CORPORATE GOVERNANCE AND PERFORMANCE, THE MODERATING EFFECT OF THE ENTREPRENEURIAL ORGANISATION

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ABSTRACT

Despite the widespread adoption of governance best practice generated by government reports such as; Cadbury (1992), Greenbury (1995) and Higgs (2003) in response to the collapse of several multi-billion dollar public entities, accounting and governance scandals continue to proliferate. The scale of failures such as Enron, and the fact that they were not foreseen, lead the author to conclude that the relationship between the way in which a corporation is governed and how it performs is far from fully understood.

A comprehensive review of existing corporate governance research highlights two major shortcomings. Firstly, literature and managerial best practice is biased towards understanding the need to control agents charged with the running of firms that they do not own, so called agency theory (Berle & Means, 1932; Williamson, 1964; Jensen & Meckling, 1976). Where other theories, namely resource dependency theory (Pfeffer & Salancik, 1978) and stewardship theory (Boyd,1995; Donaldson, 1990), have been explored, they have been largely considered in isolation in an attempt to contradict rather than compliment the conclusions that arise from the adoption of an agency stance. Secondly, corporate governance guidelines and academic research has, thus far, failed to sufficiently define firm specific circumstance, or context specific variables, and, therefore to reflect that such variables could significantly alter the relationship that a given model of governance could have upon firm performance. Consequently, this study develops and applies a theoretically integrated research model that defines governance in terms of all three aforementioned theories and utilises the entrepreneurial venture, with its unique ownership and leadership structure, as a lens through which to observe the effects of context specific variables on the governance to performance relationship.

Using a combination of publicly available, independently audited, corporate reports and primary data collected from the leaders of 204 companies listing on London's Alternative Investment Market (109 of which meet the author's definition of an entrepreneurial venture), an analysis of the collected data, using partial least squares, reveals that for both entrepreneurial and non entrepreneurial ventures, significant relationships exist between constructs of; ownership; non-financial reward; the services provided by the board; financial motivation and financial corporate performance. However, in non entrepreneurial firms, significant relationships also exist between the control of the agent construct; duality and financial corporate performance. Finally, the identified constructs of corporate governance explain 14% of return on capital employed and 17% of return on assets in entrepreneurial ventures, whereas they explain 7% and 26% respectively when the firm is deemed non entrepreneurial.

These findings provide an original contribution to academia by highlighting the manner in which the choice of performance indicator can alter the nature of the observed relationship. Furthermore, by identifying the manner in which the context specific variables associated with entrepreneurialism alter the governance to performance relationship, the author has contributed fresh insight into this economically important sub set of firms, increased the granularity of academia's understanding of corporate governance and, in the case of all three of the mentioned contributions, clarified the previously confounding results that have emerged from a tendency to research single items of corporate governance defined by a single theoretical stance within samples of largely ubiquitous firms.

In addition, a contribution has been made to business practice through the development of guidelines that call for managers, owners and policy makers to dig deeper into the role of the governance system and what it is that they need it to deliver given their specific circumstances and operating environment – rather than slavishly following a static model of best practice that, at best, provides the outward signs of compliance but that, in fact, has a greater potential to create a false sense of security.

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PART A
INTRODUCTION

This part of the thesis is composed of a single chapter that provides an introduction to the subject area, an overview of the extant knowledge and the gaps that have been identified within management and academic understanding of the association between corporate governance and corporate performance. The chapter then proceeds to state the aim and objectives of the research along with an explanation and justification of the expected contributions it will make to both academia and management. The final part of the chapter outlines the adopted research methodology, the limitations of the study and the structure of the thesis.

CHAPTER A1: INTRODUCTION

A1.1 Introduction

Investigations into the governance of UK companies came to the fore following several high-profile corporate failures, including notables such as Polly Peck, Coloroll and BCCI, in which cases, directors were not only seen as acting against the shareholders' interests, but also as acting in dereliction of their duties to the company. Public concerns over such behaviour prompted the government to launch investigations into corporate governance that resulted in the publication of reports such as Cadbury (1992) Greenbury (1995) and Higgs (2003). These investigations, which draw upon the theories produced by academic research such as Berle and Means (1932), Williamson (1964) and Jensen and Meckling (1976) made a series of recommendations with regards to governance best practice (in terms of both behaviour and structure) and remain as the template upon which the UK's governance systems are built. Furthermore, the size, importance and, therefore, influence of the London Stock Exchange mean that the recommendations of Cadbury, Greenbury and Higgs have global scope and implications.

Despite the widespread adoption of these recommendations, the (mal)practice of corporate governance has continued to be associated with the collapse of multi-billion dollar public entities such as KPNQwest, Enron, Worldcom and, most recently, banking institutions such as Bear Stearns, Northern Rock and Lehman Brothers.

The scale of these earlier failures and the fact that they were not foreseen lead the author to conclude that the relationship between the way in which a corporation is governed and how it performs is far from understood.

Given that the shockwaves generated by these corporate failures were felt by investors, employees and entire economies and given that such failures are not, apparently, being sufficiently controlled or predicted by extant best practice and research, the author concludes that understanding the way in which corporate governance affects corporate performance remains a highly relevant area for research. With a view to identifying where gaps in understanding might exist, the following section presents an initial review of related literature.

A1.2 Extant Knowledge and Perceived Gaps

A full review and debate of extant research and the extent to which it has explained the relationship between the way in which a firm is governed and how it performs is presented in Part B of this thesis. In the process of this review the author identified two avenues that merit further research, i.e. 1) extant literature was found to be over reliant upon the theoretical need to control managers and 2) the firm has largely been treated as a ubiquitous entity. Each of these points is now explored in turn.

Extant research, along with the policy and guidelines that it has given rise to (Cadbury, 1992; Greenbury, 1995; Higgs, 2003) was found to be over reliant upon a common approach that centred on exploring the impact that isolated indicators of governance, suggested by a single theoretical standpoint, have upon corporate performance. For example, research by Daily and Dalton (1993) and Slatter and Lovett (1999) is based upon agency theory's need for owners to control the business leaders, or 'agents', that they employ and concludes that CEO's that also hold the position of Chairman (a condition termed 'duality') are associated with poor corporate performance. Goodstein and Boeker (1991), Zahra and Filatotgchev (2004) and Erakovic and Goel (2008) neglect to consider the need to control or motivate agents that is suggested by agency theory and instead use lenses of resource dependency to understand the value added by a Board in terms of the services it supplies. Similarly, research by Uhlaner (2007) and Braun and Sharma (2007) neglects to consider resource dependency and concentrates on understanding how the differing, more altruistic, motivations associated with owner control and family control influence firm performance. Although all of the referenced research is thorough and well executed, the collective results fail to explain the impact that a wider definition of corporate governance, i.e. one that simultaneously encompasses all three theories, would have upon firm performance. The issue is perhaps best summed up by the findings of Nicholson and Kiel (2007) who, in an examination of the governance : performance relationship from the perspectives of agency, stewardship and resource dependency, concluded that no single theory explains the general pattern of results. The first perceived shortcoming in extant knowledge can therefore be described thus:

- Corporate governance research and managerial best practice is biased towards understanding the need to control agents charged with the running of firms that they do not own, so called Agency theory (Berle & Means, 1932; Williamson, 1964; Jensen & Meckling, 1976). Where other theories, namely resource dependency theory (Pfeffer & Salancik, 1978) and stewardship theory (Boyd,1995; Donaldson, 1990), have been explored, they have been largely considered in isolation in an attempt to contradict rather than compliment the conclusions that arise from the adoption of an agency stance.

The second shortcoming that was found to exist centred on an apparent failing of research to consider how the association between governance and performance would differ in line with the context specific circumstances within / under which the firm operates. Specifically, in one such academic example (Zahra, 1996), it was observed that the level of technological sophistication associated with the proposition or operation of any given firm would moderate the degree of impact that governance would have upon performance. Subsequent reading (Jacobs, 1991;Daily & Dalton, 1992; Donlon, 2004) however, (along with the observation that firms beyond those with links to the technology sector have also become embroiled in governance scandals) indicated that technological innovation / technological opportunity are merely individual factors of the prevailing internal / external environment. In spite of their relevance (Zahra, 1996), the author proposes that such factors should be considered as one of several context specific variables that will moderate the previously observed effect that corporate governance has upon corporate performance. This proposal can, however, be seen to create an issue of choice, i.e. context specific variables could be limitless and consequently there is a need to identify a particular set of variables that when focussed upon will maximise the relevance and contribution of the research.

In considering this need, corporate governance literature was found to have attempted to define circumstance in terms of singular, broad categories, such as, industry type (Zahra, 1996), the stage of firm development (e.g. start-up ventures) (Gedajlovic et al. 2004) firm size (Daily & Dalton, 1992; Denis & Sarin, 1999) and geography (Weir & Laing, 2001). Examples of research into multi-faceted firm specific operating environments were found to have been conducted by Hillier and McColgan (2006), Young (2000) and Peasnell et al.(2003), however, although thorough and methodologically sound, these latter papers study relationships between firm context and the construction of their governance processes – rather than focussing on how this context may alter the effectiveness of said processes and their impact upon firm performance. Similarly, Escriba-Esteve et al. (2008) explore the moderating impact of a firms environment upon the relationship between its strategic orientation and performance, finding that strategic orientation has a more positive impact on performance in turbulent environments. This study, although focussing on small and medium enterprises in Valencia and not directly relating to corporate governance, clearly illustrates the importance of considering context specific variables (represented in this case by the environment).This gives rise to the second identified shortcoming:

- Corporate governance guidelines and academic research has, thus far, failed to sufficiently define firm specific circumstance, or context specific variables, and, therefore to reflect that such variables could significantly alter the relationship that a given model of governance could have upon firm performance.

A1.3 Aim and Objectives of the Research

In light of the shortcomings described in the previous section, and on the basis that issues relating to the governance of companies prevail, it is the aim of this research to address these perceived gaps. In so doing the research will further advance academic understanding of how a wider set of governance constructs (i.e. those that emerge from a simultaneous application of agency, stewardship and resource dependency theories) relate to performance and provide managers, owners and policy makers with guidance on how best to align the design and structure of their systems of governance with their specific circumstances and respective goals. Specifically, this research aims to; 1) examine the extent to which corporate governance explains corporate performance using an integrated theoretical framework that encompasses theories of agency theory, resource dependency theory and stewardship theory; and 2) determine whether this explanation is altered by the context specific variables represented by the entrepreneurial venture.

In order to meet this aim, the author has first sought to build a theoretical framework that reflects and supports the investigation of the wider set of research questions that result from the simultaneous consideration of theories of agency, resource dependency and stewardship. The framework (debated in detail in Chapter C1) aims to provide the basis for a more granular, and therefore "life-like" definition of corporate governance and therefore a clearer understanding of the extent to which the resultant constructs explain corporate performance.

Secondly the author seeks to identify a vehicle that is relevant to the corporate governance debate and through which the effect that its specific variables has upon the governance : performance relationship can be clearly observed. The conclusion, which is fully debated in Chapter B3, is the Entrepreneurial Venture defined herein as a firm in which the founder retains greater than 10% of the firm's stock and a position on the Board of directors. Justification for electing to use entrepreneurial ventures as a focus is provided by its ability to represent:

- a clearly differentiated ownership structure (with ownership already identified as a key construct of agency theory and, therefore corporate governance by, for example, Zahra, 1996).
- the potential for a founder / manager to hold a broader set of altruistic motivations (Uhlaner, 2007, Boyd,1995; Donaldson, 1990) and therefore represent Stewardship theory.

- the potential for a founder / manager that retains a managerial position to alter the value to be gained from board members providing access to scare resource (either increasing it through having access to unique information about the firm (Zahra & Filatotgchev, 2004) or decreasing it by occupying a position that could have been used to acquire alternative resource (Gedajlovic et al. 2004).

The economic relevance and therefore justification of the entrepreneurial venture is confirmed by, among others, Schumpeter (1942), Daily and Dalton (1992), Escriba-Esteve et al. (2008) and Lumpkin and Dess (1996, pp.135) who state that, "for both start-up ventures and existing firms, entrepreneurship carried on in pursuit of business opportunities spurs business expansion, technological progress and wealth creation".

With this "definition" of context specific variables, the need to construct the theoretical framework and the overall aim of addressing the shortcomings identified in A1.2 in mind, the objectives of this research can be described thus:

Objective 1: To identify the key constructs of corporate governance and performance as defined by the simultaneous application of the theories of agency, stewardship and resource dependency.

Objective 2: Develop a comprehensive conceptual model to enable the evaluation of the corporate governance : corporate performance relationship and the effects of context specific variables (Chapter C1) .

Objective 3: To operationalise the research constructs (Section C3.1)

Objective 4: To evaluate the extent to which the identified constructs of corporate governance explain corporate performance (Part D).

Objective 5: To evaluate how this explanation is altered in line with a firm's context specific variables, specifically those represented by entrepreneurial ventures (Part D).

Objective 6: To recommend and direct additional research towards the exploration of other circumstances and firm types that extend beyond those embodied within the chosen focus of this research.

Objective 7: To provide managerial recommendations on a wider set of factors to consider when designing governance processes that more accurately reflect their individual circumstances.

A1.4 Contribution to Academia and Management

By simultaneously considering the questions raised by theories of agency, stewardship and resource dependency, this thesis has developed a definition of corporate governance that more completely represents the complex and multi-faceted nature of the human beings responsible for executing the process of business. In so doing its conclusions more accurately reflect "real-life" and as such provide managers and owners with a more meaningful insight into how governance impacts performance. This approach contributes to academia by providing evidence on how the theories of agency, stewardship and resource dependency combine to provide a more complete representation of the process of governance and, consequently a greater explanation of corporate performance. Through the application of this multi-theoretical definition of corporate governance the author seeks to clarify the confounding body of evidence that has result from research based on single governance theories, in so doing the thesis aims to provide managers, owners and policy makers with clearer recommendations on how to govern effectively and, consequently, protect investors from the effects of further malpractice.

Studying the way in which the relationships between the constructs of corporate governance and corporate performance change in line with the circumstances of the firm increases the granularity of academia's understanding of how different types of firm respond to today's stipulated governance regimes. This should alert owners, policy makers and managers alike to the need to flex their regulations, choice of board members and methods of motivation to suit their specific circumstances and aims.

Using the entrepreneurial venture as the vehicle through which to observe the effects of context specific variables adds to the academic understanding of the specific requirements of this economically critical sub-set of firms. Specifically, it seeks to contribute to the understanding of how the motivations, needs and contributions of a founder / manager / owner differ from those of a professional manager and how these differences affect the relationship between governance and performance. This will provide practitioners with guidelines on how best to govern in the circumstances represented by the entrepreneurial venture and academics with evidence upon which to base future research into the effects of different context specific variables.

A1.5 Research Methodology

This thesis has followed a systematic methodological approach, which ensures the minimisation of errors arising from measurement, collection, analysis and interference (Simon, 1969). A detailed methodology is presented in Part C, however, the following summarises the adopted process.

Following an extensive review of extant literature and research (Part B), a conceptual framework (Chapter C1) and a subsequent set of research hypotheses (Chapter C2) were developed. An appropriate set of measures and measurements were then constructed with a view to testing each of the identified hypothesis (Chapter C3) and the research-instrument/questionnaire for the gathering of data was designed (Chapter C4). The Alternative Investment Market was defined as the research population and data was collected via a combination of email, personal phone call and mail survey. In all, a total of 704 companies were approached, resulting ultimately in a sample of 204, 109 of which met the author's definition of an entrepreneurial venture (Section C3.1.5).

Having identified, on grounds of its ability to analyse both formative and reflective constructs, Partial Least Squares was selected as the most appropriate analytical method (Chapter C5) the accuracy of the measurements was assessed in terms of reliability and validity (Chapter D1) and, finally, the hypothesised relationships were evaluated (Chapter D2).

A1.6 Structure of the Thesis

Following this chapter, in which the author has introduced the subject matter, discussed the aim and defined the parameters of the study, the thesis proceeds with a detailed review of extant literature relating to corporate governance and its relationship with corporate performance (Part B). The review starts by debating the theories that purport to explain why the way in which a firm is governed is expected to impact the extent to which it performs. This debate identifies the key constructs of corporate governance, reviews literature relating to each and determines the extent to which their association with corporate performance has been researched. It has also considered how and if the potential moderating effect of context specific variables has been explained and / or factored into past research initiatives. Having established whether the perceived gap in knowledge relating to context specific variables actually exists, the final part of the literature review has been devoted to reviewing literature relating to "entrepreneurial ventures" in the context of corporate governance and debates the extent to which this sub set of firms represents a set of relevant, researchable, context specific variables.

The output of the literature review provides confirmation, and a detailed expression, of the gaps existing within the extant body of corporate governance research. The next step (Part C) has, therefore, been the design of a theoretical framework upon which research hypotheses were eventually built. At this point, the author has also presented the philosophical stance adopted and proceeds to expand upon the purpose of the study before defining the type of investigation, the study setting, the extent of the researcher's interference with the research and the time horizon over which it has been conducted. The development of the research hypotheses and their measurements and measures has, as stated, been built upon the identified theoretical framework and poses those questions that bridge the identified gaps in understanding and in so doing contribute to academia and management. The second section of the research methodology concentrates on providing a clear process, the design of which has ensured the gathering of the data needed to prove the hypotheses. Before progressing with the analysis of the data gathered, the thesis has explored the nature of the research hypotheses and the associated data in order to determine the most appropriate method of analysis and ensure that the eventual tests enabled the desired outcomes (i.e. they enabled the author to make statistically robust statements on whether the hypotheses are supported or otherwise). The analysis itself (Part D) has two distinct stages; the first considers the reliability and validity of the measurement model and has allowed conclusions to be drawn on whether or not the model has actually measured the desired parameters. Having satisfied this first set of tests, the data has been be further analysed to establish the significance and meaningfulness of the hypothesised pathways and the model's "goodness of fit", i.e. tests have been run to determine; whether the hypothesised associations between the identified constructs of corporate governance and the construct of performance are statistically supported, the extent to which corporate governance, alone, is seen to explain corporate performance and whether the associations are significantly different for entrepreneurial ventures. Equipped with the output from Part D, the final part of the thesis (Part E) reviews the research objectives and considers the implications / contribution of the findings to academia and management, it also seeks to synthesise the lessons learnt and use the resultant conclusions to signpost and recommend additional areas for research.

A1.7 Conclusion

At this point of the thesis, the author has outlined the importance and modern day relevance of corporate governance and the extent to which its impact upon corporate performance is understood. The early conclusion reached is that previous research initiatives have typically adopted a single theoretical viewpoint upon which to form their hypotheses and in so doing have failed to consider the extent to which a firm's context specific variables might alter the efficacy of its governance system – leaving a significant gap in current understanding and` leading to the conclusion that research into these areas will make a significant contribution to academia and management. The next chapter presents and explores the related literature with a view to detailing and debating the extent to which the conclusions contained within this introduction are supported.

PART B
LITERATURE REVIEW

The next part of the thesis is the literature review, which begins by discussing the theories that provide the basis for why corporate governance is expected to affect corporate performance. It then explores each of the identified elements of governance with a view to determining the extent to which their association with corporate performance has been researched. Also considered is the potential moderating effect of context specific variables and the definition of a vehicle, namely the "entrepreneurial venture", through which such a concept can be observed.

CHAPTER B1: CORPORATE GOVERNANCE THEORY – A REVIEW OF EXTANT LITERATURE

B1.1 Introduction

The review of extant literature contained within this chapter defines the concepts of governance and performance and explores the potential importance of context specific variables upon their relationship. The conclusions of this chapter relating to the perceived gaps in the existing body of research will provide the basis for a theoretically grounded / supported theoretical framework that will be developed in Part C.

The review commences by considering the theories that provide the basis for why an association between corporate governance and corporate performance is expected to exist. The next three Sections (Sections B1.4 – B1.6) concentrate on research into the control of the agent by the owner, the motivation (both, financial and non-financial) of the agent by the owner and, finally, the concept and impact of ownership itself. In so doing the review explores the application of both agency and stewardship theories. The fourth part of the review (Section B1.7) concentrates on services provided by the board and as such focuses on resource dependency theory.

Finally, this chapter considers literature relating to the concept of context specific variables and the extent to which they have been found to moderate the theoretical relationships found to exist by the research reviewed in Sections B1.4-B1.7.

B1.2 Founding Theories

The three predominant theories in corporate governance are; Agency Theory (Berle and Means, 1932; Williamson, 1964; Jensen and Meckling, 1976), Stewardship Theory (Boyd,1995; Donaldson, 1990; Braun & Sharma, 2007) and Resource Dependency Theory (Pfeffer & Salancik, 1978).

Agency Theory addresses inefficiencies and conflicts that arise from the separation of companies' ownership and control (Eisenhardt, 1989; Fama and Jensen, 1983; Jensen and Meckling, 1976; Shleifer and Vishny, 1997; Bonazzi and Islam, 2007). Berle and Means' (1932) found that managers did not always have sufficient equity in the firms they managed to give them the incentive to devote their full attention to profit maximization (although this assumes that financial gain is the primary aim of the owner(s)). Instead, managers are expected (Berle and Means',1932) to pursue self-interested initiatives, e.g. job protection and personal wealth maximisation, at the expense of goals that they are paid and entrusted to deliver on behalf of the shareholders. Hence owners of a firm can reasonably expect performance (defined as the achievement of their objectives) at least from their perspective, to be adversely affected by an ineffectively motivated and / or governed manager (or agent). This theory introduces two facets of the term "governance", namely the control and the motivation of the agent by the owner(s). Methods of control, as suggested by the non-academic Cadbury (1992) committee, include limiting the power and responsibility of an individual agent, the monitoring of the principal agent by an independent body and the responsibility for certain decisions, remuneration for example, being given to same independent body. Methods of motivation include the linking of remuneration to performance of the firm and, conversely, linking disciplinary action (e.g. dismissal or legal action) to failure. Empirical findings on methods of control and motivation are discussed in detail in Sections B1.4 and B1.5 respectively, however this initial discussion of Agency Theory highlights that its application tends to generate research questions concerning the relative autonomy / power of principle agents and the degree to which controlling bodies exist, are independent and can influence strategic decisions. Whereas these questions have been widely adopted as the cornerstones upon which extensive research initiatives have been launched (see Sections B1.4, B1.6), they are not exhaustive and fail to cover other aspects of the relationship between ownership, control and performance, as will now be discussed.

Focussing purely on the control and motivation of agents will provide little insight into the quality of the agents themselves (i.e., effective control and motivation of an ill equipped or inappropriate agent will not necessarily improve the performance of a firm). Quality is a complex parameter, however, in terms of corporate governance it is taken to represent the extent to which an agent contributes expertise, knowledge and can influence and / or exploit the external environment, i.e. the extent to which an agent can extract value from relationships with, for example, suppliers, partners or sources of funding. For an understanding of this facet we need to consider the Theory of Resource Dependency (Pfeffer & Salancik, 1978). Said theory posits that board size and quality, and not just its control and motivation, are a measure of an organization's ability to form environmental links, to secure critical resources and, therefore, to improve performance (Goodstein et al., 1994). According to Pfeffer and Salancik, "The greater the need for effective external linkage, the larger the board should be" (1978, pp.172). Pfeffer (1972, 1973) and Provan (1980), for example, demonstrated that board size was positively associated with a firm's ability to extract critical resources, such as amount of budget, external funding and leverage from an environment. Furthermore, the chances of a board possessing certain skills, knowledge or influence increases with the number of its members, the quality of those members (D'Aveni, 1990; Finklestein, 1992), the time they have at their disposal and, with reference to Agency Theory, their personal motivations (Koontz, 1967). In a more recent study Erakovic and Goel (2008) examine links between board-management relationships and relative competitive advantage concluding that "boards and executive management need to develop a conceptual understanding of internal and external capabilities of their relationships" (pp.67). This conclusion, although drawn from a small sample of firms (6) in a country (New Zealand) that could be argued to be non-representative, illustrates the ongoing relevance of resource dependency theory and the extent to which corporate governance extends beyond the need to control the CEO.

