‘either/or’. Theoretically it could, however, be interpreted differently. Using the decision model of Jensen and Meckling (1983) once again can facilitate the explanation. The results of this study have indicated the board takes part initiating strategy, if not leading the process. This study does not claim the board implements strategy. Therefore, it can be argued the monitoring function of the board is not so much ratification, but rather
monitoring the implementation in accordance with the proposed strategy from the initiation and ratification process. The focus then is not the assumption the CEO initiates and implements self-serving strategy rather than safeguarding shareholders, but that the CEO implements strategy initiated and ratified by the joint effort of the board and the CEO. From this perspective the strategic role and the monitoring role do not oppose one another or conflict. This can be seen as the argument of stewardship theory.

The basic assumption of regulators, media, and institutional and agency theorists is the board has the means to monitor management initiation and implementation. Taking into account the scandals and the general disappointment with the efforts of boards, it is evident boards do not function well as monitoring organs. Perhaps this should be the role of the gatekeepers (Coffee, 2006). Drucker (1974, p. 628) makes this point:

The decline of the board is a universal phenomenon of this century. Perhaps nothing shows it as clearly as that the board, which, in law, is the governing organ of a corporation, was always the last group to hear of trouble in the great business catastrophes of this century.

Whenever one of the “scandals” breaks, the board’s failure is blamed on stupidity, negligence of board members, or on failure of management to keep its board informed. But when such malfunction occurs with unfailing regularity, one must conclude that it is the institution that fails to perform rather than individuals.

If Drucker (1974) had already come to this conclusion forty years ago the question remains, why are we still trying to fix a failed institution? Why has the board not been eliminated from the organisation, as it only seems to provide a false sense of security? Why has the board not be eliminated, as it has no value? This brings the discussion back to the starting point of this thesis, to the main proposition. The result from this study indicates the board has value because of its strategic role. The results imply the board in the context of this study is a different organ than prescribed by institutionalism, and as this different organ it has value for the organisation. The question is then, what to do about the monitoring role. The answer proposed in this context has been it can be important to monitor the
implementation of strategy. This is, however, not radically different from the original problem of the institution Drucker (1974) refers to, as the board can be equally badly equipped to monitor strategy initiated either by the CEO or the board itself. It is possible to take the road to increased rigour of the monitoring role and strengthening the institutional framework, with the aim of improving board monitoring, as has been the focus of regulators and agency theorists. There is another possibility. To admit the limitation of the monitoring function, empower gatekeepers, and increase their responsibility. This would not decrease the responsibility of the board, as it should stand or fall with the organisation, but it does broaden the range of the board as value creator for the organisation. The monitoring role does not have to be the only or the most important role of the board.

The main assumption of agency theory, as built on the work of Berle and Means (1932), is ownership is dispersed. This assumption has been shown to hold water in very few cases in organisations (La Porta et al., 1999; Lubatkin, 2007). This is very important with regard to the purpose and the role of the board. The argument is if ownership is dispersed, the board needs to secure the control of shareholders in order to manage. When ownership is concentrated, there is seldom very much doubt who controls the organisation, as it is one or a few owners, rather than management. In this study most of organisations had very concentrated ownership, as to be expected in the case of SMEs (Heuvel et al., 2006). It can be argued the purpose of the board is different in the case of organisations with concentrated ownership than dispersed ownership, as the issue of control is almost irrelevant. At the same time it can be argued the monitoring function of the board should be different. If the board is to monitor those who have the control, the board has to monitor the largest owners rather than management. This implies the monitoring role of the board becomes more complicated, not less so, as it must still monitor management for implementation, but now also needs to monitor the largest owners regarding the initiation and the ratification process. An in-depth examination of these complexities is outside the scope of this thesis. However, it may be concluded if monitoring management is too big a task for the board, monitoring both management and the largest owners becomes even more so.
The discussion of the monitoring function has focused on the shareholder perspective, management and shareholders. If the discussion is expanded to the stakeholder perspective, it is obvious the issue of monitoring could be regarded as even more complex than before. This study did not ask directly about whether the board monitors from the shareholder perspective or the stakeholder perspective. The shareholder perspective was indicated within the format of the questions. The stakeholder perspective was, however, referred to in the context of the resource role. The main point to make in this discussion of practical implications is that the monitoring role should be different if it is based on the stakeholder rather than the shareholder perspective, as the latter takes many more actors into consideration and makes the monitoring role of the board considerably more complex.