The word 'personal' when used in the context of motivation and governance suggests that the factors that drive agents to take certain actions or decisions are not ubiquitous, which leads us to another relevant theory, that of Stewardship (Boyd,1995; Donaldson, 1990; Braun & Sharma, 2007). A common weakness of Agency and Resource Dependency theories is that they tend to interpret performance as meaning maximum financial return for the owner, and for agent motivation to centre on similar financial gains (leading to an over-reliance on motivational vehicles such as equity plans and financial remuneration). Whereas these interpretations highlight important variables within a governance system, they paint a picture of the agent that is lacking in its explanation of 'personal' agent behaviour. With this in mind, Boyd (1995) and Donaldson (1990: pp.372) present a theory of 'Stewardship' in which the desire of an agent to maximise personal gain is considered to be counterbalanced by 'a much larger range of human motives, including needs for achievement, responsibility, and recognition, as well as altruism, belief, respect for authority, and the intrinsic motivation of an inherently satisfying task.' In applying this theory, Nordberg (2008) suggests that directors are more inclined towards utilitarian judgements, whereas Yoshimori (2005) who, in a comparison of the corporate performance of Japanese firms (Toyota and Canon) and US firms (General Motors and Xerox), concluded that higher performance is possible without resorting to US-Style corporate governance and proposes that corporate values, culture and strategy are equally vital ingredients of corporate success. Both of these latter studies illustrate the ongoing relevance of Stewardship theory and find support for its application in the ongoing research of corporate governance.

B1.3 Founding Theory Conclusions

Collectively, the three theories of Agency, Resource Dependency and Stewardship, describe a complex set of differing behaviours, motivations and dependencies, the management of which can be expected to have an effect on the performance of a given firm. The elements of these theories are typically grouped together under the banner of 'corporate governance' and thus provide us with parameters within which to explore this term, summarised in Table B1.1 below.

Table B1.1 Summary of governance theories and the questions they raise.

Theory	**Facets of Governance Uncovered**	**Questions Raised in Relation to Performance / Independent Variables**
Agency	Control and Motivation of Agent by Owner	Duality, Board composition, sub committee structure, financial remuneration, equity plans.
Stewardship	Wider Set of Non-Financial Motivations	Non-financial remuneration.
Resource Dependency	Services provided by the Board	Quality of board, size of board, time available to outside directors

Having identified the individual elements of governance and the theories as to why they are expected to have an effect upon the performance of a firm, the following Sections seek to explore the extent to which the relationship between each element and corporate performance has been explored by previous research initiatives with a view to identifying gaps in understanding. Put another way, the thesis will now review the extant literature addressing each of the identified elements with a view to establishing the extent to which they have been explored as well as the extent to which the resultant evidence contributes to understanding the association between governance and performance.

B1.4 Control of the Agent and Performance

In their study of failed and non-failed retail firms, Chaganti et al. (1985) described two basic functions of a corporate board of directors. One function, termed the service function, concerns the experience and thus the advice, managerial expertise and external networks that each director brings to the firm in which he/she is employed. This is within the domain of Resource Dependency Theory and will be covered later (Section B1.7), however, the second function is that of control which will be explored herein.

The Cadbury Committee (1992) report on the financial aspects of corporate governance was a broad review of governance best practice with a bias (underlined by its recommendations) towards the control function of corporate boards. Its five main recommendations were that:

- the role of CEO and Chairman should be separated (termed 'Duality' and recommended to be avoided in order to prevent a single individual becoming too powerful[1]);
- non-executive directors should be independent (in order to represent what is best for the company rather than simply bend to the will of the CEO);
- non-executive directors should have sufficient representation to carry weight at board meetings (for the same reason as above);
- board monitoring committees should be established to deal with specific areas such as setting director remuneration (to prevent CEO's and executives from

[1] At the time of writing (June 2007), the popular press are covering tensions between the shareholders of the British based retail chain, Marks and Spencers and their appointed CEO, Sir Stuart Rose who has proposes to combine the roles of Chairman and CEO, illustrating the influence that Cadbury's recommendations continue to exert.

rewarding themselves with inappropriate amounts for inappropriate action); and, finally,

- these committees should consist primarily of non-executive directors (in order to ensure independence and objectivity) .

Relying heavily on agency theory, Cadbury's recommendations reflect major strands of the control element of governance research. The body of academic work that underpins Cadbury's recommendations, starting with that concerned with Duality, will now be discussed with a view to determining the extent to which the relationship between performance and agent control has been researched as well as the extent to which this element (i.e., control) explains the overall association between governance and performance.

B1.4.1 Duality and Performance

Weir and Laing (2001) define duality as occurring when one individual simultaneously holds the two most powerful positions on the Board of Directors. Although their research fails to consider the positive effects of duality that arise from, for example, its ability to provide clear-cut leadership and lower information costs, the issue they raise with regards to duality stems from the conflict that occurs when a Chairperson, who is responsible for ensuring the effectiveness of the Board, is duty bound to monitor his / her own actions as CEO. The suggested result is a lack of control over the CEO, a subsequent lack of performance (as the CEO will be free to act in his / her own best interests) and, consequently, Cadbury's recommendation that the roles of CEO and Chairperson be separated.

An outline of the empirical support for this proposal is provided in Table B1.2, below.

Table B1.2 Empirical support for separate roles of Chairman and CEO

Author(s)	**Conclusion**
Daily and Dalton (1993) and Rechner and Dalton (1991)	Negative association between CEO strength and firm performance.
Argenti (1976) and Slatter and Lovett (1999)	Duality an important factor in corporate decline.
Lam and Lee (2008)	Non-Duality (i.e. separate roles) is good for family-controlled firms.
Daily and Dalton (1994)	Duality is more common in failed firms.
Hambrick and D'Aveni (1992)	Dominant CEOs were more likely than weaker CEOs to be associated with firm bankruptcy.

Evidence to the contrary is supplied by Boyd (1995) and Donaldson and Davis (1991) who found that firms with a dual CEO and Chairperson perform better than those with separate roles. Dahya et al. (1996) also found a positive association between the separation of leadership roles, i.e. non-Duality, and performance (in particular they concluded that stock prices rose upon the announcement that the roles were to be divorced).

More support for joint CEO's and Chairpeople comes from those who claim that there is potential for combined roles to create clear–cut leadership that permits a sharper focus on company objectives and promotes more rapid implementation of decisions (Stoeber & Sherony, 1995; Anderson & Anthony, 1986; Boyd, 1995; Baliga et al., 1996). Furthermore, Brickley et al., (1997), in a study of 661, large, publicly traded US firms concluded that the potential detrimental effect of combining the roles of CEO and Chairman were far from obvious and concluded that the lower information costs associated with duality (CEO's have a massive store of firm specific information and the cost of transferring this knowledge to a separate chairperson is high) cuts operating expenses and thus improves performance. The work of Brickley et al. (1997) also highlights two other important concepts; firstly their research population is drawn from a single certain type of firm and hints (without concluding or stating) that another set of firms with different characteristics may produce a different set of results, secondly it comments on how dual CEO's are not ubiquitous, i.e. many were found to be in transitional positions merely managing the business until such time as the new CEO is ready to assume full control. From the author's perspective these points lend support to the idea that research should progressively increase the detail of governance studies until the moderating effect of circumstance on the governance : performance relationship is understood.

With evidence for and against duality it should not come as a surprise that research by Dalton et al. (1998), Elsayed (2007) and Dahya and McConnell (2007) concluded that duality has a neutral effect upon firm performance! Similarly, Dahya and Travlos (2000) conclude that there is not one simple answer to the question of whether Duality affects performance or is positive or negative for shareholders. Instead they postulate the idea that there is an optimum board structure (including the combination / separation of CEO and Chair) for a given firm at a given time and also that there is a big difference between firms in different countries (namely USA and UK[2]), i.e. that firms studied will each operate within their own particular context and that these contextual variables will moderate the outcome, and thus weaken the generalisability, of the research recommendations. Subsequent support for these findings is provided by Elsayed (2007), who, despite initially concluding that CEO duality has no impact on firm performance, found that the relationship varied by industry type. Similarly Lam and Lee (2008) investigated how the ownership structure of a firm (family or non family owned) moderated the duality : performance relationship – concluding that duality was good for non-family firms but bad for family firms. These latter two studies, which were executed in Egypt and Hong Kong respectively, represent progress in understanding how contextual variables such as geography, industry type and ownership structure moderate[3] the relationship between corporate governance and corporate performance, they also recognise and reflect the importance of considering stewardship theory as well as agency theory, however, their generalisability is weak as their geographic focus is relatively narrow. Bonazzi and Islam (2007) take a slightly different approach to the study of Duality by exploring the effect to which its effect is moderated by Board control. In spite of their very small firm sample (6) and exclusive focus upon the effect of the monitoring function (thus neglecting the value, information and advice also provided by the Board), they find that optimising the level to which a board monitors the actions of the CEO will improve the performance of said CEO – illustrating that the answer to whether Duality is a good or bad thing is neither yes nor no, instead it can vary in line the effectiveness of the Board.

With findings on the effect that duality has upon performance so obviously divided, the author proposes that the research by Brickley et al. (1997), Dahya and Travlos' (2000) and Bonazzi and Islam (2007) highlights the complex, fleeting and moderating nature of circumstance and that the relationship between the leader of an organisation, his / her governors (i.e., the board) and the performance of the firm involves the interaction of factors that are not likely to be accounted for by an approach based solely on the theory of agency or explained by a methodology that treats firms and their circumstances to be static and ubiquitous. Quite apart from the

[2] Since embarking on this research, the question of geographical differences has been at the centre of several research initiatives, including: Yoshimori (2005); Bauer et al. (2003); Klapper & Love (2004); Cho & Kim (2007) and Kato & Kubo (2006).

issues associated with ignoring context specific variables, the majority of the cited research initiatives rely heavily on agency theory for an explanation of the expected relationship, however, the weakness of this approach becomes apparent when more than a single theoretical perspective is considered (as it has been by Lam & Lee, 2008 and Elsayed, 2007). As an illustration, Table B1.3 shows Boyd's (1995) conclusions on how the expected association between duality and performance is altered by the theoretical standpoint adopted:

Table B1.3 The effect of theoretical perspective on expected relationship

Theoretical Perspective	**Expected association Duality : Performance**	**Reason**
Agency	Negative	A powerful CEO will tend to act, and will not be prevented from acting, in his / her own interest and may thus fail to follow a path that is in the best interest of shareholders / owners.
Resource Dependency	Positive or Negative dependent upon environment / circumstance	High environmental uncertainty will need consolidated power for swift decision making. Stable environment may benefit from a large board with multiple personal networks and influences.
Stewardship	Positive	Duality would suggest trust in the individual and as such would represent reward and would motivate accordingly

This table illustrates how the three different theoretical standpoints discussed in Section B1.2 can, when applied to the question of duality, lead researchers to the

[3] Throughout this thesis the term "moderate" will be used to describe the way in which circumstances and other context specific variables will effect. change or alter the relationship said to exist between corporate governance and corporate performance.

formulation of different conclusions with regards the hypothesised direction of the relationship between duality and performance or even entirely different hypotheses, e.g. agency theory brings out the need to control the CEO, resource dependency theory highlights the importance of the environment[4] whereas stewardship theory emphasises the need to consider a wider range of human motivators. This demonstrates that the different theories overlap or are, at least, related and as such should be considered simultaneously.

Boyd (1995) attempts to consider all three of the divergent theories, however, by his own admission; his work is limited to an examination of formal structures (e.g., board composition) and outcomes (e.g., formal reporting) and in so doing fails to consider the quality of board members and the actual process of governance. As a consequence, Boyd's research provides evidence that theories of Stewardship, Agency and Resource Dependency correlate and, in so doing, provides pointers for how additional research can further extend understanding in this area.

This review of research into the relationship between Duality and corporate performance has shown how conclusions on whether such a relationship is positive, negative or neutral are divided and therefore inconclusive. The author concludes that the reason for this division is that extant literature appears to have over simplified the potential moderating effects of context specific variables and that this has resulted from the adoption of a single theoretical perspective.

[4] Boyd (1990), Pfeffer (1972, 1973) and Pfeffer and Salancik (1978) have, also, all linked board composition with environmental conditions. Although not specifically related to the subject of duality, the issues of the process of governance and the effect of the environment will become common themes throughout this literature review and will be discussed in the closing Section.

The next section looks at another facet of agent control with a view to determining whether conclusions are more concrete or whether the same over-simplification applies.

B1.4.2 Non-executive Directors and Performance

Having reviewed the extant literature of the day relating to the Board and its relationship to firm performance, Daily et al. (1999), find more than 20 different measurements of board composition e.g. the proportion of; inside directors, outside directors, affiliated directors, or interdependent directors. Although the operationalisation of this range of measurements was, following a thorough structural equations confirmatory factor analysis, found by Daily et al. (1999) to have resulted in 'a lack of consensus about the effects of board composition on performance' (pp.84), the author concludes that these measures are all designed to capture some aspect of board independence and that, as such, board composition is, as with Duality, concerned with the control of the principal leading agent, namely the CEO.

The academic research of Dare (1998), O'Sullivan and Wong (1999), Kyereboah-Coleman et al. (2007) and Dahya and McConnell (2007) (as well as the non-academic recommendations of Cadbury, 1992) conclude that performance will be positively effected where a board includes a high proportion of outside directors who are independent from the Chairman and CEO. Intuitive interpretation of agency theory supports this conclusion as it suggests that a greater degree of control by independent advisors will increase the likelihood of actions taken being in the best interest of the company and therefore its owners. In these four academic studies, however, there is no consideration of the possibility that the CEO might be offended by the apparent mistrust of the owner (evidenced by the installation of independent monitors in the form of non-executives), nor have they considered the personal motivations or quality of the non-executives involved. In the case of Cadbury (1992) recommendations are made without apparent regard or reference to extant literature and as such lack a firm theoretical base upon which they can be supported. Unsurprisingly, given the limitations of the aforementioned research, contradictory evidence, i.e. evidence that the relationship between the proportion of non-executives on a board and corporate performance is negative, is provided in the works of Bhagat and Black, (1998); Garg (2007) and Yermack, (1996) whereas Dalton et al.'s (1998) meta-analysis and Chaganti et al.'s (1985) exploration of board composition and failures in the retailing industry find no evidence of substantive relationships between board composition and financial performance. All of these studies are grounded in agency theory and use this as the underlying reason to expect a relationship to exist. Furthermore, they all adopt a similar positivistic approach to research, i.e. they form hypotheses based on agency theory, set criteria for board composition and performance, take a sample, count observable cases and draw conclusions. In so doing, they all ignore alternative theoretical view points and neglect to consider the specific circumstances of the firms or sub-sets of firms within the sample at the time of study. Nicholson and Kiel (2007) however, consider the same relationship from the perspectives of Agency theory, Resource Dependency Theory and Stewardship theory, finding that no single theory explains the general pattern of results in 7 cases – a conclusion that, due to the small sample, lacks generalisability, but still points to the potential that the simultaneous consideration of a wider set of theoretical viewpoints has in furthering the understanding of how corporate governance effects corporate performance.

The overall outcome of the aforementioned research is a body of evidence that, although providing a general statement that is applicable under 'normal' circumstances, lacks replicability and will encourage the recommendation of best practice that will be an ill fit with the needs of firms that operate within circumstances or contexts either side of the median line. Chaganti et al. (1985) allude to the existence of context specific variables by choosing a specific industry upon which to concentrate their research and also electing to use the 'failure' of firms as a criterion to examine the research questions (stating that it is an extreme condition that creates a crisis atmosphere and, in firms approaching failure, warrants board intervention). Said authors add a degree of granularity to the general level of understanding the issue (i.e., by drawing conclusions specific to a single industrial segment) as well researching an association where a specific and common set of circumstances are thought to exist (i.e., research takes place at a time where a state of crisis reigns or has reigned). The conclusions of research such as this can therefore be expected to differ from those of other studies and the replication of this research to other industrial segments will add weight and understanding to the argument that firms are not ubiquitous and that context specific variables must be observed in order to reach conclusions that are generalisable and applicable to specific industrial sub-sets under certain circumstances. Similarly, other research initiatives into how governance impacts performance have considered the moderating effect of the circumstances dictated by different geographies (Yoshimori, 2005; Bauer et al., 2003; Klapper & Love, 2004; Cho & Kim, 2007; Garg, 2007; Kyereboah-Coleman et al., 2007 and Kato and Kubo, 2006) which again illustrate the importance of considering context-specific variables and result in an increasing understanding of the global nature of corporate governance. Latterly, Hillier and McColgan (2006, pp.576) have considered the impact of firm-specific operating environments and owner-specific characteristics on the structure of corporate boards, however, prior to conducting their research they concluded that "this aspect of governance reform remains largely unexplored in the empirical or theoretical literature". Further recognition of this gap, and another attempt to bridge it, is provided by the work of Coles et al. (2007) who report that performance is negatively correlated with the fraction of inside directors in firms that report high R&D expenditures and positively correlated with the number of outside directors in large firms and in firms with high leverage. These two research initiatives illustrate how the specifics of a firm might impact on the outcome of the research.

In conclusion, whereas the evident division in academic opinion on the extent to which non executive directors influence performance could have occurred from the application of different research methodologies, different measurements (Daily et al., 1999), the over reliance upon agency theory (Nicholson & Kiel, 2007) or the existence of different market conditions prevalent at the time of study, the author concludes, at this stage, that the issues lie with the attempt to make general statements that apply to all firms regardless of their specific contexts and environments. This confusion could be resolved through the adoption of an approach that simultaneously considers the three theories of agency, resource dependency and stewardship and controls for the potentially moderating effect of context specific variables.

B1.4.3 Board Monitoring Committees and Performance

Further granularity to the debate on the role of non-executive directors is added by the inclusion of sub-committee influence into individual studies (Weir & Laing, 2001; Klein, 1998). Cadbury (1992) concluded that board sub-committees, such as a remuneration committee, should be wholly made up of independent non-executives. The reason given for this is, again, grounded in agency theory and based upon the thought that independent directors have shareholders' best interests at heart and are, therefore, best placed to link executive rewards to corporate performance. Whereas this may well be the case, both Weir and Laing (2001) and Klein (1998), who posit a positive association between the presence and independence of committees and corporate performance, failed to recognise the potential for non-executive directors to be recruited by the CEO, i.e. the very person that they are supposed to be governing, and that consequently the level of their independence, and therefore their effectiveness, may be limited. The work of Vafeas and Theodorou (1998) supports this view by concluding that remuneration sub-committees, regardless of their composition, have a neutral effect upon corporate performance. Conyon and Peck (1998) explore the effectiveness of Board Monitoring committees by measuring the association between the presence of such committees and levels of executive remuneration. Although not a direct study into governance and performance, this latter research initiative concludes that board monitoring committees have a limited impact on levels of management pay and that management pay and corporate performance are more aligned in companies with outsider-dominated boards and remuneration committees – illustrating the conflicting nature of empirical evidence and the complexities of the relationships.

As with the body of research covering Duality and Non Executives that has already been reviewed, work on the influence of sub-committees also seems to have weaknesses in the following areas

1. A detailed investigation into the process by which governance takes place is missing (Weir and Laing, 2001), i.e. all methodologies look at the structure that exists and not at how it functions or how it came to be.

2. Moderating, context specific variables, such as the prevailing economic conditions, the financial strength of particular industrial sectors etc., are ignored (Dahya and Travos, 2000; Boyd, 1995).

3. Performance is taken as a snapshot in time without any consideration of trend or environment (either at the firm, industry or wider economic level) (Boyd, 1995).

4. Research is based on agency theory and fails to consider alternative or additional theories, such as those concerning resource dependency and or stewardship, and their potential explanatory powers.

B1.4.4 Conclusions

The literature reviewed in Sections B1.4 to B1.4.3, illustrates a body of work that includes little latitude in its choice of independent variables and research methodologies and yet, paradoxically, a lot of contradictory conclusions. This fact in turn leads the author, at this point, to conclude that a broader approach to how controlling or governing agents and how such governance affects performance is needed.

B1.5 Motivation of the Agent and Performance

The author considers that motivation can be split into elements of reward (both financial and non-financial) and discipline, or carrot and stick. Financial rewards are typically thought of in terms of pay and stock options whereas discipline is taken to mean withdrawal / reduction of pay / bonus, termination of employment (and the damage that such a measure can have upon an individuals reputation and subsequent ability to secure future positions) or prosecution. Although non- financial rewards are more difficult to measure directly (i.e., they cannot simply be gained from figures contained within the annual report and accounts), Donaldson (1990) and Donaldson and Davis (1991) find that such rewards are associated with needs for achievement, responsibility and recognition as well as altruism, belief, respect for authority and the intrinsic motivation of an inherently satisfying task done well.

Ignoring the potential for motivation to come from anything other than financial recompense, Conyon (1998) and Conyon and Nicolitsas (1998) found; (i) that executive compensation and economic performance are positively correlated, and (ii) that poor company performance results in a higher probability of CEO turnover (they also found that such turnover was more likely in small to medium public corporations than in large public corporations). With specific reference to the governance debate, and motivation of the CEO through fear of dismissal, Conyon (1998) concluded that CEO turnover was less likely in companies with large boards but more likely in poorly performing companies with a high proportion of non-executives on the board. These points, based on personal experience and anecdotal evidence, can be explained by two opposing conditions, i.e. on one hand directors will have their careers closely linked to that of the CEO and will therefore be unwilling to censure and, on the other, non-executives will wish to signal their effectiveness to the wider employment market through the application of control.

The implication of the findings presented by Conyon (1998), Conyon and Nicolitsas (1998), Coughlan and Schmidt (1985), Warner, Watts and Wruck (1988) and Jensen and Murphy (1990), is that increasing the CEO's wage and the fear of dismissal combine to improve performance. However, the same approach to the research that led to issues in the research of board structure is once again evidence in this body of work, i.e. by failing to consider the effects of other motivations (such as those described by Stewardship theory) research hypotheses are potentially limited and results consequently lack generalisability. Furthermore, the fact that size of firm was seen to be of relevance in the work of Conyon (1998) and Conyon and Nicolitsas (1998, further supported by Rosen, 1990) illustrates the effect of circumstances / context specific variables and raises questions about the effects that variables other than size, ownership structure, geography and industry sector membership will have upon the relationship under consideration – particularly if said consideration were to examine the process by which governance takes place within definable sub-Sections of the sample.

Another limitation of the body of work discussed above is that stock options held by directors are not included in the measure of compensation. Main, Bruce and Buck (1996) find that management remuneration is more sensitive to performance where the former is defined as including the value of stock options. This introduces the issue of incentivising CEOs to act in the owner's best interests by making them shareholders.

With this in mind, Dalton and Daily (1999) note the trend towards directors' remuneration packages becoming increasingly linked to stock ownership. This trend, they state, is being driven by institutional investors eager to ensure that executive remuneration is closely linked to that of their own, or, put another way, that the potential misalignment of objectives postulated by agency theory is negated by linking reward to the financial performance of the company. The expectation is that non-executives will be more willing to challenge the CEO if their rewards are aligned to the performance of the company. However, this research neglects to consider the value that an individual may attach to the prestige of serving on a board of directors and that, as such, the financial returns from stock may, the author speculates, be, at least partially, negated, by the non-financial reward of retaining a board position. Daily and Dalton (1999) conclude by calling for research into the possible conflicts in interest that will arise when equity owning directors are faced with the job of setting performance targets, initiating stock buy-backs, managing stock option re-pricing etc. and also suggest that stock-based compensation plans could have the effect of emphasizing short-term profitability at the risk of longer-term viability.

B1.5.1 Conclusions

This review of work relating to motivation from a governance perspective has again highlighted an over dependence upon agency theory and a failure to consider the direction that the application of stewardship theory would have steered the research hypotheses posed and the eventual conclusions drawn.

Closely related to the area of stock-ownership plans is the overall question of the effect that different ownership, and therefore governance, structures will have upon firm performance. The following area will now review literature covering the ownership variable.

B1.6 Ownership and Performance

Given that agency theory is based upon the need to control agents in situations where ownership has become divorced from control, it follows that ownership structure is central to any debate on corporate governance. Said structures, can differ greatly, from sole private owner, to public concern with a multitude of shareholders and yet the papers referenced thus far have all neglected to factor its influence into their respective investigations. This neglect is expected to have contributed to the evident lack of generalisability of extant research findings and, consequently, understanding its impact is therefore considered to be an essential element of this thesis.

As discussed in Section B1.2, Berle and Means's (1932) work suggested that managers did not have sufficient equity in the firms they managed to give them the incentive to turn their full attention to profit maximization. Instead, managers are expected to pursue self-interested initiatives, with remuneration, power, security and status at their core (Galbraith, 1967; Marris, 1964; Williamson, 1964) at the expense of shareholders. Although neglecting to consider the balancing effect of Stewardship theory and the consequential likelihood of managers being motivated by more altruistic ideals, such statements are supported by empirical evidence (Galbraith, 1967; Marris, 1964; Williamson, 1964) and as such, under certain circumstances, have been found to apply. It is however these 'certain circumstances' and the proposed influence of their differences that has, thus far, been highlighted as a gap in extant literature and which therefore suggests research into where, when and in what form they will apply.

Further exploration of the concept of ownership leads us beyond the simple roles of 'owners' and 'managers' to the area of relative stakes / extent of ownership and stock concentration. With this in mind Salancik and Pfeffer (1980), Hill and Snell (1998,1989) and Demsetz and Lehn (1985), all conclude that ownership represents a source of power that can be used to support or oppose management, depending on how it is concentrated and used. In general, the more concentrated ownership the more potent potential support or opposition, thus in any publicly limited company owners will range from many individual members of the public and employees with little influence, to large institutional investors, the executives and non-executives, and in some cases, the original founder or founder's family all of whom will have large blocks of stock and considerable influence[5]. The extent to which each of these shareholder groups own and can influence the company will, to some degree, be a factor of the amount of stock they hold – with the notable exception of the Executive owners who have day to day control of the venture and therefore, potentially, the greatest influence over performance (hence the need for corporate governance). This complex view of ownership serves to illustrate the conclusion that 'The Firm' is far from a ubiquitous entity and that any research that neglects or attempts to generalise with regards the effects that ownership structures (or indeed any context specific circumstance) can have or has had upon performance will be potentially flawed and misleading.

This statement raises questions with regards to the potentially divergent motivations of the different sets of owners and, in turn, to the attempt to mitigate the effect of this divergence through the encouragement of stock ownership by executives and non-executives (Daily and Dalton, 1999). With this in mind the following paragraphs will review how other research has attempted to segment the shareholders into groups with potentially different objectives[6].

As might be intuitively be expected with research concerning Corporate Governance, the sub-set of shareholders commonly thought to be of the greatest relevance are the executives, or agents, themselves. Measured as the percentage of the company's total stock held by its senior executives (defined by Zahra (1996) and Chaganti & Damanpour (1991) as vice presidents and those in higher office), Executive

[5] As an example of founder control, empirical studies by Denis and Sarin (1999) and Baker and Gompers (2003) find that founder status is negatively related to outside director representation and Board size.

[6] It should be noted that this thesis is chiefly concerned with the governance of large, publicly limited companies. As such it does not include a detailed review of small business research.

Ownership is argued (Zahra, 1996) to align the objectives of the agents to the owners and therefore introduce a form of self-regulation. Similarly, where self-regulation is found to be insufficient, Zahra, (1996) concludes that the ownership of stock by non-executive directors motivates them to challenge any agent action thought not to be in the best interest of the firm, thus improving governance and performance. These views are, again, based upon motivations being limited to the generation of personal financial gain and, as such, run the risk of prescribing an approach that under different circumstances, for example where the owner is already independently wealthy or more focussed towards altruistic ideals, will be ineffective. The other shortcoming of this approach is the treatment of stock value (and therefore relative returns) as a simple function of performance when it is actually a complex equation that can be manipulated in different ways. To illustrate ways in which the benefit and motivational effect of executive / non-executive stock ownership can be manipulated, Daily and Dalton (1999) raise questions concerning the extent to which non-executive board members are often executives on other boards and that, as a consequence, there is potential for board members to return favours to each other by setting options at advantageous levels (both in terms of price and volume). They also question whether the financial gains from options are sufficient to outweigh the prestige and salary that directors gain from serving on various boards and whether, consequently, they are an effective motivation for said directors to veto the actions of a chief executive upon whom they are dependent for their board position. There are also questions concerning the effects that executive ownership will have upon the way in which mergers and acquisitions are treated and pursued, i.e. an inappropriate merger from a long- term corporate performance perspective could result in a high short-term gain for the executive and will, consequently, be enthusiastically sought. Thus the perceived positive effect that stems from having executives as equity partners and thus aligning their reward to the performance of the company, is not as straightforward as it may seem and is therefore, the author concludes, worthy of further consideration.

The second group of shareholders found throughout the ownership debate within the context of corporate governance is that of institutional investors. Often holders of large blocks of shares, institutional investors wield considerable power in terms of the running of the firm and the appointment of the principle agent. As a group, however, institutional investors are far from a ubiquitous entity and, considering the previous statement concerning long and short term returns, the further differentiation of institutional owners into those with long-term and those with short-term investment horizons seems intuitively appropriate (it is also a differentiation that is empirically supported in the work of Zahra, (1996). Additional support for the inclusion of relative investment horizons, when considering the impact of ownership on governance and therefore performance is found in the work of Jacobs (1991) and Malatesta and Walkling (1988), who conclude that because executive compensation is usually based on short-term financial performance, they have little incentive to promote projects and initiatives that maximise a firm's long term value – a likelihood exacerbated by low ownership stakes. The work of Malatesta and Walkling (1998) specifically researches the effects of "poison pill" strategies and finds that in 131 of 132 firms that adopted such a strategy, shareholder wealth is significantly reduced and that the managers of these firms hold smaller amounts of their own firms' shares than the average amount held by managers of other firms in the same industries. In spite of the relatively small sample, this research illustrates how managers may have acted with a view to protecting their own short-term tenure rather than in the best interest of the longer-term shareholder. Similarly, Graves (1988) found a negative effect between entrepreneurship and institutional investment on the basis that institutional investors were considered to be driven by short-term, bottom line considerations. Conversely, despite limiting the focus of his research to the retail industry, Hollowell (2006) produced evidence that the external monitoring provided by institutional investors negated some elements of short-term focus and consequently produced a significant and positive effect upon firm performance over longer performance time horizons. Looking beyond the direct influence of the institutional investors themselves, Graves (1988), Chaganti and Damanpour (1991) and Hill, Hitt and Hoskisson (1988) find that the fund-managers who trade on behalf of said group are evaluated and rewarded on the basis of quarterly performance, as such will tend to overlook projects and initiatives with long-term impacts in favour of short-term gain. An example of this phenomenon is provided by the alleged accounting practices of executives at WorldCom and Enron, both of who are suspected to have manipulated sales and cost revenues to increase short-term stock gains at the expense of the long-term solvency of the ventures. In both cases the executives were well paid and benefited from the vesting of several rounds of stock options, similarly fund managers / institutional investors benefited from the outstanding short-term performance of the companies - all before the discrepancies came to light and the ventures collapsed.

Empirical support for this inclusion and further insight into how ownership structures fit into the governance debate and effect performance is, however provided by Zahra (1996) who concludes that long term institutional stock ownership is positively associated with corporate entrepreneurship (and, on the basis of an implied but unfounded assumption, corporate performance). That said, Zahra's work falls short by failing to consider the impact of stewardship and resource dependency theories, by considering a single contextual variable and by treating the firms studied as one ubiquitous collective.

With this review of corporate governance literature relating specifically to the element of firm ownership in mind, the author concludes that ownership variables are an integral part of the corporate governance: corporate performance relationship and must be included in any framework seeking to steer research in this area. Furthermore, ownership is evidently complex with the types of investors, their respective motivations, consequent investment horizons and relative influence over strategic direction and performance varying significantly. Research initiatives such as Zahra (1996) recognise the complexity of ownership and how the specific circumstances of a defined group of firms might moderate the way in which firms behave, but there is little evidence that extant research has specifically sought to understand how the relationship between corporate ownership, as a single element of corporate governance, and corporate performance might be altered by context specific variables.

B1.7 Services Provided by the Board and Performance

The final element of corporate governance highlighted by the broader theoretical perspective taken by this thesis (see summary table B1.1) concerns the services that board members, both collectively and individually, provide to the firm and how these services affect performance. This so called theory of resource dependency was constructed by Pfeffer and Salancik (1978, pp.168) who note that "one would expect that as potential environmental pressures confronting the organisation increase, the need for outside support (as might be provided by non-executives) would increase as well."

Subsequent research into links between corporate governance and corporate failure in the retailing industry by Changanti, Mahajan and Sharma (1985) recognises that the role of directors goes beyond simple control whereas Boyd (1995) uses said theory to illustrate that changing environments and industry / firm level circumstances will vary the importance of the personal skills, knowledge and influences possessed by individual directors to the performance of the firm.

Research by Erakovic and Goel (2008) applies resource dependency theory to explore directors' relationships with the firms' managers in order to define the extent to which the Board provides a competitive advantage. The findings, although based on a small sample of 6 firms in New Zealand and therefore lacking generalisability, show that "directors are perceived critical in obtaining partners, additional funds, and consulting advice in securing the company's future endeavours, and to signal legitimacy/value" (pp.66).

Goodstein and Boeker (1991) also adopt Pfeffer and Salancik's (1978) perspective, and based on their study into the effects that changes in an organisation's management, ownership and board of directors will have upon the process of strategic change, conclude that a resource dependency perspective would particularly underscore the necessity of having many external representatives on a board in a time of crisis as their presence would provide access to valued resources and information, facilitate inter-firm commitments, and aid in establishing legitimacy. Goodstein and Boeker demonstrate the way in which changing circumstances can moderate the optimum structure of a Board. Gedajlovic et al. (2004) apply resource dependency to posit a similar theory, highlighting the importance of the resources that professional managers bring to firms transitioning from founder control.

Despite their application of a single theory (that of resource dependency), these empirical studies go beyond the classic agency debate and, in so doing, illustrate the importance of taking an integrated theoretical approach when considering the question of governance as well as underscoring the concept of individual circumstances and the fact that the environment is not static and suggesting, by implication, that neither should the governance structure. Another implication of this direction is the relative quality of the directors concerned as, obviously, numbers alone will not guarantee valuable resources and information etc. being available (this work therefore provides a clear critique of any research that relies purely on agency theory and researches, as a consequence, associations based on the number of observable instances, e.g. duality, number of non-executives, size of board). Goodstein and Boeker (1991) reflect this gap and consequently add an additional set of control variables aimed at measuring the quality of the firm's board. Taking guidance from both D'Aveni (1990) and Finkelstein (1992), Goodstein and Boeker measure four indicators:

1. the total number of corporate directorships held by a firm's board members;
2. the total number of non-corporate directorships held by a firm's board members;
3. the number of CEO's or chairpersons who serve on a firm's board; and
4. educational prestige, or the number of members with undergraduate or graduate degrees from elite educational institutions.

All three of these research initiatives (D'Aveni, 1990; Goodstein and Boeker, 1991; and Finkelstein, 1992) find that a higher quality (measured against the 4 parameters above) board will improve performance of the firm. As such, any attempt to understand the association between corporate governance and performance must reflect resource dependency theory.

Further support for the investigation into the quality of the board, rather than its mere shape, size and control, is provided Hambrick and Mason's (1984) Upper Echelon theory which states that, "organisational outcomes – strategic choices and performance levels – are partially predicted by managerial background characteristics" (which includes variables such as formal education, years of inside service and years of peripheral experience (i.e. experience in other industries). Escriba-Esteve et al. (2008) also consider the link between 'Top Management Characteristics' , represented by the level of education and experience of top managers, and firm performance, however, although they highlight the relevance of "quality" they specifically explore the moderating effect of the the variable, rather than its direct explanatory power.

B1.7.1 Conclusions

The weakness of the empirical research reviewed within this Section, lies with its inability to isolate the effects of board quality from the effects of other circumstances or other governance and performance factors. Researching the quality of board members undoubtedly extends understanding as to how corporate governance interacts with the performance of a firm, however, this thesis maintains that an approach that takes a simultaneous view of multiple independent variables within a specific context will afford additional insights into this complex relationship. Having discussed literature relating to the last of the elements thought to represent corporate governance, the following section examines the second half of the governance equation at the centre of our proposal, i.e. corporate performance.

B1.8 Performance

If the elements of corporate governance discussed in the preceding sections are said to represent independent variables, then it follows that this section should seek to discuss the dependent variable described here as "performance."

An agency perspective postulates the need for governance as a mechanism to control the divergent objectives held by owners of the firm and its managing agents. As such performance could be argued to be best defined as some measure of shareholder return (either absolute or relative to industry or both). With this in mind, research into governance structures and performance have typically adopted accounting-based indicators, i.e. return on assets, return on equity, return on investment (e.g., Bucholtz and Ribbins, 1994; Finklestein and D'Aveni, 1994; Ocasio, 1994), market based indicators, like Jensen's alpha (1993), the Treynor measure, or the Sharpe measure, or combinations of both (e.g., Hoskisson et al., 1994; Johnson et al., 1993; Dahya and McConnell, 2007).

Criticism of market measures come, amongst others, from Grossman and Hoskisson (1998), Hambrick and Finkelstein (1995) and Joskow, Rose and Shepard (1993) who find that market variations are often subject to environmental conditions beyond the control of the CEO and his board (the so called triple bottom line of financial, social and environmental performance) and as such are unsafe indicators of board performance. Similarly, the adoption of accounting measures is also prone to danger as such goals may provide a convenient target for CEO's to aim at, to the detriment of other, perhaps longer term, objectives (Joscow et al., 1993). Research using such measures would have failed to predict the collapse of entities such as Polly Peck, BCCI, WorldCom, KPN Qwest and Enron as in all of these cases the outward, visible signs of performance based on market or accounting measures would have been positive up until the point of collapse.

Ghobadian & O'Regan (2006) argue that a comprehensive performance measurements system needs to comprise both financial and non-financial measures, specifically discussing the difficulty of securing "hard measures" of performance when researching privately owned SME's and consequently suggesting the use of subjective, self reporting measures of performance. A similar approach is adopted by Escriba-Esteve et al. (2008), however, both studies are focussed upon small to medium enterprises and as such do not have access to the audited report and accounts available for listed companies.

Given the differing opinion of what constitutes an appropriate indicator of performance in the context of measuring the effect of a particular governance structure, it can be expected that choice of measure will influence the observed association, for example, choosing stock growth as an indication of the performance of firms such as Enron and Worldcom would have lead to conclusions that governance positively effects performance and yet, in actuality, the opposite appears to have been the case . Daily and Dalton's meta-analysis (1999) of research into governance and performance however, concludes that there is no evidence that the choice of performance indicator effected the conclusions drawn. Daily and Dalton (1994) also postulate use of perhaps the ultimate measure of success, i.e. bankruptcy / survival (suggesting governance structures and quality of directors are predictors of bankruptcy). Using firms that have collapsed as a focus for research has the advantage of providing a fairly ubiquitous set of circumstances that can be used to describe the particular environment being experienced by the firm at the time of bankruptcy, i.e. shortage of operating cash, crisis and a subsequent narrowing of motivations and objectives (i.e., focussing on immediate survival as opposed to longer term strategic agendas) and an enhanced reliance on the quality of the board and their links to the external environment. Standing, however, against the use of bankruptcy as an indicator for performance is the fact that it represents an absolute state (i.e., the firm is either bankrupt or it is not) and as such cannot distinguish between relative 'degrees' of success. Furthermore, the use of a retrospective measure may constrain the degree to which conclusions drawn will predict the bankruptcy of other firms (i.e. the event has already happened and as such its ability to provide insight to future events is limited).

This examination of literature relating to measurements of performance employed in extant governance research demonstrates that a range of mainly[7] financial indicators have been applied in the context of gauging the influence of the associated governance structure.

Chapter B1 of this thesis has, so far, discussed the theories of agency, stewardship and resource dependency upon which the corporate governance: performance debate is founded. In so doing it highlighted a number of "questions" (see table B1.1) with regards how these theories suggest governance will affect performance. In reviewing and discussing empirical studies relating to these "questions" it has become evident that extant research has tended to treat the subject of its attention, i.e. the firm, as a largely ubiquitous entity and that, consequently, the effects of context / circumstance specific variables remain unexplored. With this in mind, the following section reviews the extent to which governance literature has explored the effects of these variables.

B1.9 Context Specific Variables

Thus far, the literature review has demonstrated that a common approach to the research of corporate governance has been based on an investigation of observables such as board structure, size and composition. Where the quantification of more qualitative research questions has been attempted, e.g. the quality of individual board members and the services they provide, they have been asked in isolation (i.e., they appear to ignore the possibility of interactions and the combined effects of the various elements such as quality of board members, ownership structure, the stage of development at which the firm finds itself or the industry in which it operates). In some cases, Zahra (1996) for example, industry level variables have been considered, however the dilemma facing researchers is perhaps best summed up by both Baliga et al. (1996) and Brickley et al. (1997) who state that 'in order to have a meaningful result, researchers need to control industry and other variables'.

The number of potential variables is large, however, within the context of corporate governance they are bounded and uncovered by the review of work into the three identified theories. Support for including such variables in research initiatives and indications of what variables might be considered are provided by, for example, the works of Zahra (1996) who includes an industry level / context specific moderating variable (the poorly defined "technological opportunity").

Ghobadian and O'Regan (2006) consider how the circumstantial differences between independent and subsidiary firms impact their respective levels of performance and in so doing illustrate the relevance and importance of considering context specific variables. More to the point, the fact that they are considering aspects of ownership

[7] Bankruptcy was the only 'non-financial' measurement used and no evidence was found of measurements such as 'contribution to community' or 'employee / customer satisfaction.'

and leadership underlines the specific importance of context to the corporate governance debate (it should, however, be noted that the work of Ghobadian and O'Regan (2006) only covers small and medium enterprises and as such is not representative of wider industry).

The influence of time (or, at least the transient nature of circumstance over time) and industry level variables is also at the centre of studies into entrepreneurial leadership carried out by Covin and Slevin (1988, 1990) and Chaston (1997) who find that different types of firms in different environments might benefit from taking a non-entrepreneurial approach at certain points in time, and that the most successful firms are those that manage to move back and forth between the two congruent style/structure states of effective bureaucratic and effective-entrepreneurial.

Daily and Dalton (1992) touch upon the concept of firm transition and development (i.e., the stage of development at which a firm finds itself at the time of study could effect its governance system and its performance) whereas further support for the consideration of fluid, context specific variables is provided by Dahya and Travlos (2000) who postulate the idea that there is an optimum board structure for a given firm at a given time. Furthermore, Boyd (1990), Pfeffer (1972, 1973) and Pfeffer and Salancik (1978) all support the need to consider environmental conditions when researching governance structure. Weir and Laing (2001) call for more research into a flexible board structure as opposed to the strict, static best practice suggested by Cadbury (1992) as do Hillier and McColgan (2006, pp.576) who considered the impact of firm-specific operating environments and owner-specific characteristics on the structure of corporate boards, but stated "this aspect of governance reform remains largely unexplored in the empirical or theoretical literature".

These concepts lead the author to suggest that ignorance of the impact that a firms context specific variables could have upon the effectiveness of its governance system could have a detrimental effect on firm performance. The previous areas of governance literature reviewed show that this is a consideration not yet widely taken. One reason for this short-coming is thought to be that these context specific variables span elements of the individual, the organisation and the competitive environment and as such necessitate a multi-disciplinary approach, however, the limitations of research covered in this thesis appear sufficient to warrant increased attempts to consider multiple moderators.

B1.10 Summary

The literature reviewed thus far has illustrated that three basic theories, Stewardship, Agency and Resource Dependency, underpin the reasons why the why in which a firm is governed will impact the way in which it performs. These theories have given rise to the identification of control, motivation, ownership and the services provided by the Board as indicators of governance, however, the review of existing literature has highlighted how research has tended to consider these indicators individually or in groups that relate to a single of the founding theories. Furthermore, the unit of analysis in all of the literature reviewed has been 'the firm', however, this term has been widely used to represent a ubiquitous population of companies without recognition of the wide ranging differences and circumstances that these companies operate under. The implication of this latter weakness in research is that current findings and subsequent guidance lack generalisability and that, consequently, there is a need to progressively understand how the context specific variables of a firm may moderate the governance to performance relationship.

With this requirement in mind, the author has sought to identify an appropriate lens through which to observe the effect of context and circumstance, i.e. one that relates to the previously identified indicators of corporate governance. The authors own experience of having managed in both publicly limited and privately owned companies with very different governance dynamics has initially informed a decision to explore how aspects of owner / founder / manager companies have been considered within the governance debate. As is highlighted within the previously mentioned research by; Zahra (1996), Graves (1988) , Chaston (1997), Covin and Slevin (1988, 90, 91), Zahra et al., (2007) such elements have come to the fore when "entrepreneurialism" is the predominant focus of the research. Consequently, the next Chapter reviews literature relating to the governance of entrepreneurial ventures with a view to determining the extent to which such firms can be justified as a representative of the concept of context specific variables.

CHAPTER B2 THE ENTREPRENEURIAL VENTURE

B2.1 Justification for the use of The Entrepreneurial Venture as a Lens Through Which to Observe the Effects of Context Specific Variables

The word 'entrepreneur' is often used simply as an adjective to describe a host of behaviours or characteristics, e.g. entrepreneurial activity, entrepreneurial individual or entrepreneurial orientation. When applied in a business context, the word also has a variety of meanings that vary according to the perspective of the user, e.g. if used in a marketing context the word could be used to describe the activity that results in the development of a new product or service (Burgelman, 1983), whereas, a strategist might apply the word to describe a new vision or mission for an existing company, so called strategic renewal (Sathe, 1989). This paper is, however, interested in defining the word from a Corporate Governance perspective and, as a consequence, understanding how entrepreneurship relates to the ownership, control and performance of a firm.

As a starting point, the definition of 'entrepreneur' found at Your Dictionary.com (an apt place to look given the relevance of high technology firms such as Worldcomm and KPN Qwest to the modern day governance debate) describes an entrepreneur as:

'one who owns, launches, manages, and assumes the risks of an economic venture'

Although far from academically rigorous (a more detailed review of relevant academic literature follows) and lacking a specific business context, this simple definition captures the essence of the behaviour that this paper is seeking to explore and describes the characteristics of an entrepreneur, i.e. the foresight, creativity and courage of an individual that spots an opportunity and takes the risks necessary to seize it. The question of the extent to which these characteristics are dissimilar to those of a professional manager who lacks the historical and personal links to the creation of the firm is central to the decision to use entrepreneurial ventures as the focus for this thesis – more important, however, is the extent to which these perceived differences will drive distinct behaviours and will therefore require different governance in order to maximise the positive impact they have upon performance. Sections B1.4 and B1.5 have illustrated the importance of controlling and motivating the agent along with the ownership of the firm to the governce debate, consequently the author drew the initial conclusion that entrepreneurship, defined herein as firms where the founder retains both a ownership and managerial position, is a justifiable lens through which to observe the moderating effect of context specific variables upon the relationship between corporate governance and performance.

The economic relevance and therefore justification for the use of entrepreneurial venture as an area of focus is confirmed by, among others, Schumpeter (1942), Daily and Dalton (1992) and Lumpkin and Dess (1996, pp.135) who state that, "for both start-up ventures and existing firms, entrepreneurship carried on in pursuit of business opportunities spurs business expansion, technological progress and wealth creation".

Zahra et al. (2007) provide statistical support for this statement by determining that small to medium enterprises (SME's[8]) account for 60–70% of employment in most advanced economies (OECD, 2004), nearly 25% of manufacturing SMEs worldwide compete in international markets and approximately 97% of all US exporters are SMEs (OECD, 2004).

That said, this thesis is specifically concerned with entrepreneurialism in the context of Corporate Governance and, as a consequence, understanding how entrepreneurship relates to the ownership, control and performance of a firm. With this in mind, a review of extant literature highlights that entrepreneurial firms and their leaders differ from other firms in the following ways:

- An entrepreneur will have a wider range of motivations and subsequent behaviours than those covered by agency theory. These motivations should be factored into the design of governance system (Boyd, 1995).

- Entrepreneurial ventures will attract investors with short-term investment horizons (Zahra, 1996).

- Focus on short-term returns will be at odds with the motivations and objectives of entrepreneurs and as such the performance of entrepreneurial ventures with ownership and control structures biased towards the needs of short-term investors will suffer (Graves,1988; Zahra, 1996).

- The entrepreneur will have a dual role of both owner and manager, however, whereas this duality will traditionally be expected to align the objectives of owner and manager, and thus, according to agency theory, mitigate the need for governance (Daily and Dalton, 1999) the expanded motivations of an entrepreneur means that governance remains essential.

- The founding entrepreneur allows smaller firms to exhibit the degree of dynamism which is often lacking in larger firms, particularly those with widely distributed shareholdings and a divorce of ownership from effective control (Cowling, 2003).