5.2.3 Board as a resource
The results of factor analysis showed one of the factors could be regarded as both resource and advice role. The implication of the resource part of the role is a broader focus for the board, taking the discussion outside the organisation. Hung (1998) called this role the linking role, as it links the board and the organisation with outside actors. It has, furthermore, some elements of the stakeholder perspective, as some items focus on reputation and relationship with stakeholders, a coordinating role, to use Hung’s (1998) term. The resource and advice role indicates the board has a role attracting or supplying resources to the organisation, as well as marketing its image.

The resource and advice role has somewhat been overshadowed by the monitoring and the strategic role in this thesis, as has occurred generally in the literature. This does not indicate the role is not important. This study has indeed shown the resource and advice role is as important as the other two, as shown by the means of the factors. From a contingency perspective, the most important role of the board might be to attract new resources, or to coordinate and influence the view of different stakeholders at times. There is little need for this role according to the institutional perspective, further undermining the managerial hegemony theory. However, as Drucker (1954) pointed out half a century ago, the board could have
value by breaking the isolation of the manager. This role could add value to the board, although this study has not emphasised its importance.

5.2.4 Strategy focused boards

The strategic role turned out to be the most important role for the board in terms of the relationship with organisational performance. The role was important in the theoretical discussion, as the involvement of the board in strategy has been used to reject agency theory in the context of the study. The strategic role is also interesting because it emphasises a different purpose and process of the board than regulators emphasise (Nadler, 2005). A good rationale for the role was given by one of the respondents to the open-ended questions meant for increasing the conclusion validity:

I think the most important role of the board is strategy and advice. The board is the representative of the owners and the owners themselves sit on the board. Therefore it is normal that they want to develop the strategy.

It is normal that the owners want to decide what values the organisation stands for, what the vision is, the main mission, and generally how their organisation is run. Of course there is a fine line between a director who contributes ideas to company strategy and one who tries to manage the company (Lorsch, 1995). The implications of the strategic role need therefore to be clear (Lorsch and Carter, 2004). The Berle and Means (1932) study alludes to dread of people called ‘professional managers,’ which Chandler (1977) discusses in some detail. During fourth decade of the 20th century this might have been the case, but the situation has changed dramatically, as owners of organisations are now just as likely to have an MBA in management and business as the managers. It is, therefore, likely owners know just as much, or even more, about the implications of strategy as managers. The managerial monopoly of strategy is, therefore, to a large extent obsolete. This professionalism could have been regarded as an argument for managerial strategy initiation at the time of Berle and Means (1932), but can probably not be regarded as a valid today. Why should owners then not be involved with, if not lead, strategic initiation?
The board, with or without the owners, might also be in better position to see the big picture needed to initiate and formulate good strategy. Several of the respondents to the open-ended questions emphasised this point, for example respondent 14:

A board that takes the strategic role seriously is more likely to be an active board which secures the future of the company. Many boards are relatively passive and let the companies get stuck in the mud for a long time. Managers are often too preoccupied with the daily routines but an active board can keep the necessary discussion about direction and future paths alive.

Management cannot see the forest because of all of the trees which dominate its daily routine, destined to spend much of its time putting out fires (Mintzberg and Waters, 1985). It needs someone else to provide the helicopter view of the forest. The board could, therefore, be a valuable tool in the strategic formulation process, from start to end. This is why the strategic role could be an important role for all boards, not just boards of SMEs in Iceland.