Thus the entrepreneurial venture can be seen to differ from other firms in terms of its ownership structure (including stock concentration), its leadership structure, the

[8] SME's are used here as a proxy for Entrepreneurial Ventures

motivations of said leaders / owners, the investment horizons of its owners / investors and performance. With a view to identifying how literature has treated and researched these differences, each will now be explored in turn:

B2.1.1 Ownership and Leadership Structure

Cowling (2003), Daily and Dalton (1999) and Zahra (1996), typify researchers who define the entrepreneurial venture as one in which the founder / founders family retains managerial control. In such firms, the theory of agency, and therefore the theoretical need for owners to control agents, can be argued to have been negated on the basis that ownership and control have not been divorced. Evidence in support of this statement is provided in research by Uhlaner et al. (2007) which, in a study of 2000 Dutch firms, concluded that owner commitment is positively associated with firm performance, thus supporting the predictions of stewardship theory. Similarly Begley and Boyd (1986) measured growth rate, profitability, and return on investment for founder-operated firms, and found that founders have a significant and positive impact on firm performance. Further support for founder control is provided by a series of studies that concluded that management-controlled firms tended to be less profitable than owner-controlled firms (Larner, 1970, McEachern, 1976, Stano, 1976). Anderson and Reeb (2003) also find a positive relationship between family ownership and firm performance and explain that "family blockholders are more apt to act as stewards in the firms they own – that is, they are more likely to consider not only their personal interests but also shareholder interests as a whole' (pp.1342).

Conversely Thomsen and Pedersen (2000) explain the negative association that they observe by positing that family owners may balance financial and non financial motives. In line with this concept, Levinson (1971) presented the view that, when considering the performance of organizations that remain founder controlled, the wisest course for any business, family or non-family, is to move to professional management as quickly as possible.

In spite of the obvious contrast in extant findings, these studies none-the-less highlight the relevance of the entrepreneurial / founder managed firm to the general governance : performance debate as they indicate that such a firm will perform differently from a professionally managed firm.

Another aspect of ownership structure is the concentration of stock. When applied in the context of the entrepreneurial venture it is proposed that stock concentration is highly relevant as it is likely to be densely centred around two parties, i.e. the entrepreneur / founder and the lead venture capitalist / investor (Zahra, 1996). The result is a reduction in the leverage that the owner would have over the agent in an established, professionally managed firm (Hill & Snell, 1989). This in turn decreases the control that the owner has over the agent and increases the concerns postulated by agency theory (which when considered alongside the stewardship supporting findings of; Uhlaner et al.,2007; and Anderson & Reeb, 2003, underline the need to consider multiple theoretical standpoints). Another aspect of stock concentration relates to the information asymmetry that has been found to exist between the investing owner (e.g. the venture capitalist in this case) and the founder / agent (i.e. the entrepreneur) (Fama, 1970; Brickley, Coles & Jarrell, 1997). In such instances the investing owner will require sufficient stock concentration to allow it to; 1) demand the information that will allow it to ensure the Agent is acting in the best interest of the firm and 2) remove the agent if it finds that the best interests of the firm are not being observed. Stock concentration will therefore provide a measure of the respective power to govern within an organisation - power that, in the case of an entrepreneurial venture, is proposed to be far more evenly distributed between owner and agent than in a professionally managed firm.

Hill and Snell (1998,1989) explore the relationship between stock concentration and firm productivity, finding that firm productivity rises with stock concentration. This conclusion suggests that entrepreneurial ventures should outperform established firms, however, the research draws its sample exclusively from Fortune 500 firms and fails to consider the implications of a situation where stock concentration is divided between owners and agents. As such it fails to specifically consider how entrepreneurial ventures will respond if researched in the same way – thus neglecting to consider the differences between entrepreneurial and professionally managed firms.

In terms of leadership, entrepreneurial ventures will differ from professionally managed firms on the basis of the founder / owner will retain a leadership position within the firm and as such will have the incentive, knowledge and power to monitor managers effectively and therefore outperform other companies (Schleifer & Vishney, 1997). Braun and Sharma (2007) applied both agency and stewardship theories to the question of duality in founder managed firms and concluded that the separation of the two most powerful roles in the company was beneficial to performance (shareholder returns) when the founder / leader's stock holding was low. Such a conclusion provides support for the author's proposal that governance should be explored, simultaneously, from multiple theoretical stances but also highlights the need to consider more than a single aspect of governance in order to determine how it is associated with performance (i.e. Braun and Sharma find that the influence of Duality on performance is contingent on ownership).

B2.1.2 Motivation

In the case of the entrepreneurial venture, ownership extends beyond mere financial terms as the entrepreneur will own the whole idea / concept upon which the venture is founded and may, as a consequence, be motivated by a different set of values. Professional managers on the other hand will not share the same degree of personal stake and as such will not be as loyal to the same set of ideals (Blackburn and Lang, 1989). Such non-financial motivation is explained by the previously discussed Stewardship Theory, which proposes that agents will not simply seek personal financial gain at the expense of the owners, i.e. a founder manager may strive to generate shareholder (as opposed to personal) value on the basis that such success will enhance his personal reputation (or that of his family) and the degree of satisfaction he / she receives from a job well done. Furthermore, the entrepreneur is investing his / her credibility into the firm and in spite of the distribution of ownership (i.e. the investment banks may have a significant equity stake, Hill and Snell, 1989), the entrepreneur will have a loyalty to his or her idea that is not typically shared by a professional manager tasked with running a similar firm in which he / she has no personal stake (Blackburn and Lang, 1989). Contrary to the thought that Stewardship Theory negates the need for governance / control, there remains a potential for the ideals of the entrepreneur to diverge with the motivations of other investors and for behaviours therefore to differ from those displayed by professional managers. Evidence to this effect is provided by Blackburn and Lang (1989) who, although specifically researching merger strategies, illustrated a clear distinction between founder / managers and professional managers in terms of motivations. Similarly; Ulhaner et al. (2007); Braun and Sharma (2007); and Le-Breton-Miller and Miller

(2008) all provide evidence of the ways in which entrepreneurial motivation creates different outcomes to those observed with different types of leadership.

This thesis is not, however, focussed upon understanding how entrepreneurs differ from professional managers, suffice to say that the literature reviewed provides sufficient evidence that an entrepreneur will have a wider range of motivations and subsequent characteristics / behaviours (Burgelman, 1983; Kanter, 1983; Peters and Waterman, 1982) than those covered by Agency Theory or Stewardship Theory alone and that these motivations should be factored into the design of corporate governance systems.

B2.1.3 Investment Horizons

In terms of relative investment horizons there is, it is proposed (Zahra, 1993,1996) an increased potential for divergence where the firm is managed by its founding entrepreneur, for example, venture capitalist investors have been found to desire quick returns on investment (Graves, 1988; Hill et al., 1988) whereas the entrepreneur with his observed tendency to stewardship (Anderson & Reeb,2003) will make decisions aimed at slower, sustainable growth (Le Bretton-Miller & Miller (2008).

Zahra, 1996, researches the hypothesised link between institutional investors and corporate entrepreneurship[9] / performance and provides evidence that the short-term focus of investors such as venture capitalists, investment banks and the fund managers that they employ has a negative effect (conversely, he finds that a long term investment horizon increases entrepreneurship and therefore performance). The short term nature focus of such investors, and their tendency to invest in entrepreneurial

[9] In the context of Zahra (1996), the term 'Corporate Entrepreneurship' does not relate to founder managed firms, the author, however, maintains that his conclusions with regards to the effects of short term and long term investment horizons are none the less relevant to the research described within this thesis.

ventures is provided in studies by Changanti and Damanpour, 1991, Graves, 1988; Hill et al., 1988. The type of rigid control and monitoring prescribed under the application of agency theory lends itself to the achievement of these short term goals, however, the findings of Anderson and Reeb (2003) suggest that such control will be at odds with the entrepreneur who's motivations are more accurately described by stewardship theory. This point is succinctly explained by Aoki (1984) who finds that stockholders focus on wealth maximisation through maximising efficiency whereas managers focus on a utility function that has remuneration, power, security and status at its core, in the case of an entrepreneurial venture, where the entrepreneur is both a stockholder and manager, this utility function is expanded to straddle both sets of motivations as well as factors such as personal and family reputation. Consequently, this thesis proposes that an inappropriate governance system (i.e. one that fails to reflect the complex motivations of the entrepreneur and the specific goals of his/her fellow investors) will result in the entrepreneur reacting negatively to the control mechanisms employed which in turn will lead to issues such as a loss of investor confidence, the withdrawal of funding and, ultimately, the general poor performance of the ventures – in short, this thesis proposes that the governmental effects of varying investment horizons and varying investor objectives will be magnified in entrepreneurial ventures.

This thesis also proposes that the short-term investment horizons of the venture capitalists that are, as discussed above, the most likely investors in entrepreneurial ventures, will be at odds with the management objectives of the entrepreneur and as such the performance of entrepreneurial firms will suffer unless such 'short- termism' is addressed by the design of the governance system.

CHAPTER B3: OVERALL CONCLUSIONS

The primary driver behind this thesis has been the collapse of huge corporate entities such as Enron and Worldcom – collapses that have resulted from an apparent inability to control the actions of the agents who were charged with the management of the ventures on behalf of their owners. These regrettable occurrences lead the author to conclude that knowledge with regards corporate governance is at best incomplete and at worst flawed and misleading.

In reviewing literature relating to the study of corporate governance and the way in which it affects corporate performance (Section B1), this thesis has highlighted a number of concerns. These concerns centre on an apparent over reliance upon the theory of agency as a base upon which to construct research initiatives. The result is a body of contradictory empirical evidence that appears to lack generalisability.

With this issue in mind this thesis calls for the development of a theoretical framework that simultaneously considers the questions raised by theories of agency, stewardship and resource dependency and in so doing controls for the potential contradictions that arise when a single theoretical perspective is applied in isolation and the combined influences of these theories are ignored.

Furthermore, the literature review has lead the author to postulate that extant research has largely treated the firm as a ubiquitous entity operating in a static environment, with common circumstances, managed by professional managers that share common motivations and who own little more than a minor equity stake (through, for example, stock options) in the firm.

With this conclusion in mind, and building on the recommendations of Baliga et al. (1996) and Brickley et al. (1997) who recognise the need to control industry and other variables in order to have a meaningful result, this thesis recommends that in order to advance understanding into the governance: performance relationship, research must not only adopt a multiple theoretical standpoint but must also explore the effect of context / circumstance specific variables.

Given the critique that extant research has oversimplified its treatment of the variables that exist within the firm and its environment, Section B1.9 discusses a number of context specific variables that are expected to alter the basic governance: performance relationship. In order to research this phenomenon, this thesis has drawn a focus on a sub-set of firms that can be shown to exhibit considerably different circumstances from firms in general, and that therefore represent such context specific variables. In order to be relevant in a corporate governance context, these circumstances should relate to those elements at the core of the governance debate, i.e. ownership, control, agent motivation, investment horizon etc. The sub-set of chosen firms should also be readily researchable (i.e. have publicly available performance and structure data); and economically relevant / worthy of research.[10]

With these criteria in mind this thesis concludes that the entrepreneurial venture, defined here as a firm in which the founder retains ownership and managerial control and which differs in terms of its ownership, leadership structure, agent motivation and the relative investment horizon of its owners (see Section B2.1), provides an appropriate focus for the recommended research. Add to this, evidence that

[10] The primary objective of this thesis is to further understand the governance to performance association, however, in researching a specific sub set of firms it will allow conclusions to be drawn that relate to this sector – as such the chosen firms should be important in terms of their contribution to economic growth.

entrepreneurial ventures are a significant engine for economic growth (Schumpeter,1934, 1942; Lumpkin and Dess, 1996) and this thesis concludes that not only is the entrepreneur, defined herein as the owner, founder and manager of a firm, an effective focus for further governance research but is also a highly justifiable area of research in its own right.

With these conclusions in mind, the following Part of this thesis will concentrate upon the development of an appropriate theoretical framework and research design.

PART C
RESEARCH DESIGN

This part of the thesis builds upon the conclusions drawn from the review of existing literature in order to conceptualise a framework within which to research the relationship that exists between corporate governance and corporate performance and how it is affected by the context specific variables represented by the entrepreneurial firm (Chapter C1). Having defined the framework, the following chapters present and justify the author's methodological actions and decisions.

CHAPTER C1: RESEARCH FRAMEWORK

This chapter summarises the gaps identified as a result of the literature review carried out in Part B. It then discusses and develops the conceptual framework within which the focus of the proposed research, i.e. corporate governance, corporate performance and the entrepreneurial firm, has been researched and upon which the research methodology has been built.

C1.1 Research Model

The review of literature (Part B) has identified that extant corporate governance research, and the managerial recommendations that it has spawned, has tended to rely heavily on agency theory and the need, therefore, to control the actions of the agent in order to ensure he/she continues to act in the best interests of the owner (Section B1.4). Secondly, the review has illustrated that the application of other governance theories, namely stewardship and resource dependency, where considered, have been applied in isolation as an alternative to agency theory, rather than as a compliment (Sections B1.5 & B1.7). Thirdly, extant literature was found to have neglected to consider the effect that a firm's individual circumstances have upon the relationship between its system of governance and its performance (Section B1.9).

With a view to bridging these gaps, the author proposes the development of a conceptual framework that encompasses and allows the simultaneous consideration of the theories of agency, stewardship and resource dependency whilst defining and providing a vehicle, namely the entrepreneurial venture, through which to observe the effects of context specific variables.

In exploring the extant literature, Part B has provided the basis for the conceptual framework by identifying four constructs of governance that represent the three governance theories. These constructs are graphically represented as Figure C1.1 The four constructs are described as: control of the agent (Section B1.4, relating to agency theory), motivation of the agent (Section B1.5, relating to agency and stewardship theories) ownership structure of the firm (Section B1.6, relating to agency theory) and the services provided by the board (Section B1.7, relating to resource dependency theory). The literature review has also discussed the extent to which entrepreneurial ventures represent a relevant and justifiable lens through which to observe context specific variables (Section B2.1). Each of these constructs, along with the concept of context specific variables will now be discussed in turn with a view to developing both the elements of each construct and their associated hypotheses.

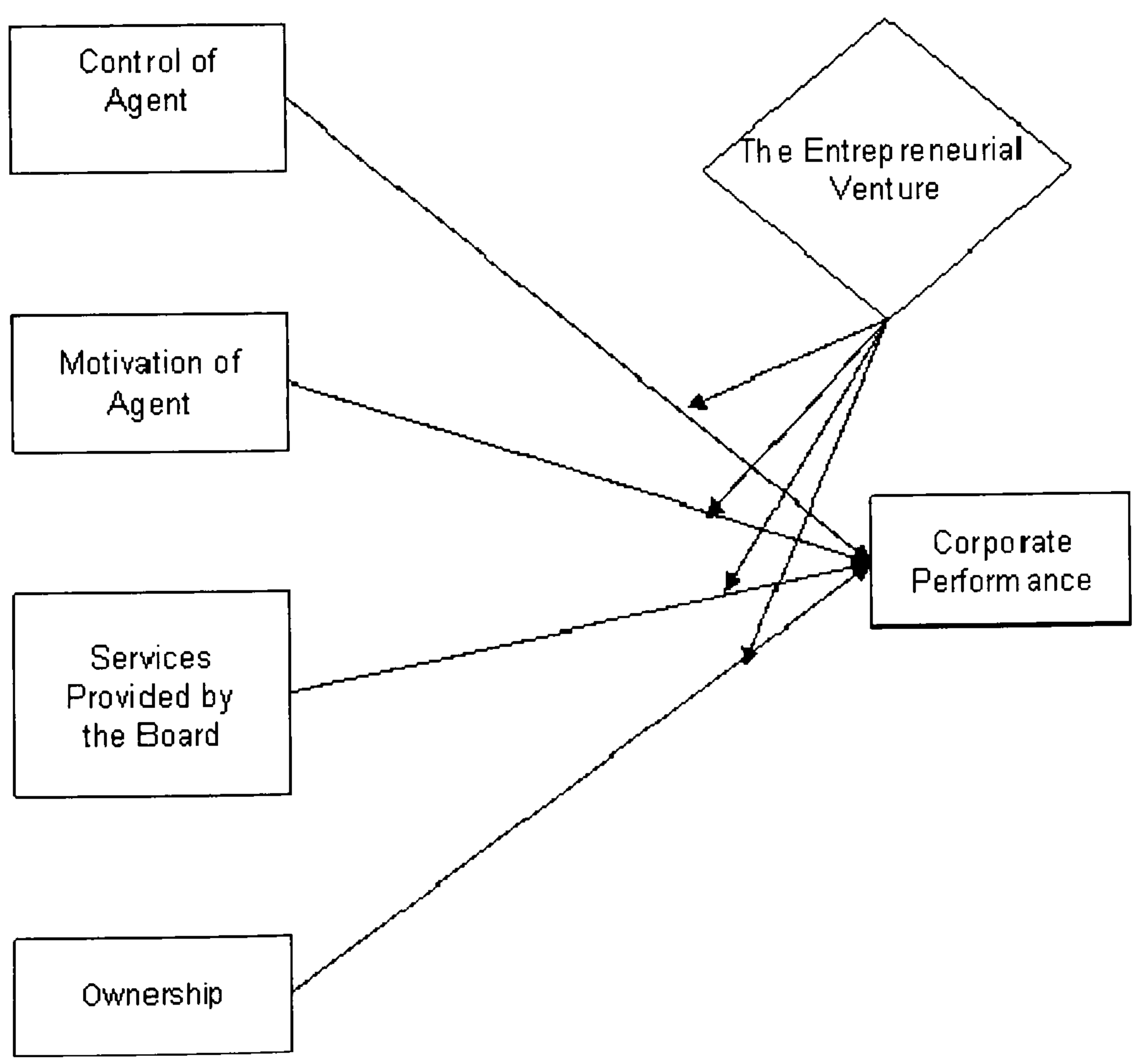

Figure C1.1 Research Framework

C1.2 Development of Hypotheses

C1.2.1 Control of Agent and Performance

As discussed in Section B1, the need for an owner to control the actions of an agent stems from the theory of agency that proposes that agents will take actions aimed at furthering their own objectives as opposed to those in the best interest of the owner. Aspects of control found in literature include;

- Duality (Daily and Dalton, 1993 and Rechner and Dalton, 1991, Section B1.4.1) – the condition that exists where the roles of Chairperson and Chief Executive are combined and held by a single person;
- The number of non-executive directors (Cadbury, 1992, Sections B1.4.2) – the number of non executive directors sitting on the Board;
- The ratio of non-executives to executives (Weir and Laing, 2001, Section B1.4.2) – the ratio between the full-time, managing executive members of the board and the part-time non executives; and
- The independence / affiliation of non-executives (Cadbury, 1992; Daily and Dalton, 1993; 8 1993; O'Sullivan and Wong, 1999, Section B1.4.2) – the extent to which the non-executives are independent from the Chairperson / Chief Executive and the firm itself.

That said, although the cited literature highlights several aspects of "control of the agent", it has only research the different facets separately and is unclear as to the direction of the relationship with performance (i.e. some find a positive relationships, some find negative relationships and some say the relationships are neutral), consequently this research has limited itself to establishing the significance of the relationship rather than its direction. Furthermore, the author's critique of the literature suggests that in order to understand the impact of corporate governance, its constituent parts should be researched simultaneously, therefore, rather than researching the effects of a single element of governance upon performance, this research has therefore combined the indicators of corporate governance into a single construct and consequently poses the following hypothesis:

H_1 : The control of the agent (indicated by duality, board size, board independence and the ratio of non executives) has a significant impact upon corporate performance.

C1.2.2 Motivation of Agent and Performance

Section B1.5 of the literature review explores how previous research has treated the subject of the motivation of the agent. In short, Stewardship theory states that reward goes beyond simple financial gain and extends to needs for achievement, responsibility and recognition as well as altruism, belief, respect for authority and the intrinsic motivation of an inherently satisfying task done well. Representing another, perhaps intuitive, perspective, Conyon (1998) and Conyon and Nicolitsas (1998) ignore the potential for motivation to come from anything other than financial recompense and find that executive compensation and economic performance are positively correlated. As with the development of the Control of the Agent hypothesis, the author has been lead by the aforementioned literature to consider the extent to which financial and non financial motivation are associated with corporate performance (Sections B1.5) and has applied the following variables:

- Equity held by agents – the stock held by a firm's executive leadership team;
- Equity held by non executive board members – the stock held by a firm's non executive directors; and

- Non-Financial Motivation – factors other than financial reward that influence leadership decision making (the measurement of which is discussed in Section C3.1).

Given literature's divided opinion on the direction of the relationships and the subsequent need to consider the association between the broader construct of motivation of the agent and performance, rather than the association of its component parts, the author has derived the following hypothesis:

H_2 : The motivation of the agent (indicated by the equity held by executives, the equity held by non executives and the non financial motivation of the agents) has a significant impact upon corporate performance.

C1.2.3 Services Provided by the Board and Performance

The theory of resource dependency (Pfeffer and Salancik, 1978) states that the environment in which a firm operates has a direct impact upon its performance, as a consequence the greater the ability of a board to extract resources from its environment, the better its performance (Section B1.7). With this in mind, the services provided by the board can be seen to effect the extent to which a firm performs.

Factors of 'services' include:

- The relative quality of individual board members (Goodstein and Boeker, 1991) – the extent to which the board members are highly edicated, highly sought after, experienced business people with valuable skills;
- The number of non-executive directors on a board (Pfeffer, 1972) – self explanatory – the greater the number, the greater the services provided; and

- The overall size of the board (Pfeffer and Salancik, 1978) – as with the number of non executive directors – the greater the size of the board, the greater the services provided.

Following the same principles as those applied to the development of the control and motivation of the agent hypotheses, leads the author to propose:

H_3 : The services provided by the board (indicated by the quality of the board, the size of the board and the number of non executive directors) have a significant impact upon corporate performance.

C1.2.4 Ownership and Performance

Section B1.6 of the literature review explores how previous research has treated the subject of firm ownership and how it affects governance and performance. The variables to be considered can be summarised:

- Equity held by agents – the amount of a firm's stock held by the executive leadership team;
- Equity held by non-executives - the stock held by a firm's non executive directors;
- Stock concentration – the amount of stock held by any one person or group (as an indicator of power); and
- Investment horizon – the relative motivations of different groups to take certain decisions based upon the period over which they wish to generate a return on their investment.

Agency theory assumes that ownership and management are divorced and that governance therefore equates to addressing the potentially divergent objectives of owners and their agents. Literature (Berle and Means's, 1932) also suggests that managers without sufficient equity in the firms they manage will not have the incentive to turn their full attention to profit maximization (Section B1.6). Instead, managers are expected to pursue self-interested initiatives, with remuneration, power, security and status at their core (Galbraith, 1967; Marris, 1964; Williamson, 1964). With this in mind Salancik and Pfeffer (1980), Hill and Snell (1989) and Demsetz and Lehn (1985), all conclude that ownership represents a source of power that can be used to support or oppose management, depending on how it is concentrated and used (Sections B1.5, B1.6). Zahra, (1996) concludes that the ownership of stock by non-executive directors motivates them to challenge any agent action thought not to be in the best interest of the firm, thus improving governance and performance (Section B1.6). Zahra (1996) also explores the influence of a second group of shareholders, namely the Institutional investors who often hold large blocks of shares and who sub-divide into groups with both short term and long term investment horizons – both of which will impact the expectations they have upon the agents employed to lead their companies and as such will need to be reflected in the design of the firm's governance system (Section B1.6).

Consequently, these findings on how ownership affects governance and its association with performance have been utilised as the basis for the fourth hypothesis (the direction of the potential relationships have been removed for the same reasons as discussed in Section C1.2.1):

H_4 : The ownership structure of a firm (indicated by the equity held by executives, the equity held by non executives, the concentration of stock and the investment horizon of the owners) has a significant impact upon corporate performance.

C1.2.5 Context Specific Variable and Performance

- Context specific moderating variable – the entrepreneurial venture – described herein as a firm in which the founder retains both an ownership and leadership position.

Section B1.9 of the literature review explores the manner in which previous research has treated the subject of context / circumstance specific variables. The issues created by changes in firm circumstance are perhaps best summed up by both Baliga et al. (1996) and Brickley et al. (1997) who state that meaningful research into corporate governance is dependent upon the control and consideration of industry and other variables. With this in mind and in an attempt to add granularity to the understanding of how the type of firm and its environment effects the governance to performance relationship, Zahra (1996) introduces an industry / context specific level moderating variable (the poorly defined "technological opportunity"), Escriba-Esteve et al. (2008) consider topmanagement characteristics and environmental conditions and Ghobadian and O'Regan (2006) research differences between independent and subsidiary firms . The influence of time (or, at least the transient nature of circumstance over time) and industry level variables is also at the centre of studies into entrepreneurial leadership carried out by Covin and Slevin (1988, 1990) and Chaston (1997). These studies find that different types of firms in different environments benefit from taking a non-entrepreneurial approach at certain points in time, and that the most successful firms are those that manage to move back and forth between the two congruent style/structure states of effective bureaucratic and effective-entrepreneurial.