The practical implication of the importance of the strategic role is boards need to be trained in strategy to optimise the potential of the role. Such training specifically for boards hardly exists today. It is, however, important boards take a broad view of strategy, and not adopt the tunnel view of any single school of strategy (Mintzberg et al., 1998). The first step is to acknowledge the importance of the board’s strategic role, from the perspective of owners, CEOs, and shareholders. This could represent a way to increase the value of the board.

5.2.5 Choosing the role

The history of the board in organisations has shown it has been traditionally somewhat lost if it only had a formal and ceremonial role (Mace, 1971; Herman, 1981; Vance, 1983). Those boards didn’t function (Drucker, 1974). This might seem strange, when in the words of Drucker (1954, p. 178), “to the law, the Board of Directors is the only organ of the enterprise. [. . .] Legally it is considered the representative of the owners, having all the power and alone having power.” In other words, it is in the hands of the board, in their power, to decide what the role of
the board is to be. Directors have responsibility, as well as the power to decide what to do with that responsibility.

The discussion of the results of this thesis from a practical perspective has reached the conclusion the board can, and should, choose its role. This conclusion was reached by studying SMEs in Iceland and discussing the implications of the results. This supports the contingency perspective of ‘one-size doesn’t fit all,’ indicating boards determine their own value. This conclusion is similar to that reached by Lorsch and Carter (2004) after studying large leading corporations in North America and Europe. They argue (Lorsch and Carter, 2004, p. 61):

> We believe strongly that each board must define the value it will provide. It must explicitly choose the role it will play, and its choice must be informed by a good understanding of its company’s specific situation and its own capabilities and talents. Defining its role is the first step in effective board design. It is as important as laying a foundation before a house is built.

The conclusions reached in this thesis seem not only to apply to SMEs in Iceland. There seem to be global similarities not affected by size of organisation. The emphasis on the board’s freedom to choose its role is based on the contingency perspective rather than institutionalism. Directors need to understand the board as an organ in an organisation, as well as becoming ‘professionals’ and ‘activists’ (MacAvoy and Millstein, 2003). The value of the board as an organ and the value of the whole organisation may be determined by the foundation the board itself chooses to build.
5.3 Personal implications

*Only in a quite limited sense does the single individual create out of himself the mode of speech and of thought we attribute to him. He speaks the language of his group; he thinks in the manner in which his group thinks.*

Karl Mannheim (1936 - )

Work on a doctoral thesis is a learning experience designed to gain a better understanding of the craft of scientific research. It is a life-changing experience which influences the premises and paradigms of one’s life. It is enlightenment. The process is a journey from one place to another, and in some ways from one group to another. Strangely, one no longer speaks the language of the group one used to embrace. Instead one speaks a new language and identifies with a new group. The new group call themselves scientists. Membership in this group implies there has been some progress and personal achievement during the journey.

*Figure 5.3.1: The outline of personal implications.*

This section takes the discussion to a more personal level. It is a reflection upon the meaning of the journey for the researcher. The first part is about the implications and experience of being a researcher. The second part discusses some milestones of the learning experience and the take-away value of the process. The third section is a reflection upon personal goals set at the start of the doctoral process (figure 5.3.1).
5.3.1 Being a researcher

The process of becoming a researcher has sometimes been described as learning a craft. It is a good metaphor. It alludes to the hard labour of a craftsman and the skill one acquires going through the process and understanding its implications and limitations. It may better be described as a discipline calling for self-control and hard work, where the aim is rigorous analysis, a quest for understanding, criticism, and contribution. It is a discipline needing to be constantly reviewed, enforced, and advanced.

Being a researcher is like being a member of a club seeking to advance the knowledge of mankind. Individuals can disagree utterly and fundamentally, but ultimately they are on the same quest, just by different means. Although the debate is not always about the issues, it can also be about pride and prejudice, the club of researchers works hard to generate new ideas and advance understanding. That is a great club indeed.

Popper (1994, p. 123) argues scientists should take an ethical oath. He even proposes a refined version of the Hippocratic oath for scientists. The main points are along the following lines.

1. **Professional Responsibility.** The guiding light must be the growth of knowledge by taking part in the search of truth, or more precisely, the approximations of the truth. Mistakes are unavoidable and therefore they should not be taken over-seriously, although not taken over leniently, as the goal is, through hard work, to constantly raise the standards by which the work is judged. We must constantly be reminded of the finitude and fallibility of our knowledge and of the infinity of our ignorance.

2. **The student.** One belongs to a tradition and a community as a scientist. One owes respect to all those who contribute to the search for truth and loyalty to the teachers. There is a duty, however, to be critical towards others, teachers, and colleagues, and especially towards oneself. It is most important to beware of intellectual arrogance and to try not to succumb to intellectual fashion.
3. *The Overriding Loyalty*. One owes the overriding loyalty to mankind – just as the physician owes his overriding loyalty to his patients. One needs to be aware studies may produce results that may affect the lives of many people, and one must constantly try to foresee and guard against any possible dangers or misuse of the results. In other words ‘do no harm.’

I subscribe to this oath as a researcher using a slightly different focus: the role of the researcher is to search for insight that helps to solve problems and find opportunities, respect the work of other scientists by acknowledging it, criticising and challenging it, but first of all: to do no harm. This is the ethical guideline I will follow as a researcher.

5.3.2 The learning experience

You live and you learn, they say. However, how much you learn may depend on how you live. Learning by trial and error implies those who make the most mistakes are also likely to learn the most. There was no lack of mistakes in the process of producing this thesis (figure 5.3.2). However, the mistakes are not most important *per se*, but rather meeting the challenges. A life challenged is a life bound to learn both from success and failure. A doctoral thesis is such a challenge. It is a journey requiring dedication and motivation to reach the end. It is a journey of pleasure and pain, hopes and disappointments, dreams and nightmares, and success and failure. These are all part of the journey. And one learns.

To make a short story longer this section is divided into three parts, which demonstrate what and how this researcher has learned from the process. The first section is about learning by writing, the second about self-knowledge, and the third about lifelong learning.
5.3.2.1 Learning by writing

One of my guiding lights in business literature and in many ways my role model is the legendary Peter F. Drucker. He remains so, even after the doctoral process when I understand the weaknesses of his writings and although he is curiously absent in academic references. He passed away in the year 2005, and although he was over ninety he was still writing and teaching about business. I have always found him impressive because of the depth of knowledge of different issues that jump from the pages of his books. He was a great teacher and a first-class writer. I think the reason for this is Drucker was probably one of the most dedicated students alive. Drucker (2001, p. 221) tells the story of how some first-class writers sometimes fail miserably in school. “The explanation is that first-rate writers do not, as a rule, learn by listening and reading. They learn by writing.” I can relate to this. I best understand subjects and arguments when I start writing about them. Listening to lectures never contributed much to my education. I have, however, always enjoyed writing and speaking about things. This approach to learning can be supported by the theory of multiple intelligences (Gardner, 1982) and the theory of experiential learning (Kolb and Fry, 1975). I think this is important self-knowledge. Drucker (2001, p. 173) puts it this way:
Actually, of all the important pieces of self-knowledge, this is one of the easiest to acquire. When I ask people, “How do you learn?” most of them know it. But when I then ask, “Do you act on this knowledge?” few do. And yet to act on this knowledge is the key to performance—or rather not to act on this knowledge is to condemn oneself to non-performance.

I agree with Drucker and I have acted on this knowledge in the last few years, using writing as a learning tool and as the barometer of my learning progress. Therefore writing this thesis has been an immense learning experience.