Daily and Dalton (1992) consider the concept of firm transition and development (i.e., the stage of development at which a firm finds itself at the time of study could effect its governance system and its performance) whereas further support for the consideration of fluid, context specific variables is provided by Dahya and Travlos (2000) who postulate the idea that there is an optimum board structure for a given firm at a given time. Furthermore, Boyd (1990), Pfeffer (1972, 1973) and Pfeffer and Salancik (1978) all support the need to consider environmental conditions when researching governance structure. Weir and Laing (2001) also call for more research into a flexible board structure as opposed to the strict, static best practice suggested by Cadbury (1992).

These concepts lead the author to suggest that to treat "firms" and the environment in which they operate as a ubiquitous entities and to ignore the effects that these variables could have upon the way in which such firms should be governed in order to maximise performance is a huge over simplification. Failure to consider these variables will, the author proposes, lead to the construction of "one size fits all" governance policy which will fail to protect the best interests of owners and other stakeholders. When considering how best to observe the effects of context specific variables, the author considered the key elements of governance that have resulted from the development of Agency and Stewardship theories (Section B1.2), namely the control and motivation of agents and the ownership structure of firms and and sought a vehicle through which to observe them. The conclusion drawn was that firms within which the original founder retains both a significant ownership stake and a leadership position embody these variables and differ from professionally managed firms in dimensions that have specific relevance to research concerned with corporate governance. For the purpose of this research, these firms have been described as 'Entrepreneurial Ventures' (Section B2.1). With this in mind, the author proposes to determine the extent to which the specific circumstances associated with entrepreneurial ventures are different and consequently moderate the relationship that is found to exist between governance and performance in other, non entrepreneurial ventures. This gave rise to the following hypothesis:

H_5. The outcomes of Hypotheses $_{1\text{-}4}$ will differ significantly on the basis of the type of firm (i.e. entrepreneurial and non entrepreneurial) to which they are applied.

C1.3 Research Model

A graphical representation of the resultant theoretically grounded research model is shown at Figure C1.2

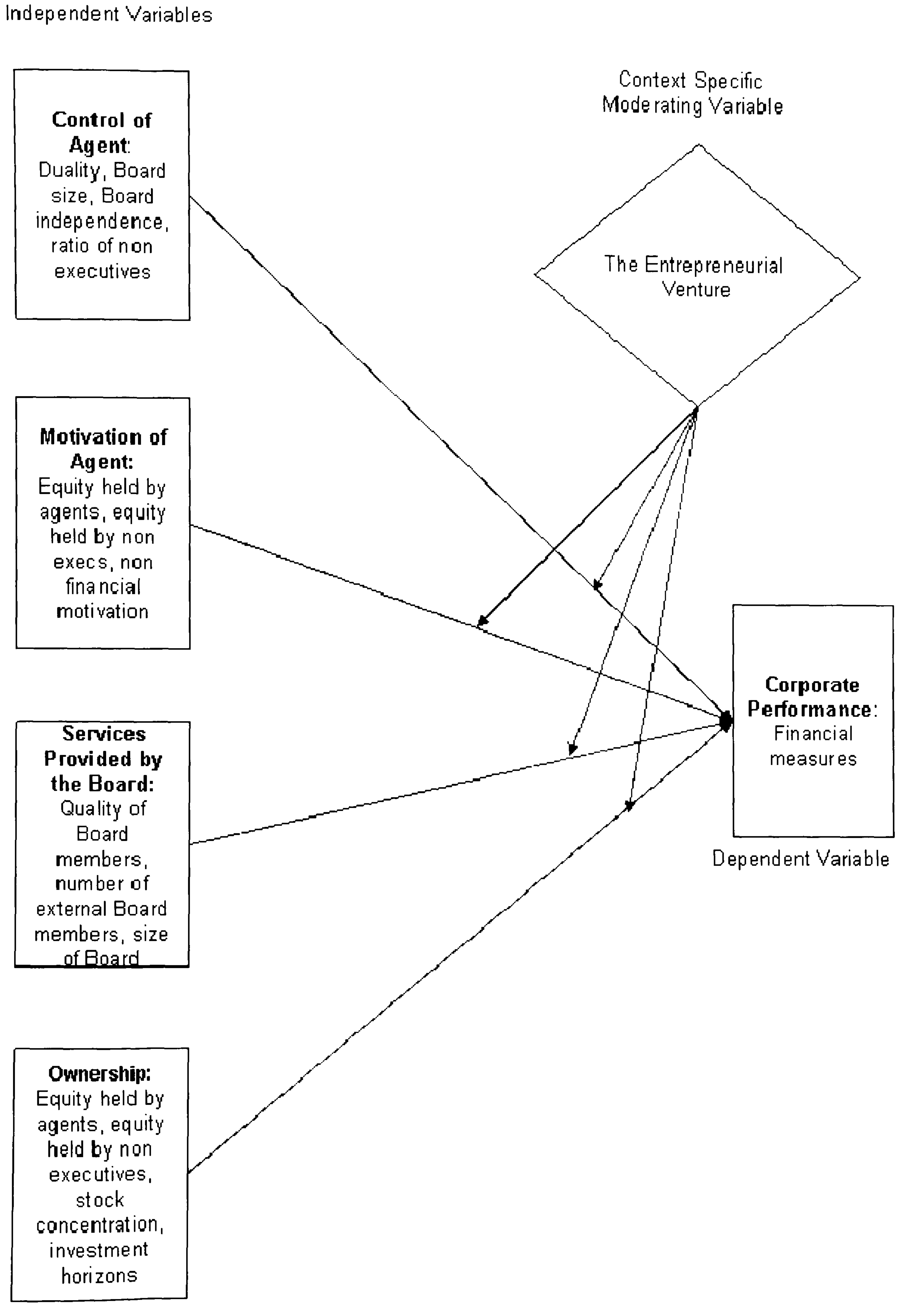

Figure C1.2: An integrated research model for the study of governance and performance and the affect of context specific variables.

This research model and its associated hypotheses provide the theoretical starting point, based on extant literature. By starting with the research model provided by the literature review, followed by the development of a research method, the gathering of empirical data, its detailed analysis and finally by concluding with logical deductions based on the consequential results of this study, a hypothetico-deductive method of research has been followed (Sekaran, 2003).

Consequently, the following chapter presents, discusses and justifies the adopted research methodology.

CHAPTER C2: RESEARCH METHODOLOGY (I)

C2.1 Introduction

The following three chapters are organised along lines of Sekaran's (2003) research design model. In each chapter the highlighted cells of the model will be debated. Chapter C2 covers the purpose of the research, the type of investigation, the extent of interference, the study setting and the time horizon.

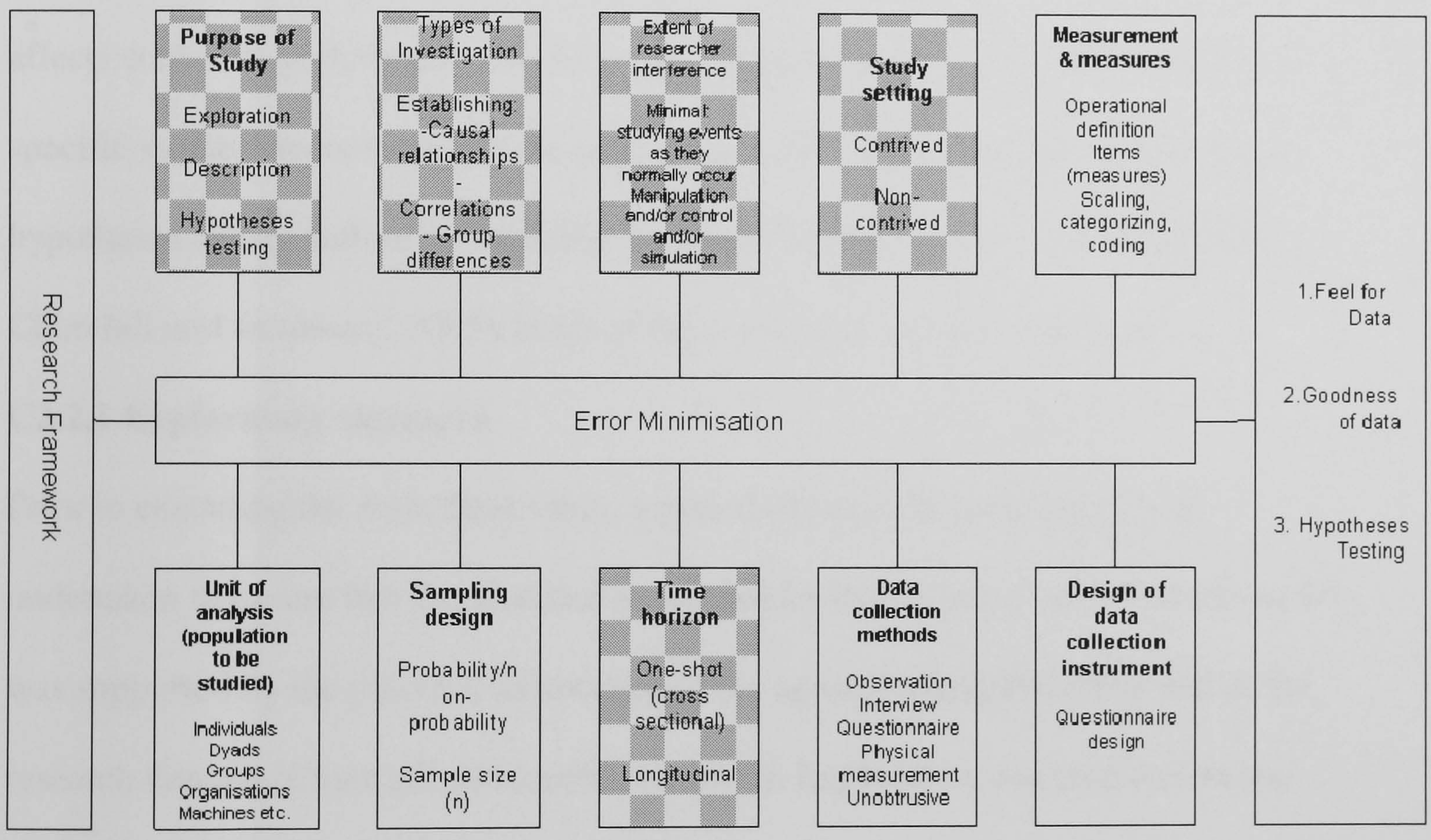

Figure C2.1 Research Design Framework.
Source: Sekaran, U. (2003) *" Research Methods for Business: A Skill Building Approach",* 4th ed., New York: John Wiley and Sons. Inc. (p.93)

Such a design model is described by Green et al. (1988, pp.68) as:

"The specification of methods and procedures for acquiring the information needed to structure or solve problems. It is the overall operational pattern or framework of

the project that stipulates what information is to be collected, from which resources, and by what procedures."

The adoption of this design framework has ensured that the methodological considerations and decisions are relevant to the research problem and that an appropriate set of procedures were employed in fulfilling the research aim and objectives (Churchill, 1979).

C2.2 Purpose of Study

Given the stated aim and objectives of this research (Section A1.3), three basic types of research design were employed in order to investigate how corporate governance affects corporate performance and how this relationship is altered by the context specific variable represented by the entrepreneurial venture; exploratory research, hypotheses testing and model building (Kinnear and Taylor, 1996; Malhotra 2003; Churchill and Iacobucci, 2005). Each of these will now be discussed in turn.

C2.2.1 Exploratory Research

Prior to executing the main field study, a period of exploratory research was undertaken to ensure that the direction suggested by the literature review (Chapter B1) was supported by the practical experience of the agents leading the firms within the research domain (Churchill and Iacobucci, 2005). Exploratory research covers the following main areas (Kent&Lee, 1999):

1) **Increase the researcher's familiarity with the topic under investigation**. In the case of this research, the author was employed in a leadership capacity for both an entrepreneurial and non entrepreneurial firm and was able to question leaders and owners within these firms as to the relevance of the hypotheses that were identified as a result of the author's extensive review of extant literature (Part B). This experience

enabled the author to observe the effects of divergent motivations and how outward compliance with prescribed governance best practice did little to ensure the security of the owners' investment. This experience confirmed the need to explore the affect that context specific variables, specifically those associated with entrepreneurial ventures, has upon the effectiveness of a governance model.

2) **Establishment of research priorities and objectives**. The intent to simultaneously apply several theories (resource dependency, agency and stewardship) with their range of associated parameters / concepts (duality, non financial motivation etc.) as part of a single research initiative made it necessary to decide which of these parameters were of greatest relevance. The author's working experience and ability to observe that manner in which elements of all three theories influenced the performance of a range of firms provided an initial practitioners view of the elements upon which the research should focus which was then developed through the review of academic findings. As an example, the author experienced a situation where the personal commitment of an entrepreneurial leader to a personally created vision had a far greater impact upon his decisions than personal financial gain - this led the author to include non financial motivation as an element of this research. The decision to include this facet of governance was then confirmed by reviewing literature relating to stewardship theory which underlined its importance.

3) **The practical problems of data collection**. Preliminary discussions with colleagues and business leaders highlighted to the author that information relating to governance can be sensitive and approaching senior business

leaders with a suggestion that they cannot be trusted to act in the best interests of the owners can cause significant issues of response bias. Similarly, the discussions indicated that senior business leaders are often busy and unwilling to take part in research of any kind, creating issues with response rates. These facts required significant consideration (addressed through depth interviews – see below) prior to the execution of primary research and resulted in the re-wording of research questions. The potential issues associated with gaining access to business leaders and detailed accounting data (Ghobadian and O'Regan, 2006) also informed the decision to define firms within the Alternative Investment Market as the research domain.

4) **Ideas, insights and suggestions for hypotheses**. Three different activities were undertaken to generate and test ideas for hypotheses. Firstly, the author reviewed a large number of annual report and accounts filed by companies listing in the alternative investment market (AIM). The statements within these reports provided significant insight into how the leaders of these companies viewed their Board and their attitude, policy and approach to corporate governance. Secondly, canvassing expert opinion (i.e., conversations with business leaders and firm owners – as recommended by Winkler, 1981) and the "on-the-job" application of the principles of governance allowed the author to test reaction to different concepts and hypothesis. Finally, the author benefited from the timely opportunity to work through the collapse of two companies, both of which had different ownership structures and employed different governance

systems[11]. This work culminated in the provision of a legal deposition relating to a case bought by the 'investor owners' of an entrepreneurial venture against the 'founder owners' that they had trusted to act in their best interests. This practical experience allowed extensive exploration of theory in the most extreme of real-life contexts and confirmed the author's choice of the entrepreneurial venture as the vehicle through which to explore the effects of context specific variables.

In addition to the practical experience and informal canvassing described, the author also carried out a series of interviews with business leaders aimed at gaining insights into the issues experienced with extant corporate governance guidelines, ideas with regards to the author's proposed hypotheses and the issues associated with gaining information relating to the governance and motivation of business leaders. The choice of the face-to-face depth interview was based upon recommendations of Malhotra (2003); Churchill and Iacobucci (2005) and McDaniel and Gates (2002) and was used as it allowed the author to exploit his status as a businessman (thus maximising involvement rates) whilst providing a rich source of data that could be further developed as it was imparted (thus mitigating the boundaries that would have occurred from use of an un-tested questionnaire). Furthermore, Sekaran (2003), recommends use of this method in situations where complex issues need to be explored and understood. In the case of this research, it is important to understand how best to position and articulate the concept of corporate governance and to consider the potential for poorly constructed questions to imply a lack of integrity or the need for control.

[11] One of the companies conformed to the author's definition of "Entrepreneurial" and the other not.

The nature of the targets within the sample frame (i.e., senior executives) meant that the depth interviews had to be, due to time and availability constraints, conducted via. pre-arranged telephone conversations, others were conducted face-to-face. In total 14 interviews (decided on the basis of availability, willingness and time) took place with a cross Section of representatives from the sample frame including Chief Executive Officers from entrepreneurial ventures, executive directors, owners and investors. Individuals were purposefully selected from the population on the basis of experience and an ability to relate to the real-life importance and impact of corporate governance. Discussions with the expert informants (Churchill and Iacobucci, 2005) typically lasted 60 minutes and took the form of a discussion around the concept of researching governance in terms of agency, resource dependency and stewardship theories and, in particular, the potential sensitivities of data collection.

Insights gained from these interviews (as well as the literature review and practical experience) confirmed the research model (Figure C1.2) and were applied in the development of the research instrument and data collection methodology. The main lessons provided can be summarised as:

- The author should leverage his own standing as an executive in order to develop an empathetic link to the respondent, this has the effect of reducing the potential for a respondent to feel that their integrity is being questioned.
- In line with established best practice, It should be stressed that all responses would be treated with strictest confidence and that no link between firm and response would be detectable within the final research document (this followed several expressions of concern that a misconstrued response that was attributable to a specific firm or agent could be share price affecting).

- A high degree of support was expressed for the proposed wider consideration of possible owner / agent motivations. Executives were keen to make it clear that their actions were not entirely driven by personal financial reward, they also agreed with the concept of entrepreneurs reacting differently to a given governance system.
- Whereas electronic requests (e-mail or internet based automated surveys) for information within the public domain, such as report and accounts, was seen as appropriate and likely to gain a positive response, this same method would be considered negatively if used as the medium for the collection of more sensitive data relating, for example, to the personal motivations of the agent questioned and his or her personal experience / qualifications (underlining established best practice).
- The willingness of the approached executives to engage in the debate and to offer support / advice provided support for the use of the AIM market as a sample frame.

C2.2.2 Hypothesis Testing and Model Building

The focus of this research centres on the relationships between research constructs through the development of appropriate hypotheses as such, and as stated previously in Section C1.3, we can conclude that this research follows a hypothetico-deductive approach.

Using the results of the research defined herein, guidelines for the effective governance of non entrepreneurial ventures and how they differ for entrepreneurial ventures are proposed (Chapter E1).

C2.3 Type of Investigation

With the hypotheses described in Section C1.2 in mind, the type of investigation adopted must be able to determine the ways in which the constructs of governance (the independent variables) relate to corporate performance (the dependent variable) and how this relationship is affected by the context specific variables associated with the entrepreneurial venture.

The investigation has also reflected the fact that the study of a 'fluid' entity such as day-to-day business and resultant performance cannot be 'stopped' and manipulated whilst the effects of said manipulations are observed. Instead, the effects of governance and specific circumstance must be monitored in the field after they have been implemented or have occurred. Consequently the approach adopted is an *'ex post facto'* regression (Sekaran, 2003, Churchill and Iacobucci, 2005).

C2.4 Extent of Interference and Study Setting

Given the type of investigation, interference will be minimal, i.e. observations are made of the outcome of actual, naturally occurring events, artificial manipulation is therefore inappropriate.

The proposed research will focus on the governance and performance of operational corporations, using 'live' data from reports and accounts as well as primary data gathered from incumbent Executives, Agents and Owners. As such it is a non-contrived study, i.e. not a scenario or simulation.

C2.5 Time Horizon

Both the introduction chapter, A1, and the literature review contained within Chapter B1 make several references to the influence of time on the potential outcomes of governance on performance. In particular, attention is drawn (Section B1.8) to the fact that, with the exception of research utilising stock growth over a given period, the evidence reviewed was found to measure performance indicators at a snap-shot in time without any consideration of how these indicators may have been performing over a given period, whether they were trending up or down, or how the prevailing environment (at the firm, industry or wider economic level) may have influenced them.

That said, the author has, whilst recognising it as a limitation of the research (Section E1.5), also adopted a snap-shot approach and has consequently recommended a longitudinal study for future research (Section E1.6).

CHAPTER C3: RESEARCH METHODOLOGY (II)

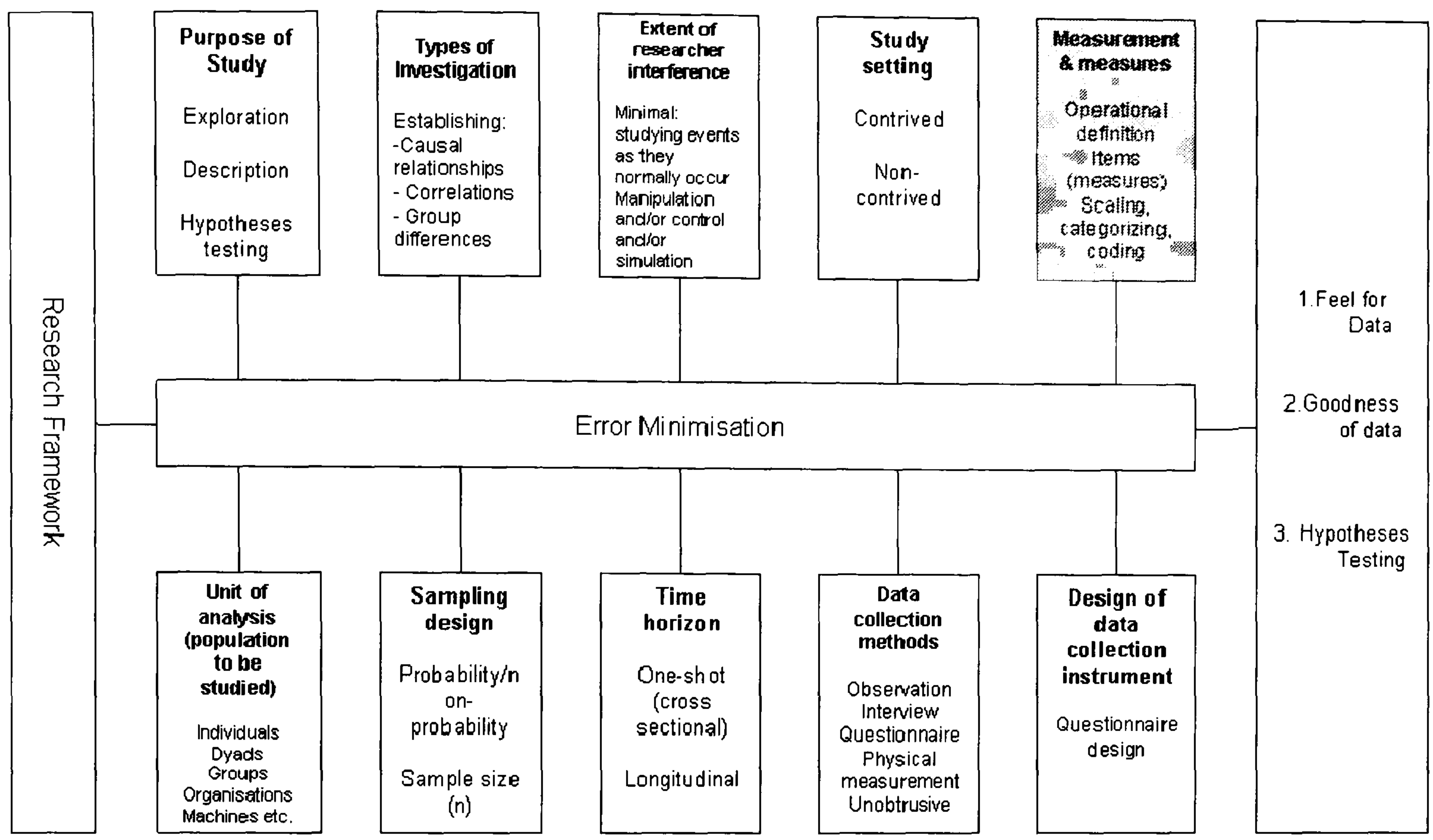

Figure C3.1 Research Design Framework.

Chapter C3 will introduce and develop the measurements and measures that define the data to be gathered.

C3.1 Measurements and Measures

Within the context of this research, the measures refer to those constructs of corporate governance (and their individual indicators) that, having been identified as relevant within extant governance literature, have been included in the research model (Figure C1.2) and its associated hypotheses (Section C1.2). This section describes and justifies an appropriate measurement for each element / measure. With the exception of the non-financial motivation of the agent construct, the author has applied empirical scales as the means of measurement.

This discussion also extends to include the conceptualisation of the relationship between the measures (or indicators) and the construct (i.e. whether formative or reflective, Section C3.2).