I feel I have learned more than I think I have. Much of it has been about the infinity of my ignorance, to quote Popper (1994). I have learned about the subject of corporate governance, the breadth of it and some of its depth. More importantly I have learned to tackle a subject in a systematic fashion, from a theoretical to a practical level, and from claims to arguments to evidence. I have learned one needs to understand where one is coming from before one can understand where one is going. I have also learned about research methodology, how to research a subject, to challenge existing knowledge, and to seek new approximations of the truth. I have learned if one wants to see farther, one needs to stand on the shoulders of giants, to paraphrase Isaac Newton. Last, but not least, I have learned the importance of science as probably the greatest achievement of mankind (Gribbin, 2002). The scientific method is the mother of all science. That was a huge leap for this researcher.

5.3.2.2 Self-knowledge

One result of doing a doctorate is learning about oneself. Some experiences were scary and disappointing, but others surprising and exhilarating. The strangest realisation of the doctoral process was one’s strengths had become weaknesses. I had always considered my creativity, broad knowledge of the business literature, and skills as an editor as being my strengths. However, they were not a source of fortune. The creativity tended to wander different paths deeper into dark forests and blind alleys, when a more level-headed approach would have made the process more straightforward. Similarly, the broad knowledge of the grand spectrum of business and economics literature resulted in a false sense of security and lack of
focus. The experience as an editor led to overconfidence in the ability to mould a big and complex project into a single and clear thesis. On the other hand, by understanding the weaknesses of my strengths I could better convert them to an advantage.

This process of self-knowledge is in essence how I understand the difference between single and double loop learning (Argyris and Schon, 1978). It is a question of ‘efficiency’ and ‘effectiveness,’ or in other words ‘doing things right’ and ‘doing the right things’ (Drucker, 1954). One tends to, as I did during most of the process of working on this thesis, want to focus on doing things right, only to realise later in the process those were the wrong things. What one should have been focusing on was doing the right things. It seems from the experience of this research, however, that one sometimes needs to take several rounds in the single loop before one realises the double loop. It not only describes the personal learning experience in terms of self-knowledge, it actually describes the research process and the structure and the strategy of the thesis. It was only late in the game that I figured out what the essence of the thesis was, and what work had to be done, and what the right focus was. Initially, the work had mainly emphasised following the procedures of good research practice.

The learning experience will help me to become a better researcher. I understand now that one needs to try to find out what the right things are before doing things right. I have also learned sometimes one needs to do something, as in contrast to just looking at the problem, to figure out what those right things are, as sometimes they emerge as part of the process. This self-knowledge is in a sense about understanding, if not unlearning, one’s bad habits, and learning from mistakes.

5.3.2.3 Lifelong learning

Lastly, another very important lesson was acquired from the doctoral journey, and that is about lifelong learning. Drucker (1997, p. 105) taught this lesson, as he made lifelong learning into a discipline. For over sixty years he made it a rule to learn a new subject over a time period of three or four years.
It may be statistics, it may be medieval history, it may be Japanese art, it may be economics. Three years of study are by no means enough to master a subject, but they are enough to understand it. So, for more than sixty years, I have kept on studying one subject at a time. This has not only given me a substantial fund of knowledge, it has also forced me to be open to new disciplines and new approaches and new methods – for every one of the subjects I have studied, makes different assumptions and employs a different methodology.

I think Drucker made an important discovery. Three years is roughly the time it takes to get some insight into a subject. It is no coincidence, in my view, that a doctoral degree usually takes three to four years. I have chosen to look at my DBA studies in this light, to learn the process of learning a subject in three or four years. In a way, this is probably the most valuable skill that a doctorate degree can give me, the discipline to focus on a subject for three years and gain a fundamental understanding of it. Hopefully, I will also be able to retain this knowledge to build on and cherish. This time it was corporate governance. Hopefully there will be more subjects to come.

5.3.3 A new turning point

In the introduction I discussed some of the personal goals I made as part of my CDP. They were goals I wanted to achieve as part of the doctoral process. The goals are indicators of the new turning point I foresaw as part of taking this challenge. Each of the goals will be discussed in terms of the results achieved, and speculated about as to whether they did indeed represent a turning point in my life as I anticipated.

*Researcher* – As a researcher I have gained a much broader spectrum of tools and theories to work from. I think I am fairly well educated in research theory and quantitative and qualitative research tools. For most of the first two years my focus was on qualitative methods. For the second two the focus was on quantitative methodology. I have not mastered either discipline yet, but I feel comfortable applying them, separately or together, as I think they should be used, to supplement each other.
Consultant – I believe modern consulting should be more research-focused than previously. I believe, therefore, the research process has made me a better consultant, and vice versa. I started an advisory board programme in 2006, the A-Board, where I chaired five boards of Danish entrepreneurial companies. In 2007 the programme was also started in Iceland, and expanded to twenty companies in Denmark. From this work I have a better understanding of the needs of small and growing companies. Furthermore, I started a consulting agency in the spring of 2007, specialising in corporate governance issues in Nordic countries (www.performingboards.com).

Educator – I was not going to focus much on teaching while I was doing my doctorate. It turned out differently. In 2006, I started to teach entrepreneurship at the MBA level at the Copenhagen Business School in Denmark. The programme was expanded in 2007, and even grander plans have been made for 2008. I taught also as a guest lecturer on the MBA program at the University of Iceland, and in top management education at the Reykjavik University. Some other programmes with three other universities are scheduled for 2007/2008. In March 2007, I accepted a part-time position as associate professor at Copenhagen Business School. I have emerged as an educator. I think the confidence gained from discussing theories and ideas at a top academic level made that step much easier. Furthermore, it was my link to research and researchers that made this possible.

Writer – One goal had more influence on the decision to take the DBA than any other, and it was to become a better writer, someone who could write sufficiently in English. I could not do that before with any confidence. I published my first “scientific” article in English in 2005. Since then I have published three others in scientific journals. Two articles written by me can be found in the Henley Management College Working Paper Series, and I have written more than ten conference papers. Last but not least, I have managed to put together a thesis in English. It has rewarded me with the confidence to pursue further writing in English. Several projects for books are already on the agenda.
Entrepreneur – Although it was not clear how the goal of entrepreneurship would be realised, it was very important to actively seek to broaden my scope as an entrepreneur. Early in 2007 I started a research and consulting agency focused on corporate governance in Nordic countries. Although it is not much it is a venue for my research and consulting on corporate governance. I am considering several other projects, and the only thing standing in the way is my desire to focus on finishing my doctorate before I take on any further projects. Furthermore, as already mentioned, I have been teaching entrepreneurship at three different universities, which has provided me with tools and a network to make it easier for me to start new ventures in the future.

Student – I do subscribe to the lifelong discipline that Drucker practised. I understand the value of the three-year focus much better now than before. I believe my research into learning theories has helped me to learn from different perspective. More interestingly, my curiosity and desire to understand theories and theory-building has had a profound influence on my ability to understand how and what to learn. There is little doubt the DBA process has made me into a much better student than I was before, especially in terms of approaching it as a discipline.

Network – The DBA programme at Henley Management College turned out to be a disappointment in terms of a networking venue. I have, however, on my own initiative travelled to different countries and conferences where I have met lot of people with similar interests. One of my initiatives has, furthermore, been to start a DBA-HMC Network, were I tracked down DBA graduates from Henley Management College and proposed an informal network and a yearly gathering. By the end of April the network had nearly forty members, after less than three months in existence. I have also become better at networking, understanding what the nature of relationships can be. I have good relationships with top ranking professors of many different universities around the world. I cannot say that I had many before I started the journey.

A new research area – My original idea was to do my research within the field of entrepreneurship. I realised, however, that Henley Management College had much
more leverage within the field of corporate governance. I knew the field from the perspective of governance codes, and had somewhat led the discussion in Iceland as an editor. I cannot, however, say I really knew the field until I started researching it. I found out I had misunderstood some issues, and not thought enough about others. Corporate governance has become my new field, an area I shall continue to research as I think it is a very interesting field. Four years of exploration have given me the ability to call this field my area of expertise.