C3.1.1 Control of the Agent

The first construct of governance to be measured is the extent to which agents of a firm are controlled by its owners. Section C1.2.1 summarises extant facets of agent control and uses them to derive an unobservable construct indicated by; the ratio of outside (non executives) to inside (executives) directors on a Board; the independence and affiliations of these directors, duality and the size of the board. Literature provides empirical scales for these elements and given that the author's critical review of prior research has found issue with the isolated study of individual elements rather than the ways in which they have been measured, said scales have been re-applied for this research:

- *Ratio of Outside (Non-executive) to Inside (Executive) directors* – this is the percentage of non-executive directors on the board of directors (O'Sullivan & Wong, 1999; Kyereboah-Coleman et al., 2007 and Dahya & McConnell, 2007).
- *Independent non-executives* –this measures the extent to which there is a presence on the board which is independent from the inside (executive) directors. It is the percentage of the total board that consists of non-executive directors who are neither former directors of the company nor corporate advisors to the company (Daily et al.,1999).
- *Unaffiliated non-executives* – this is an alternative measure of director independence. It is defined as the percentage of the total board that are non-

executive directors and who have served on the board for less than four years (Weir & Laing, 2001).

- *Duality* –this has been measured by a binary variable equal to 1 if an individual holds both of the positions of chairman and CEO and 0 if otherwise (Schleifer & Vishney, 1997; Lam & Lee, 2006; Braun & Sharma,2007).
- *Number of non-executive directors* – Cadbury (1992) proposed that there should be at least three non-executive directors on the board. A binary variable was therefore constructed that had a value of 1 if there were at least three non-executive directors and 0 if there were less than three (Weir & Laing, 2001).

C3.1.2 Motivation of the Agent

Section C1.2.2 explains the need to consider motivation from both financial and non financial perspectives and constructs hypotheses that reflect this need. In order to measure both elements of motivation the following have been employed:

- *Equity held by executives (agents)* - Measured as the percentage of the company's total stock held by its senior executives (defined by Zahra, 1996; and Chaganti & Damanpour, 1991) as vice presidents and those in higher office)
- *Equity held by non-executives* - Holdings will be measured as the percentage of the company's total stock held by its non-executive directors (Zahra, 1996).
- *Non-financial motivation* – the extent to which non-executives are motivated by factors other than financial remuneration will be measured via. a likert scale questionnaire (attached as Appendix 1 and discussed in Section C4.4).

C3.1.3 Services Provided by the Board

As discussed in Section C1.2.3, the need to consider the services provided by the Board of Directors stems from the theory of resource dependency (Pfeffer and Salancik, 1978) and gives rise to a hypothesis concerning the quality of the Board. In order to measure "quality", the following measurements have been employed:

- *Board Quality* – D'Aveni (90) and Finkelstein (1992), Goodstein and Boeker (1991) measure four indicators: (1) the total number of corporate directorships held by a firm's board members; (2) the total number of non-corporate directorships held by a firm's board members; (3) the number of CEO's or chairpersons who serve on a firm's board; and (4) educational prestige, or the number of members with undergraduate or graduate degrees from elite educational institutions.
- *Number of Non-executives on a board* –In the case of the "services provided by the board" construct, the absolute number of non executives will be measured rather than the relative number measurement that has been employed for the control of agent construct (Pfeffer & Salancik, 1978).
- *Overall size of board* – as the number of directors on a Board increases, so will the ability of said Board to extract resources from its environment (Pfeffer & Salancik, 1978). With this in mind the Overall board size has been measured simply by the absolute number of directors upon it.

C3.1.4 Ownership

Section C1.2.4 discusses the impact that a firm's ownership structure has upon the effectiveness of its governance system and hypothesises that elements of agent ownership, stock concentration and investment horizon will influence the relationship between governance and performance. With these elements in mind, the following measurements have been employed:

- *Equity held by agents* - Measured as the percentage of the company's total stock held by its senior executives; defined by Zahra (1996) and Chaganti & Damanpour (1991) as vice presidents and those in higher office.
- *Equity held by non-executives* - the percentage of the company's total stock held by its non-executive directors (Zahra, 1996).
- *Stock Concentration* – measured as the percentage of the company's total stock held by any one group or individual. The groups considered will be agents and non executives , the founder / founders family and institutional investors (Salancik & Pfeffer, 1980; Hill & Snell, 1989; Demsetz & Lehn, 1985).
- *Long-term institutional ownership* – the percentage of a company's stock held by long-term institutional investors, i.e., mutual and retirement funds (Zahra, 1996)
- *Short-term institutional ownership* - the percentage of a company's stock held by short-term institutional investors, i.e., investment bankers, venture capitalists and other private funds (Zahra, 1996).

C3.1.5 Context Specific Variable

Section C1.2.5 explains the need for governance research to consider how context specific variables that relate to the circumstances of a firm might alter the relationship that a governance system could have upon performance. This has led the author to construct a hypothesis that suggests the context specific variables embodied within entrepreneurial ventures will significantly change the association corporate governance and performance. Entreprenuerialism will be measured thus:

- *Entrepreneurial ventures* - The vehicle through which the effect of context / circumstance will be studied is entrepreneurialism as embodied within the entrepreneurial venture. Said ventures are defined as those where managerial control is retained by the founder (Sections B2.1). This is a binary variable and is equal to 1 if the founder, co-founder or a member of the founder's family retain greater than a 10% share of the company and a position on the Board and 0 if otherwise.

C3.1.6 Performance

Section B1.8 of the literature review explores how previous governance research initiatives have defined firm performance. Consequently, corporate performance will be measured thus:

- *Internal Financial Measures* – measured by return on capital employed (profit before interest and tax divided by capital employed multiplied by 100) and return on assets (profit before interest and tax divided by total assets multiplied by 100) (Bucholtz and Ribbins, 1994; Finklestein and D'Aveni, 1994; Ocasio, 1994; Lam & Lee, 2006; Garg, 2007).

C3.2 Reflective and Formative Latent Variables

The theoretical framework illustrated in Figure C1.2 can be seen to comprise a four constructs of corporate governance and a single construct of corporate performance. Each of these constructs is unobservable, e.g. the control of an agent cannot be directly observed but instead is inferred by other observable variables or empirical / measurable indicators. With these constructs in mind, Fornell and Bookstein, (1982, pp.441) state that the "unobserved constructs can be viewed either as underlying factors or as indices produced by the observable variables. That is, the observed indicators can be treated as reflective or formative". Consequently, it is necessary to understand the difference between reflective and formative variables and to conceptualise each of the constructs employed in this research as one or the other. An explanation of reflective and formative variables is provided by Haenlein and Kaplan (2004, pp.289):

"Formative indicators are not influenced by but influence the latent variables, consequently, if the unobservable (variable) can be considered as giving "rise to something observed," as is the case when, for example, the unobservable describes a personality trait or attitude, reflective indicators should be used. In contrast, formative indicators are appropriate if constructs "are perceived as explanatory combinations of indicators" (Fornell & Bookstein, 1982, p.442). This leads to one major difference between formative and reflective indicators: whereas reflective indicators should have a high correlation (as they are all dependent upon the same unobservable variable), formative indicators of the same construct can gave positive, negative or zero correlation with one another (Hulland, 1999), which means that a change in one indicator does not necessarily imply a similar directional change in the others (Chin 1998)".

Furthermore, and in order to provide guidelines against which to consider each of the governance constructs, the concept of reflective and formative indicators is represented diagrammatically in Figure C3.2 and explained below.

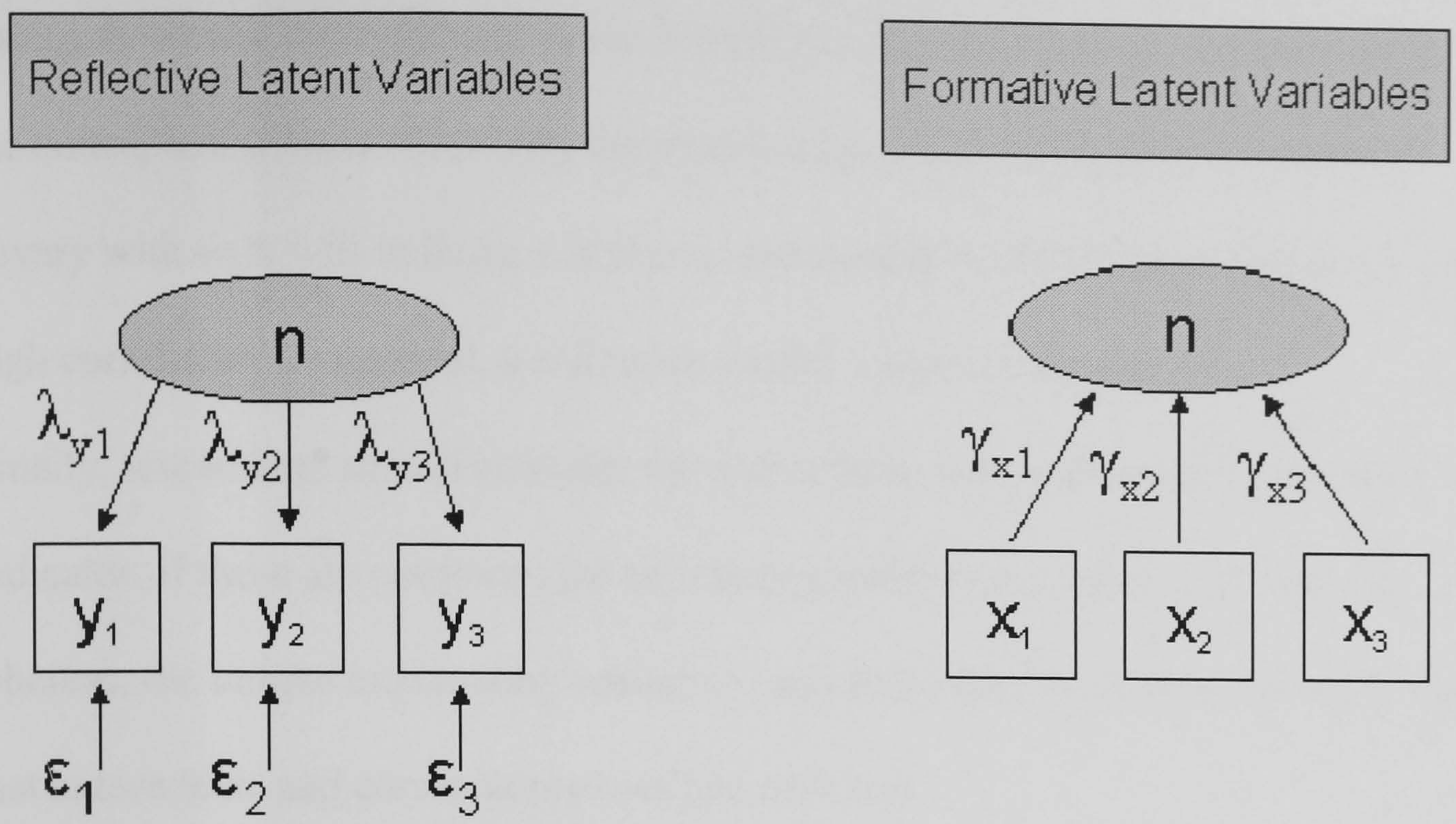

Figure C3.2 Reflective vs. Formative Constructs

The importance of correctly specifying a particular construct is illustrated by the work of Law and Wong (1999) where, as a consequence of modelling a construct as having reflective rather than formative indicators, the parameter estimate for the relationship between job perception and job satisfaction was inflated by 132%.

With this potential error in mind, it is important to carefully evaluate the nature of the relationships between the indicators within a given construct and the unobservable variable that they measure. In order to distinguish between reflective and formative indicator models MacKenzie, Podsakoff and Jarvis (2005, pp.173) recommend the consideration of the following criteria:

"If the measures represent defining characteristics that collectively explain the meaning of the construct, a formative indicator measurement model should be specified. However, if the measures are manifestations of the construct in the sense that they are each determined by it, a reflective indicator model is appropriate".

The second criteria concerns the extent to which a set of indicators share a common theme. In the case of reflective indicators the degree of commonality should be strong, however, if the indicators are formative each may capture a unique aspect of the conceptual domain. Similarly the extent to which indicators are expected to covary with each will indicate whether a relationship is reflective or formative – if a high correlation is expected, a reflective model would be appropriate.

Finally, researchers should consider the antecedents and consequences of each indicator. If these are common, the construct should be modelled as reflective, whereas, the unique explanatory nature of each individual formative indicator means that antecedents and consequences will be different.

Applying these criteria to the conceptual measures developed for this research (Section C3.1, Measures and Measurements contains a full list of the observable indicators within each of the constructs) leads to the following conclusions:

In the case of the "**Control of Agent**" construct, the observed indicators are; the number of unaffiliated non executive directors, the number of non executive directors and the ratio of non executive:executive directors. Applying the first of MacKenzie et al (2005) criteria, the author concludes that these indicators explain the construct, i.e. if a high number non executives have been employed, if they are unaffiliated and if they proportionately outnumber the executives on the Board, then the agent will be effectively controlled. When considering the question of potential covariance the author concludes that a change in the number of unaffiliated directors will not necessarily result in a change in the absolute number of non executives on a Board, as such, the potential for covariance between the indicators is reasoned to be low (although, given the obvious correlation between the number of non executives and the ratio between non executives and executives, there could be an argument for either a reflective or formative relationship – in cases such as these MacKenzie, Podsakoff and Jarvis (2005) recommend relying upon the remaining criteria in order to make a decision). The question of common antecedents and consequences is less clear as it could be argued that the indicators all result in the tighter control of the agent. However, a closer consideration reveals the absolute number of non executive directors could have the effect of producing a greater volume of resistance and a greater range of reasons to resist a particular action, whereas, the extent to which a director is unaffiliated will simply change the likelihood that an individual will act upon a pre-conceived perception or pre-shaped relationship, as such the individual indicators are reasoned to each have a different consequence. The indicator has therefore been modelled as formative.

In the case of **Non-Financial Motivation**, the unobservable construct is represented by individual research measures that relate to the extent to which the firm is regulated and the nature of the directors remuneration package. With this and the following logic in mind, the author concludes that these measures are manifestations of the environment in which the firm operates, i.e., in a highly regulated environment, compliance is critical and as such actions and decisions will be constrained, regardless of contrary financial motivation. Similarly, the degree to which an owner's goals are altruistically driven could define the balance of the remuneration packages that are constructed for the appointed agents. Although individual, the measures have the common theme of "non-financial motivation" and if the desire to regulate or the desire of the owners to drive decisions that consider a wider range of outcomes (i.e. other than the purely financial), increases, then the answers to the questions would all be expected to change accordingly – as such, the potential for correlation is high, the antecedents are common and the construct is consequently modelled as reflective.

The **"Services Provided by the Board"** construct is also measured by a range of different research measures aimed at determining the resources that each director has access to and the size of the Board. In this case the indicators are reasoned to explain the concept of "services provided" rather than being determined by it. Given that the indicators cover areas such as; the number of directorships held, the number of CEO's on the Board, the size of the Board and the number of degrees held by Board members, it is reasoned that each indicator captures a unique aspect of the conceptual domain. Furthermore, there is little likelihood of covariance (i.e. if the services that are required from a Board increase, the author would not expect all of the indicators to increase as well) as a consequence, a formative model is considered to be appropriate. Finally, the **"financial motivation"** of the agent and the **"ownership"** of the agent constructs are measured by the degree to which executive and non executive directors hold equity in the company. In this case, the indicators clearly explain the concept, they are not expected to covary (both could increase or decrease independently) and their antecedents could be entirely different (ownership could be a function of history, individual wealth, personal risk profile or personal belief in the company) as such a formative model is considered as the most appropriate.

Given the consequent need to analyse a model comprising both formative and reflective latent variables (Chin, 1998), careful consideration was necessary to identify the most appropriate modelling technique (Section C4.5).

CHAPTER C4: RESEARCH METHODOLOGY (III)

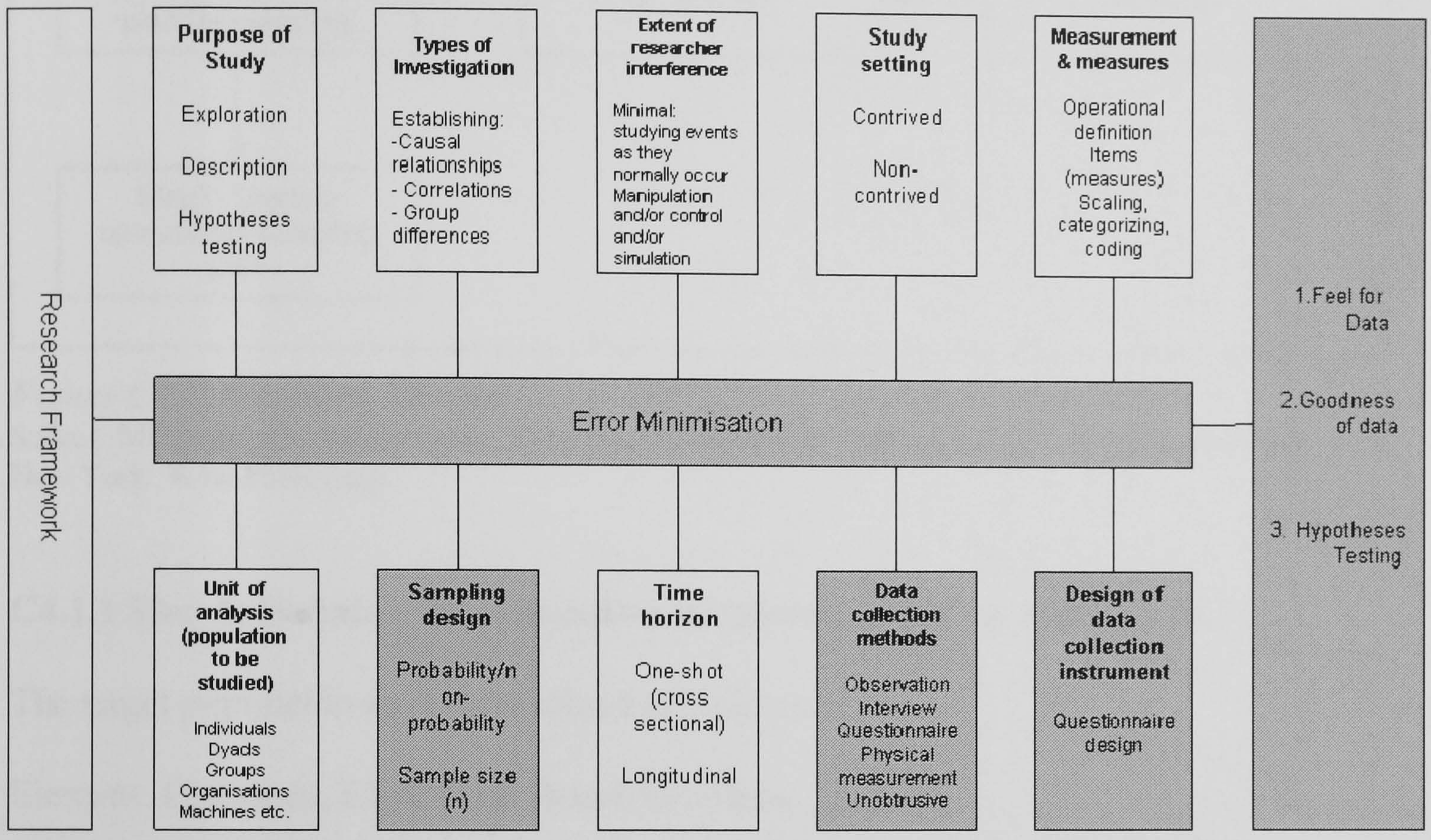

Figure C4.1 Research Design Framework.

Chapter C4 will introduce and develop the sampling design, the data collection methods, the instrument through which the data will be gathered and the analytical technique with which it will be analysed. All of these will be developed with error minimisation in mind.

C4.1 Sampling Design

In order to develop an operational sampling plan, the author has adopted the framework suggested by Mc.Daniel and Gates (2002), illustrated as Figure C4.2:

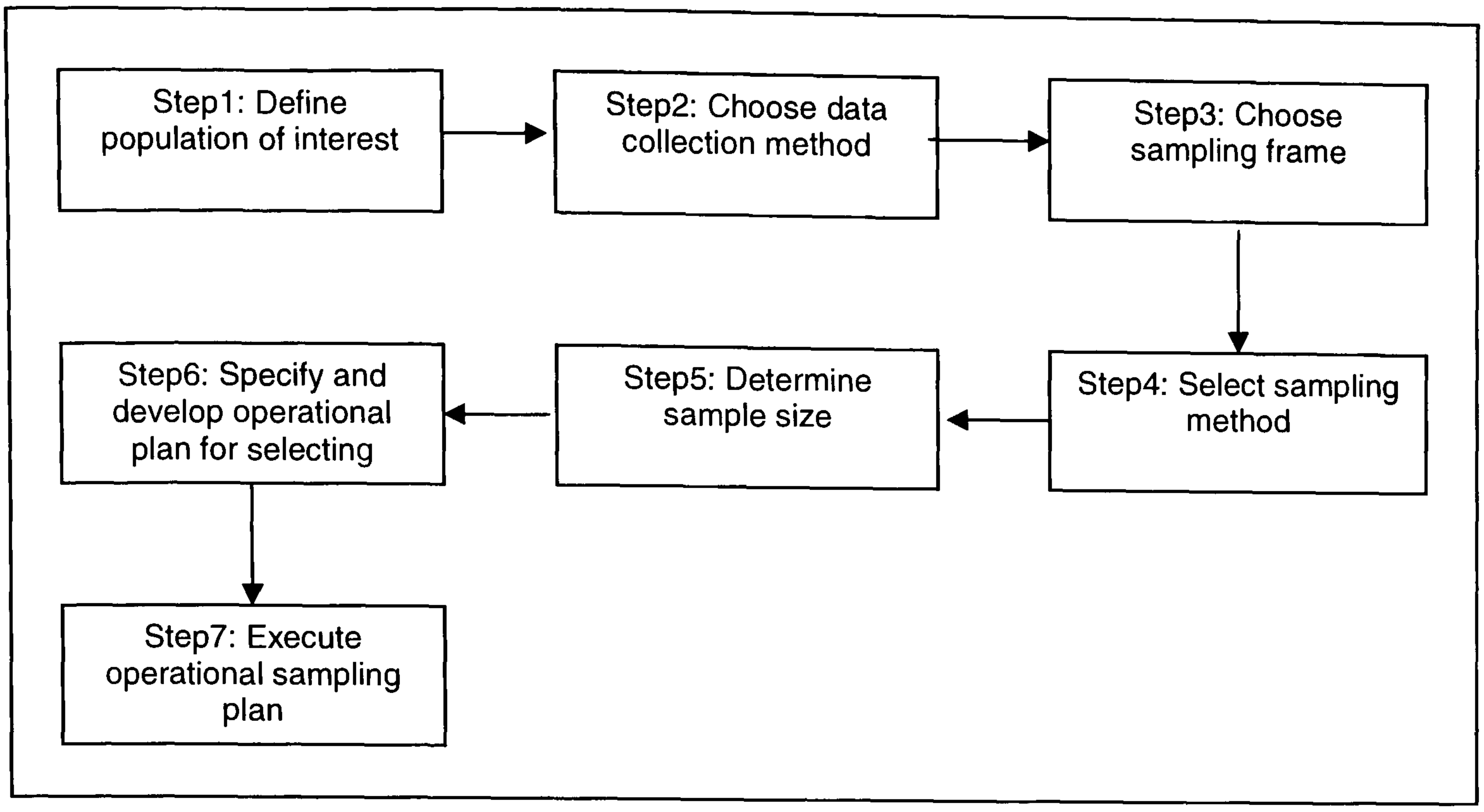

Figure C4.2. Sampling Design
Source: McDaniel, C., Jr. and Gates, R. (2002), *Contemporary Marketing Research*, Second Edition, New York: West Publishing.

C4.1.1 Step 1: Defining the Population of Interest and Unit of Analysis

The target population has been defined as follows:

Element: Chairmen, CEO's and Board Members

Sampling unit: All industries

Extent: Listing on London's Alternative Investment Market

Time: November 2003

Considering the focus of the research (corporate governance and corporate performance) and the need to study both entrepreneurial (i.e. firms where the founders retain ownership and managerial control) and non entrepreneurial firms, the extent of the population to be researched is defined as those firms listing on the Alternative Investment Market (AIM). This population has the advantage of; comprising an almost equal mix of entrepreneurial and non-entrepreneurial ventures; containing executives that are, due to the relative size of the firms that they lead, more likely to be accessible than leaders of firms listing on the main financial markets and containing firms that are compelled by the conditions of their listing to release independently audited results. Within these firms, the element of the population to be targeted is defined as members of the Board of Directors, comprising the Chairman, Chief Executive Officer and executive or non executive directors. Only these individuals, as the leaders, owners and controllers of their respective companies, are considered appropriate and relevant to governance research of the kind described in this thesis. Firms listing on AIM represent a comprehensive spectrum of industries and with a view to maximising the generalisability of results whilst mitigating the risks of industry specific trends or circumstances influencing findings, the author has included firms from all industries in the sampling unit. Finally, in terms of time, the population is defined as those firms listing on AIM in November 2003.

C4.1.2 Step 2: Data-Collection Method

The data collection method is discussed fully in section C4.2. Subsequent decisions discussed in the section were guided by, and were congruent with, the adopted primary data collection method.

C4.1.3 Step 3: Choice of Sampling Frame

The choice of the Alternative Investment Market as the research population provided an established sampling frame in the form of the AIM Guide (2003) published by Growth Company Investor Ltd. The guide contained details of all 704 companies listing on AIM and whereas the AIM market is not the exclusive source of entrepreneurial ventures, it can be seen to be representative of the entire population as it contains a complete cross section of industries, circumstances and, to some degree, sizes of firms. Along with these reasons, the AIM Guide was chosen as the sampling frame for the following reasons:

- The Guide contained detailed information about the company name, trading address, telephone number, fax number, email address, web address, stock concentration, key employee names and positions, key investors and their holdings and an overview of the business conducted. This information was more comprehensive than any other identified / reviewed source and allowed the author to personalise communications with the recipient and to have an informed discussion about his/her business and its circumstances.
- The fact that the Guide had just been issued meant that it included an accurate and complete snap-shot of the entire market as it existed at that time, meaning that the majority of companies were operational and full report and accounts were available – thus there was little time wasted approaching bankrupt ventures.

That said, during the compilation of the sample frame some companies were removed, specifically where they were found to have been liquidated, acquired, suspended from trading or where incomplete information had been filed. Furthermore, in order to avoid duplication the subsidiaries of parent companies, companies that had the same directors and / or the same trading address were also removed.

C4.1.4 Step 4: Selection of Sampling Method

The two main types of sampling methods are probability and non-probability (Figure C4.3) the relative merits of which are discussed by various authors (Tull and Hawkins, 1993; Malhotra and Birks, 2000; Churchill and Iacobucci, 2005).

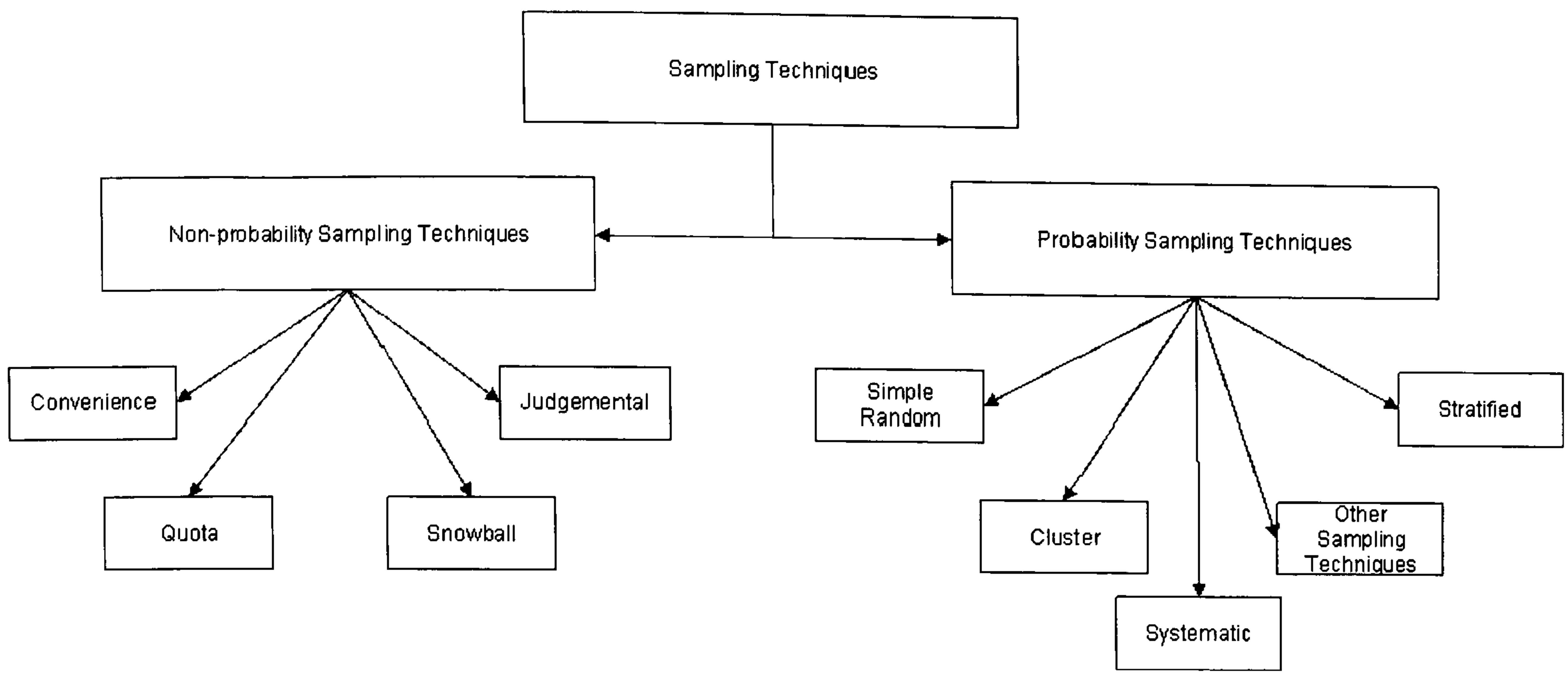

Figure C4.3: Classification of Sampling Techniques
Source: Malhotra, N. K. and Birks, D. F., (2000), '*Marketing Research - An Applied Approach*'.European Edition, Harlow, England: Pearson Education, p. 363.

The choice of sampling method is dependent upon the focus of the research (i.e., the population under investigation), the purpose of the research and the availability and appropriateness of sampling frames. In the case of this research, the ready availability of contact information for the specified population, the size of the entire population and the ability of the author to leverage his own business status in order to increase response rates led the author to adopt a census approach and issue an initial email request for information to all of the 704 companies listing on AIM.

All of the respondents to the initial email census were then approached and invited to complete a questionnaire (Section C4.4).

C4.1.5 Step 5: Determination of Sample Size

When considering an appropriate sample size the author has followed the recommendations of; Tull and Hawkins, 1993; Malhotra and Birks, 2000; Churchill and Iacobucci, 2005 and considered; a) the degree of accuracy required, b) the need to consider a sub-sample within the overall sample frame (namely entrepreneurial ventures), c) the nature of the population, d) the proposed analytical technique, e) the method of survey and f) the cost of additional information.

For the adopted analytical approach (see Section C4.5.2) Chin and Newstead (1999) recommend a minimum of 30 replies. In addition, according to Barclay et al. (1995; page 292) when employing PLS the sample should be, whichever larger, 10 times the number of predictors (the 4 predictors in this study indicate a minimum sample of 40 respondents) or 10 times the number of indicators for the most complex reflective latent variable (in this study this is Non financial motivation with 7 indicators thus a minimum sample of 70 is recommended). Assuming a 30% response and allowing for undeliverable and unusable surveys the desired sample should easily be achieved from the targeted population of 704 companies.

C4.1.6 Steps 6 & 7: Develop Operational Procedures for Selecting Sample Elements and Execute the Operational Sampling Plan

In the case of this research the operational procedures involved obtaining a copy of the sampling frame, e-mailing the entire population (excluding those companies removed on the basis of duplication and cessation of listing, Section C4.1.3), identifying the most appropriate person to participate in the survey and then issuing the questionnaire in line with the methods discussed in Section C4.2.

With identifying an appropriate survey participant in mind, the nature of the research (i.e. the exploration of the link between how an agent / leader is governed and how the respective firm performs), means that only the leaders and owners of firms are truly qualified to answer the proposed research questions – as such a highly targeted approach was necessary to maximise the accuracy of the returns as well as minimising the potential for the respondent to delegate the task of completing the survey (see section relating to Mode of Survey Administration within C4.2.1 and Dillman, 1978).

C4.2 Data-Collection Method

Table C4.1 maps each of the measures discussed in Section C3.1 to their respective constructs, measurements and the source from which their data will be gathered.

Table C4.1: Sources of Data

Construct	Measure	Measurement	Source
Control of Agent	Duality	Binary 1 = dual, 0 = separate	Report and Accounts
	No. of non exec Directors	Binary 1 = > or equal 3, 0 = <3	
	Ratio of non execs	% of non execs/total board size	
	Independence of non execs	% of non execs who are neither former directors or advisors	Report and Accounts and questionnaire
	Unaffiliated non-execs	% of total board that are non execs who have served <4 years	
Services Provided by Board	Board Quality	Total number of corp directorships held by board members	Report and Accounts and questionnaire
		Total number of non-corp directorships held by board members	
		No. of CEO's or Chairpersons who serve on Board	
		No. of under grad and grad degrees held by board	
	No. of non exec Directors	Absolute number	Report and Accounts
	Overall Board Size	Absolute number	
Ownership	Equity Held by Agents	% of total stock held by senior execs	Aim Guide / R&A
	Equity held by non-execs	% of total stock held by non execs	
	Stock Concentration	% of the company's tot stock held by any one group	
	Long-term institutional investors	% of companies stock held by short-termers	
	Short-term institutional investors	% of companies stock held by long-termers	
Motivation of Agent	Equity held by agents	% of total stock held by senior execs	Aim Guide / R&A
	Equity held by non-execs	% of total stock held by non execs	
	Non-financial motivation	Extent to which non execs are motivated by non financial factors	Questionnaire
Performance	Internal financial measures	ROCE	Report and Accounts
		Return on Assets employed	
Entreprenuerial	Is founder or founders family still in managerial control and do they hold > or equal to 10% of companies total stock	Binary 1 = yes, 0 = no	Aim Guide and questionnaire

Table C4.1 illustrates that the data required to measure the identified elements of corporate governance, corporate performance and entrepreneurialism is to be gathered from three sources:

- The AIM Guide (Section C4.1.3)
- Published and independently audited report and accounts, and
- The questionnaire (Section C4.4, Appendix 1).

The AIM Guide and Report and Accounts contained current information on the board of directors, ownership structures, stock concentration, shareholders and corporate performance, however, in some cases, these sources lacked depth of information relating to individual board members and did not contain an indication of agent motivation (beyond equity holdings). Consequently it was necessary to conduct primary research, the process of which will now be discussed:

C4.2.1 Primary Research

Primary research was necessary in order to gather data relating to the motivations of the agent. Consequently, this section discusses the methods applied to arrive at and execute the survey discussed in Section C4.4 and attached in Appendix 1.

In designing the primary element of this research initiative, the author considered three main questions; method, administration and communication.

Data Collection Method – three methods of primary data collection were considered; Observation, Experimentation and Survey, the relative merits of which are discussed by various authors (Malhotra, 2000; McDaniel & Gates, 2002; Tull & Hawkins, 1993).

In the case of this research the survey method of primary data collection is considered to be the most suitable as it negated the issues of the geographic dispersion of the sample frame and it provided a prompt method of collecting multiple, independent views for a relatively low cost. Another advantage of using a survey method was its ability to allow the respondent to choose whether or not to reveal potentially sensitive information without having to explain why. Although all three of the aforementioned methods of data collection have the advantage of being well established and of having a track record of success, observation and experimentation methods were not thought to support the simple gathering of information relating to personal attitude, factual aspects of board construction and factors of governance.

Contrary to the relative benefits of the survey method, the author also considered the following limitations.

McDaniel and Gates (2002) and Malhotra (2003) both warn of response bias that can stem from the interpretation of written questions. In order to minimise this potential, the author executed the exploratory research phase (Section C2.2.1).

Similarly, the potentially sensitive nature of the research questions (Section C2.2.1) may result in respondents giving deliberately inaccurate answers. With this in mind, the author has again taken care to reflect the lessons learned from the exploratory research and took steps to ensure empathy was developed and that confidentiality was appropriately articulated and understood.

Mode of Survey Administration

Malhotra (2003) and Churchill and Iacobucci (2005) identify and discuss the relative merits of the following methods of survey; personal interview, telephone interviews; mail surveys and electronic surveys. They also suggest that these methods can be combined. In considering the various methods, the author concludes that an electronic means of survey would have similar advantages to a postal survey whilst being even more cost and time effective (Kent and Lee, 1999), however, the exploratory research of Section C2.2.1 highlighted that this may, in light of the sensitive nature of governance research and the author's experience of being inundated by "junk" electronic mail, be perceived negatively by respondents and may therefore result in an inferior response rate. With this in mind, such a method has been rejected.

In terms of other merits, the author considered the need to build empathy (C2.2.1) and the nature of the population of the sample frame (senior leaders within geographically dispersed firms) and concluded, on the basis that personal interviews would be impractical, telephone interviews and a mail survey were most suitable.

Telephone interviews and mail surveys are said to have advantages in terms of convenience, cost, their ability to collect sensitive information, their speed and their ability to negate issues of geographic dispersal of respondents (Aaker et al., 1998, Hague, 1992). All of these advantages are relevant to this research which is aimed at companies located across the country, that involves potentially share price affecting and other sensitive information and that is aimed at senior business leaders with little time. This mixed method would, through personal contact, also maximise the opportunity for the author to leverage his professional status, establish empathy, stress confidentiality and minimise response bias.

Authors such as Malhotra, 2003; Churchill & Iacobucci, 2005 discuss the drawbacks of using the survey method of data collection and, in terms of this research, the author considered the following:

- **Questions:** complex questions can lead to ambiguity or differences in interpretation. Attempting to simplify these questions is a way of negating these issues, however, this can in turn lead to a lack of validity. In order to reduce the risks of ambiguity the author tested the construction of questions during the exploratory research telephone interviews (Section C2.2.1) prior to issuing the final questionnaire to the sample population.
- **Answers:** similarly, complex questions can lead to misunderstandings which in turn lead to incomplete or inaccurate questionnaires (Section C4.2). This risk was, again, mitigated through the exploratory research process.
- **Response rates:** response rates to mail questionnaires can be as low as 3% and as high as 90% (Stanton, 1998; Thompson *et al.*, 2003). In the case of this research, leveraging the author's own business standing, the credibility of the

University and the incentive of receiving a copy of the final research resulted in a response rate of 27%.

- **Time:** Mail surveys take longer than other methods and it may take several weeks for a response to be received. That said, time was not a primary issue in this research and the majority of the questionnaires were issued and returned within a 3 month period which did not impact the research in any way.

It is on the basis of this debate, along with the lessons highlighted by the exploratory research (C2.2.1) that the author has adopted a combination of postal and telephone contact / interview.

Communication Method

Having discussed the relative merits of collection and administrative methods, this section discusses the method of communication.

The telephone interviews were made direct to the office of the target respondent using the contact details contained with the AIM Guide. The call was often intercepted by a personal assistant, however, by introducing both a business and research context, the author found that the setting of a call, at the convenience of the respondent, did not prove to be an issue. In some cases the author used his own personal assistant to set up calls through her opposite number, this also proved to be a successful method.

The mail survey was administered in the following way:

- Amount of disguise: This refers to the extent to which the underlying purpose of the research is revealed to the potential respondent (Tull and Hawkins, 1993). In the case of this research, the postal questionnaire (Appendix 1) was issued following a telephone interview and as such its purpose had already been fully explained and explored. In cases where telephone interviews had

had not preceded the postal survey, the underlying purpose and background to the research were fully explained in the covering letter (also attached in Appendix 1). This approach aimed to create an open discussion that afforded the potential respondent every opportunity to decline to supply what could be construed as sensitive information, whilst minimising the potential of response bias (the author took care to explain the background in order to gain an accurate answer and avoid cases where the respondent chose to supply deliberately misleading data – see Primary Data Collection Method) and maximising response rates.

- Respondent Targeting: In all cases the questionnaires were addressed directly and personally to the identified respondent. The names of said respondents were listed in the AIM Guide (and verified within the report and accounts or by telephone interview) and were chosen specifically on the basis of their position within the company as either a leading agent (Chief Executive Officer) or as the founder / owner / board member that met the specific definition of "entrepreneur" (Section C3.1.5).

- Letterhead: Fox et al. (1998) had found that use of a university letterhead increased response rate, however, given the lessons learned from the exploratory research (Section C2.2.1), the author used his business title and address as the heading for the letter. To add academic credibility, the cover note made strong reference to the alignment of the research to Kingston University, however, a conscious decision was taken to leverage the author's business standing rather than use a Kingston University letterhead. The confidentiality of the research and the anonymity of the firm was stressed

(Faria and Dickinson, 1996) and each letter was signed personally by the author in a show of personal attention in deference to the seniority of each respondent (Hawes et al., 1987).

- Identifying the Survey: Each survey had a unique identification number that allowed the author to associate returns with the respondent – without having to name the respondent on the survey itself (in an attempt to increase the confidence of the respondent that only the author would be able to associate a specific response to a specific firm).

- Incentives – no completion incentive, other than an offer of a consequent summary of the final findings, was offered. The reasons for this approach were based upon the work of Mizes et al. (1984) and Dillman (1983) who conclude that offering a summary of the outcome increases response rates. The author also wished to increase the perceived openness of the research and to avoid a response bias resulting from someone responding in order to claim the incentive, rather than a desire to supply an accurate, considered response.

- Survey return-envelopes: a pre-paid, pre-addressed return envelope was enclosed in every survey pack with a view to increasing return rates (Dillman, 1978) as well as highlighting that the response would be returned directly to the author rather than a third party agency (in a further attempt to build confidence and a personal relationship).

- Follow–up: on the basis of identified respondents being senior executives with scarce and precious time and considering the sensitive nature of the research, the author concluded that follow-ups could appear unprofessional (i.e., busy executives may not appreciate being "chased" to provide data that they may feel is too sensitive to reveal). Consequently it was decided that follow-ups would only be used if the initial response rate was insufficient. In practice the mix of telephone contact and surveys generated a sufficient response without the need for additional contact.

C4.3 Response Rate

As discussed in Section C4.1.4, the author initially approached the entire population of the identified sample frame. An initial response rate of 33% was achieved, however, not all responses were sufficiently detailed and so the initiative eventually yielded a sample of 204 from the population of 704, 95 of which had divorced ownership from control (i.e. are considered herein as "non entrepreneurial) and 109 of which conform to the authors definition of an entrepreneurial venture (Sections B2.1, C3.1.5).

As discussed in Section C4.1.5, this sample size meets the levels recommended for use with the PLS analytical technique it is also in line with response rates achieved by similar research (Shrader's, 2001,research into the moderating effects of young, high technology firms upon the relationship between collaboration and performance which yielded 214 'young' ventures from which a final sub-set of 70 high technology firms was drawn) as such it is expected to provide an acceptable level of accuracy.

The response rate could have been increased through the issue of reminders or repeat questionnaires, however, considering the cost of gaining a greater sample size in terms of time and nuisance[12] leads the author to conclude that the additional benefits

[12] Multiple requests for data and the chasing up of responses would have yielded a greater return, however, this would have delayed the research and could have effected the authors credibility within the sample frame.

are, given that an adequate sample that has already been achieved, outweighed by the costs.

C4.4 Research Instrument / Questionnaire Design

As discussed in Section C4.2, the primary research instrument took the form of an undisguised questionnaire (Appendix 1), the design of which drew upon the principles and recommendations of Tull and Hawkins (1993) Sekaran (2003) displayed below in (Figure C4.4).

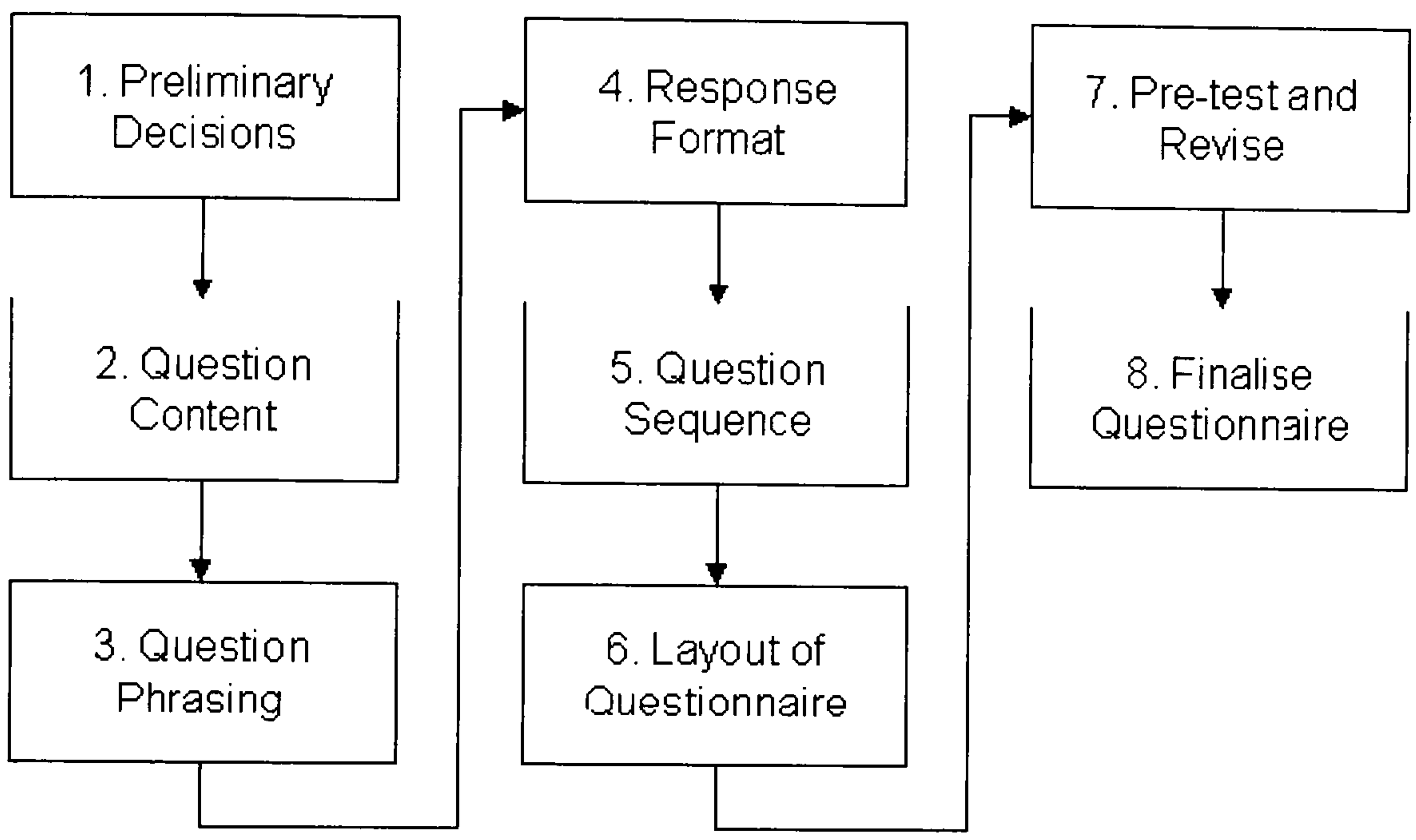

Figure C4.4 - Questionnaire Construction Decisions
Source: Tull, D. S. and Hawkins, D.I. (1993), *Marketing Research: Measurement & Method*, 6th edition, New York: Macmillan, p. 332.

Step 1: **Preliminary decisions** - before constructing the questionnaire, the author made decisions on the data to be collected (Section C3.1), the people from whom to collect it (Section C4.1.1) and the method to be employed in doing so (Section C4.2).

Step 2: **Question content** – Some of the questions posed were based upon empirical scales and as such were considered sufficiently tested to yield an accurate response without further testing. That said, in the case of the scale developed for assessing the motivations of the respondent these was no precedent and so the author followed best practice (Sekaran, 2003) and sought elucidation through pilot testing of the questionnaire and expert informant face-to-face depth interviews (Section C2.2.1).

Step 3: Question phrasing – the adopted phrases and language needed to be easily understood and unambiguous. The use of empirical scales minimised error, however, in the case of the motivational scale, the risk was mitigated by the process of pilot testing and depth interviews.