*International life* – Life has become international. I live in Denmark, spend lots of time in the UK, Norway and Italy, and less and less time in my home country. The network I have built during the programme is truly international. There are now more opportunities to live wherever I choose and the Henley DBA will give me the international credentials I needed. Furthermore, I have become much more independent and confident than before, which permits me to make dreams come alive, rather than just be a spectator to the life I dreamt of living. That is an important achievement.

Some turning points are hard to see whilst one is still involved in the process, although they become clearer in retrospect. Four years feel like a long time. In some ways, I feel I am still on the same track as I was on before. What I have achieved does become clearer when I reflect on the above goals. I wanted the DBA to be a turning point, and I believe that is what it was, a life-changing journey.
5.4 Final words

The roots of education are bitter, but the fruit is sweet.

Aristotle (384 BC – 322 BC)

It has been like a marathon. One should say it has been an intellectual marathon, but that would be an overstatement, as it was more about resilience and survival. ‘Never, never, never give up’ – to quote Winston Churchill. Marathon is a good metaphor. It started out as a journey where the length and the struggle were known beforehand. However, it then turned out to be a marathon where the roads were unmarked and the supplies limited. It was a jungle marathon.

The wonderful thing about a marathon is although it is like a venture through hell during the run, it is like finding heaven reaching the goal – that applies to both if you are still breathing (heavily), as well as if you are dead on arrival. Two experiences might give some clue about how I have perceived this doctoral journey. First, I ran my first marathon in the second year of my DBA, and have run two other marathons since – one of those on the Great Wall of China. Second, I started singing in a gospel choir. These two things indicate how desperate one can become on this journey. Masochism and the last resort for hope is what got me through. The side effects, or the parallel spiritual journey if you like, were not just the strife for mental sanity, but actual goals from the past that wouldn’t have been realised without the trial of the doctorate. The mantra has been – ‘if I can do this I can do anything.’ That is the dearest achievement of the journey.

I do feel that I have made my contribution to the body of knowledge, and learned to understand the discipline of research and what it is to be a ‘scientist’. If nothing else, I learned to appreciate my ignorance and use it as an incentive for further exploration. That was the essence of the doctoral journey.
Summary of Chapter 5. - Conclusions

This summary brings the thesis to a close. The issues presented in the first chapter are discussed in terms of the results of the study. The main focus is the contribution the thesis has made to the body of knowledge from an academic perspective. The implications of the practical and the personal dimensions are also discussed. The argument is the contribution of this thesis demonstrates the researcher has understood the discipline of scientific research.

The main points from this chapter are:

- The main contribution of this thesis, a major original study based on the process view of the board, indicates a positive relationship between the board of directors and organisational performance. It provides empirical support for three theoretically different roles of board, one of those being the strategic role measures, with instruments adapted from other disciplines. The empirical results and theoretical discussions reject the managerial hegemony theory and the agency theory in the context of SMEs in Iceland.
- The thesis, furthermore, contributes to the methodology of the process-based view by introducing broader organisational performance measures, refining and validating board instruments, and by using the approach of rigorous instrumentalism.
- The thesis also contributes to the corporate governance literature with the definition and the problem formulation based on theorization, as well as with the classification of previous empirical and theoretical discussions.
- The practical implications of the study are boards can choose how they can be most valuable by understanding the implications of the three different roles empirically supported in this thesis. It indicates a fundamentally different perspective of the role of board as an organ within the organisation.
- The personal implication of the journey was goals set in the beginning were mostly achieved, indicating the process has indeed been a turning point in the life of the researcher.
- The doctorate journey was a (jungle) marathon.
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Appendix 1: Bivariate Correlations
Appendix 2: Final Version of Questionnaire