Step 4: Response format – on the basis that the questionnaire would be sent to leading executives, the author adopted a format resembling a simple business letter, from one businessman to another, rather than a formal questionnaire. Consequently, the cover note took the form of a single sheet of A4 with two subsequent A4 sheets making up the questionnaire – all of which were folded in half and contained within an A5 envelope.

Step 5: Question sequence – the sequence of the questions was not expected to create issues as all were considered to be of equal sensitivity. The questionnaire began with using the empirically tested scales, moved from subject to subject with an intervening explanation and then introduced the experimental scale relating to agent motivation – which required a simple 'tick in the box' response.

Step 6: Layout of questionnaire: Sanchez (1992) concluded that the way in which a questionnaire is laid out can affect the response rate. The author therefore carefully considered options of professional printing, paper quality and desk-top publishing. Feedback from the depth interviews, however, combined with the author's own experience of responding to questionnaires, led to the conclusion that a simple informal approach that exploited the author's own business credentials would have the greatest impact. Consequently, the author took care to print the questionnaires on quality stationary but made the layout look like a business letter rather than a formal questionnaire.

Step 7: Pre-test and revise – the process undertaken to pilot, pre-test and revise the questionnaire is, along with the conclusions drawn, discussed in section C2.2.1.

Step 8: Finalise questionnaire – having followed the steps above, no other changes or decisions were required with regards to the questionnaire and it was duly finalised.

C4.5 Data Analysis

C4.5.1 Purpose of Study

As discussed in Section C2.2, the purpose of this research is to establish the extent to which relationships exist between constructs of corporate governance and corporate performance, and the manner in which these relationships are differed by the context specific variables embodied by the entrepreneurial venture. This will be achieved by testing the hypotheses developed in Section C1.2. With this purpose in mind, this section will discuss analytical methods and present and justify partial least squares as the technique adopted within this study.

C4.5.2 Analytical Method

First-generation statistical techniques such as multiple regression and analysis of variance have traditionally been used to confirm theoretical hypothesis based on the analysis of empirical data. These techniques, however, are limited in, among other things, their ability to analyse or fully consider complex models with multiple predictor and criterion variables, measurement errors and models containing unobservable variables. In 1973 Joreskog introduced covariance structural equation modelling (SEM), which Bagozzi (1980) suggested had four key benefits over traditional techniques:

1) it makes the assumptions, constructs and hypothesised relationships in a theory explicit;
2) it adds a degree of precision to a theory, since it requires the clear definition of constructs, operationalizations and functional relationships;
3) it permits a more complete representation of complex theories; and
4) It provides a formal framework for constructing and testing both theories and measures.

That said, covariance based approach to SEM also has limitations and is said to be poorly suited to deal with small data samples, non-normal distributions (Fornell,1982, 1983, 1987); Smith and Barclay, 1997) and can yield "improper solutions" (Fornell and Bookstein, 1982 pp.440). Furthermore, as discussed in Section C3.2, Chin (1998, pp.ix) states "an underlying assumption for SEM analysis is that the items or indicators used to measure a latent variable are reflective in nature....a serious mistake often committed by researchers is to inadvertently apply formative indicators in an SEM analysis."(p.ix).

One method of mitigating the stated limitations, supported by all of the aforementioned literature, is to apply the components based approach known as partial least squares (PLS), which negates the need for normality, can model both reflective and formative indicators whilst working effectively with smaller sample sizes and simultaneously handling metric and categorical types of indicators and constructs (Chin, 1998; Hulland, 1999; Fornell and Larker, 1981; Haenlein and Kaplan, 2004; White, Varadarajan & Dacin, 2003).

Therefore, in order to select an appropriate method for the analysis of the data gathered, it is necessary to consider the characteristics of said data and the conceptual model upon which the research is based. In this case the research model is discussed in Section C1.1 and shown as Figure C1.2 and can be seen to comprise a number of independent variables, each in turn made up of a number of indicators all of which are hypothesised to have a relationship with a dependent variable which, in itself, has multiple indicators. In addition to these primary relationships, the model suggests that results will be affected by the context specific variables embodied within firms that are entrepreneurial (Section C3.1.5). Also of relevance is the fact that the relationship between each of the independent constructs and their indicators is conceptualised as being either formative or reflective (Section C3.2).

Given that the research model includes indicators of constructs, reflective and formative variables and a relatively small sample, the author concludes that PLS is the most appropriate analytical technique.

Having concluded the design of the research methodology and selected the analytical technique to be applied, the following part of this thesis presents the detailed analysis of the data that resulted.

PART D
DATA ANALYSIS

This part of the thesis comprises two chapters that present the process of analysis that was applied to the gathered data. The first chapter describes how the entire measurement model was tested for the accuracy of its constructs and the face and content validity of its scales. It then reports on the convergent validity and reliability of reflective latent variable. Finally, it describes the tests carried out on the formative latent variables for multicolinearity.

Chapter D2 begins with an analysis of model fit and goes on to test the meaningfulness and significance of the hypothesised pathways that comprise the models resulting from the process described in Chapter D1.

CHAPTER D1: MEASUREMENT ACCURACY AND TESTING FOR MULTICOLINEARITY

D1.1 Introduction

This chapter describes the structured process of analysis that was applied to the gathered data in order to test for measurement accuracy. Given the choice of partial least squares as the method for analysing the gathered data (Section C4.5) the author has drawn upon the work of Hulland (1999) as a basis for this process. Hulland states "three general sets of methodological considerations are relevant to the application of PLS in a management research context" (pp.198):

1) Determining the appropriate nature of the relationships between constructs (i.e. is the relationship within the construct formative or reflective, are the indicators within a given construct correct etc.). This has been discussed in Section C3.2 and the accuracy of the construct structures is explored below in Section D1.3, with details of the steps taken recorded in Section AP2.3 of Appendix 2.

2) Assessing the reliability and validity of measures. This is discussed in Sections D1.2 and D1.4 with test results reported in Sections AP2.1, AP2.3 and AP2.4 of Appendix 2.

3) Interpreting path coefficients, determining model adequacy and selecting a final model from the available set of alternatives. A full account of this analysis can be found in Chapter D2.

D1.2 Face and Content Validity for both FLV & RLV

Hardesty and Beardon (2004) and Hair et al. (2006) describe the starting point for the creation of a measurement scale as being its conceptual definition which specifies the theoretical basis for the scale by defining the concept in terms applicable to the research context. The extent to which the items in a given scale correspond to the concept define their face validity. In addition to individual items having face validity Nunnally and Bernstein (1994) state the need for a measure's items to represent a proper sample of the theoretical content domain of a construct and define the extent to which this is achieved as a scale's content validity. Face and content validity are equally relevant to both RLV's and FLV's. The procedure adopted to assess the face validity of the scale applied in this research is described below.

During this research, an exhaustive study of the subject matter relating to corporate governance and its association with corporate performance was undertaken, in order to gain a thorough understanding and grounding of the issues involved (Part B - Literature Review). Extant literature provided the theoretical and empirical guidelines for the definition of each of the constructs from which the measurements of the research constructs were operationalised (Section C3.1). The procedure proposed by Churchill (1979) was followed during the operationalisation of the measurements, in order to develop measures capable of capturing the content of the research constructs (Section C3.1). This process relies on empirically tested expert opinion and experiences and as such any measure adopted has a degree of face validity.

The next stage was to interview expert informants in the target population. In order to enrich the content of the measurements, relevant suggested items were added and inappropriate / unclear items were eliminated or modified (Section C2.2.1). A similar level of debate and rigor was applied to each item within each construct and to all constructs in the conceptual model. The execution of this procedure is therefore believed to have provided sufficient evidence of face and content validity.

D1.3 Testing the Accuracy of the Construct Structure

Prior to formal examination of the accuracy of the measurement model it is, as will be explained, necessary to test the accuracy of the identified constructs of corporate governance.

The theoretical model (Figure C1.2) is based upon a grouping of measures all of which are identified by extant literature as representing elements of corporate governance and all of which, it is hypothesised, will impact the way in which a firm performs (Part B and Section C1.2). Although the literature review has identified empirical scales for almost all of these factors, it does not, or has not, led to the development of a validated scale for the construct relating to the motivation of the agent. Consequently, this particular construct of the research model has not undergone formal testing – making this element of the study highly exploratory. Similarly the literature review has not identified evidence that the scales adopted for the elements of the other constructs have been used in the same manner (i.e.integrtaed into multi-faceted constructs), making the conceptualisation of the model exploratory. These issues pose similar questions concerning the true nature of the relationships within the conceptual model as those faced by Johansson and Yip (1994) who, as a way of conducting their analysis, specified eight possible conceptual models.

In order to ensure the accuracy of the construct measures, prior to more detailed tests of reliability, validity and multicolinearity, the author used PLS Graph to test the item weights (in the case of the FLV's) and loadings (RLV's) representing the relationship that each indicator of corporate governance had with its associated latent variable. Issues were concluded to exist where the relationship was calculated to have an item weight value greater than the standardised coefficient of 1 (in the case of FLVs) or less than the item loading benchmark of 0.7 (RLVs). A theoretical basis for the observed issues was then sought, actions were taken (e.g. the problematic indicators were removed) and the model was run again – until such time as the observed results met the aforementioned benchmarks.

Having initially tested the entire research model, as conceptualised in Figure C1.2, and observed that a number of loadings and weights failed the benchmark test, the author then tested the accuracy of each construct in turn. This process eventually resulted in a research model within which all weights and loadings were within the recommended benchmarks, which provided an approximate and preliminary indication of accuracy prior to formal testing.

As an example of the process and its outcomes, the following paragraph describes how the conceptualised constructs, "Control of The Agent" and "Financial Performance" were tested:

Figure C.1.2 illustrates that the "Control of the Agent" construct was conceptualised as comprising 5 measures (Section C3.1.1) i.e. the presence of duality, the number of non executive directors, the ratio of outside to inside directors, the independence of the non executive directors and the percentage of unaffiliated non executive directors. Furthermore, in Section C3.2 rationale for a formative structure is provided.

Figure C1.2 also illustrates the dependent variable, Financial Performance, as comprising 2 measures (Section C3.1.6); return on capital employed and return on assets.

Figure AP2.1 illustrates the constructs as entered into PLS Graph.

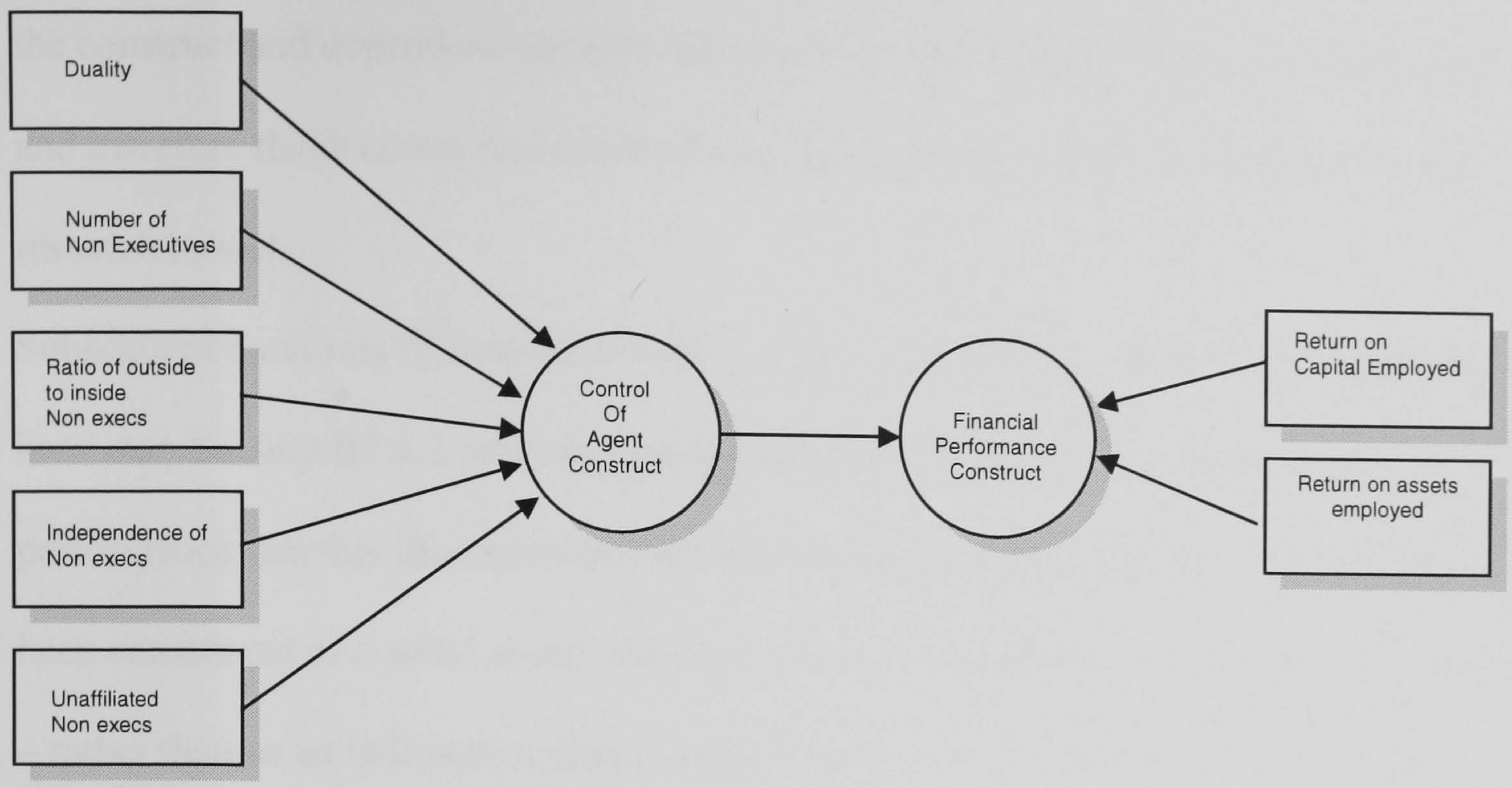

Figure D1.1: The Control of Agent Construct and its relationship with Financial Performance.

The execution of PLS Graph gave rise to the following observations.

Observations: The standardised weights between each indicator and the Control of Agent construct were <1, except the Independence of Non Execs indicator which, for both entrepreneurial and non entrepreneurial data sets, failed the benchmark.

Conclusion / Actions: The independence of non-executive directors is considered to be an important element of governance (Section B1.4) and yet appears not to fit within this measurement model. Therefore, without a theoretical basis for the rejection of this indicator, attention was turned to its measurement. In order to assess the independence of a non executive director the author had used data relating to career history contained within the formal report and accounts. As the data appeared in an audited public document, the author concluded that the data are accurate, however, on reflection the information included could have been selective or inconsistent and as such could have lead to the consequently observed modelling issues. With this risk in mind, the indicator was removed and the model re-run. The path coefficient between the construct and dependent variable and the R^2 of the overall model were unaffected and therefore the decision was taken to remove the Independence indicator from the research model.

Subsequent iterations illustrated problems with the weight associated with the Duality indicator. Section B1.4.1 reviews literature relating to the effect of duality upon performance and this illustrates that this obviously important indicator has previously been considered as a stand alone indicator within the governance : performance model – rather than as an indicator within a wider "agent control" construct. With this in mind, duality was removed from the CA construct and treated as an independent determinant of corporate performance. The result bought the weights of the other indicators of the construct within benchmark.

This step resulted in a conceptualisation of the "Control of Agent" construct that met the weighting benchmarks.

Appendix 2.5 provides details of each sequential iteration, the issues raised and the decisions that the results and subsequent (theoretical) reasoning prompted. Tables D1.1 and D1.2 illustrate the resultant measurement models.

These tables illustrate that the constructs have been altered from those that were originally conceptualised in Figure C1.2. The construct "Control of the Agent" has been split and is indicated by three measures – the number of unaffiliated non-executive directors, the number of non-executive directors and the ratio of non-executive directors to executive directors (the measurements for each of which are discussed in Section C3.1.1). Duality has been removed from the control of agent construct and is now a stand-alone determinant of corporate performance.

Ownership has also been split and is now indicated by the equity held agents and non-executives (Section C3.1.4) with the indicators relating to the investment horizons of owners becoming stand-alone determinants of corporate performance. Motivation of the agent has become a Non-Financial motivation construct indicated by six of the questions from the questionnaire and financial motivation, indicated by equity held by the agents and equity held by the non executives. The services provided by the Board construct is indicated by four measures relating to the quality of the Board and two relating to its size and structure.

Table D1.1 – Measurement model for Entrepreneurial Ventures.

Measurement model for Entrepreneurial Ventures			
Measurement	**Loadings**	**Weights**	**Construct**
No. of unaffiliated non-executives		0.199	Control of Agent
No. of non-executive directors		0.216	
Ratio of non executive directors		0.975	
			Duality
Equity held by agents		0.382	Ownership
Equity held by non-executives		0.999	
			Short-term investment
			Long-term investment
PM_Q1 - My company makes a significant contribution to the community in which it operates	0.949		Non-financial motivation
PM_Q5 My company is concerned with the environment within which it operates..	0.963		
PM_Q6 The impact upon which my company has upon the environment is tracked and measured..	0.917		
PM_Q4 The firm employs a community relations manager.	0.979		
PM_Q2 - Said contribution is tracked and measured.	0.892		
PM_Q3 Part of a Board level Director's total remuneration is dependent upon said contribution.	0.946		
Total number of corporate directorships held by board members		0.136	Board Services
Number of non-executive directors		0.925	
Board Size		0.518	
Total number of non-corporate directorships held by board members		0.171	
No. of CEO's or Chairpersons who serve on Board		0.293	
No. of under grad and grad degrees held by board		0.698	
Equity held by agents		0.382	Financial Motivation
Equity held by non-executives		0.999	

TableD1.2 – Measurement model for Non-Entrepreneurial Ventures.

Measurement model for Non-Entrepreneurial Ventures			
Measurement	**Loadings**	**Weights**	**Construct**
No. of unaffiliated non-executives		0.398	Control of Agent
No. of non-executive directors		0.965	
Ratio of non executive directors		0.918	
			Duality
Equity held by agents		0.158	Ownership
Equity held by non-executives		0.972	
			Short-term investment
			Long-term investment
PM_Q1 - My company makes a significant contribution to the community in which it operates	0.973		Non-financial motivation
PM_Q5 My company is concerned with the environment within which it operates..	0.974		
PM_Q6 The impact upon which my company has upon the environment is tracked and measured..	0.976		
PM_Q4 The firm employs a community relations manager.	0.972		
PM_Q2 - Said contribution is tracked and measured.	0.976		
PM_Q3 Part of a Board level Director's total remuneration is dependent upon said contribution.	0.960		
Total number of corporate directorships held by board members		0.136	Board Services
Number of non-executive directors		0.138	
Board Size		0.561	
Total number of non-corporate directorships held by board members		0.791	
No. of CEO's or Chairpersons who serve on Board		0.939	
No. of under grad and grad degrees held by board		0.437	
Equity held by agents		0.158	Financial Motivation
Equity held by non-executives		0.972	

D1.4 Summary of Tests of Validity, Reliability and Multicolinearity

Having assessed the face and content validity of the formative and reflective latent variables and arrived at an accurate measurement model, the next step was to test the validity and reliability of the RLV and for multicolinearity within the FLV. A detailed description of the tests conducted and their results is contained in Appendix 2, however, these can be summarised thus:

D1.4.1 Validity of the RLV

Validity relates to whether researchers can determine the extent to which a scale predicts the concept that it measures and the relationships that the scale has with the measures applied to other constructs (Hair et al., 2006). In the case of this research the six questions that indicate the Non Financial Motivation were tested for convergent validity, i.e. the extent to which indicators within the same construct correlate and explain the variance of the construct (DeVellis, 1991, Hair et al., 2006).

Two approaches to the assessment of convergent validity were utilised, Exploratory Factor Analysis (EFA) and Average Variance Extracted (AVE).

Exploratory Factor Analysis - In order to design an appropriate factor analysis, the author employed the five step decision process described by Hair Et al. (Section AP2.1) which, confirmed the convergent validity of the construct and retained all six scale items for EFA. The EFA resulted in question 4 (which relates to a financial form of motivation) being removed from the construct and the remaining questions being split into two different factors (Table AP2.8) which were renamed Non-Financial Contribution and Non-Financial Reward.

Average Variance Extracted – The next test of convergent validity is AVE which represents the extent to which measures of a given construct correlate with each other. Fornell and Larker (1981) recommend that the AVE of a given construct be greater than 0.5 (i.e. the variance captured by the construct exceeds that which is due to measurement error) and in this case (Table AP2.7) both of the constructs were comfortably above this threshold, leading the author to conclude that the convergent validity of the re-conceptualised non-financial motivation RLV's is acceptable.

D1.4.2 Reliability of the RLV

Reliability is an assessment of the degree of consistency between multiple measurements of a variable (Malhotra & Birks, 2000; Hair et al., 2006). A number of approaches have been recommended to assess and improve the reliability of the measurement scale, these include scorer reliability, test-retest reliability, alternative form reliability and internal consistency reliability (DeVellis, 1991; Malhotra & Birks 2000) all of which are discussed in Appenndix 2.1.2. For this research, only Internal Consistency and Composite Reliability were considered appropriate both of which concern the degree to which two measures of the same concept are correlated. In order to test for these forms of reliability the author has adopted Fornell and Larker's (1981) measure of internal consistency, analysed PLS loadings and applied a jacknife test of significance. The results are shown in Tables AP2.9 and AP2.10 and allow the author to conclude:

Composite Reliability – In both cases, the composite reliability of the construct is above the 0.7 benchmark.

PLS Loadings – In all cases the individual item loadings are all above the benchmark of 0.7.

Significance – In all cases the indicators within the RLVs are significant at the 0.001 level.

Conclusion – all indicators are reliable and significant and are therefore retained.

D1.4.3 Testing Multicolinearity of the FLV's

One of the concerns when employing formative latent variables is the potential for multicolinearity among their indicators, i.e., the potential for separate indicators within a construct to explain each other as well as the dependent variable.

In such cases where multicolinearity exists it becomes difficult to determine the effect of any single variable. Consequently the formative latent variables within the model were tested by analysing the variance inflation factor (VIF), tolerance, eigenvalue, condition index and variance proportion statistics, all of which will allow the author to determine the extent to which the explanatory power of each indicator is free from the influence of the others (Hair et al., 2006).

Tables AP2.11 – AP2.18 provide the detailed output from the analysis of both the Non Entrepreneurial and Entrepreneurial data sets.

This leads the author to the conclusion that there is no multicolinearity and that, consequently, all of the stated indicators have been retained.

This analysis concludes our tests for data validity and reliability and provides us with a final, valid model, shown as Tables D1.3 and D1.4 that Chapter D2 will test for goodness of fit and for the significance of its hypothesised pathways.

Table D1.3 – Final Measurement model for the Entrepreneurial data set.

Measurement model for Entrepreneurial Ventures			
Measurement	**Loadings**	**Weights**	**Construct**
No. of unaffiliated non-executives		0.199	Control of Agent
No. of non-executive directors		0.216	
Ratio of non executive directors		0.975	
			Duality
Equity held by agents		0.382	Ownership
Equity held by non-executives		0.999	
			Short-term investment
			Long-term investment
PM_Q1 - My company makes a significant contribution to the community in which it operates	0.969		Non-financial Contribution.
PM_Q5 My company is concerned with the environment within which it operates..	0.986		
PM_Q6 The impact upon which my company has upon the environment is tracked and measured..	0.969		
PM_Q2 - Said contribution is tracked and measured.	0.892		Non-financial Reward.
PM_Q3 Part of a Board level Director's total remuneration is dependent upon said contribution.	0.946		
Total number of corporate directorships held by board members		0.136	Board Services
Number of non-executive directors		0.925	
Board Size		0.518	
Total number of non-corporate directorships held by board members		0.171	
No. of CEO's or Chairpersons who serve on Board		0.293	
No. of under grad and grad degrees held by board		0.698	
Equity held by agents		0.382	Financial Motivation
Equity held by non-executives		0.999	

Table D1.4 – Final Measurement Model for the Non-Entrepreneurial data set.

Measurement model for Non-Entrepreneurial Ventures			
Measurement	**Loadings**	**Weights**	**Construct**
No. of unaffiliated non-executives		0.398	Control of Agent
No. of non-executive directors		0.965	
Ratio of non executive directors		0.918	
			Duality
Equity held by agents		0.158	Ownership
Equity held by non-executives		0.972	
			Short-term investment
			Long-term investment
PM_Q1 - My company makes a significant contribution to the community in which it operates	0.987		Non-financial Contribution.
PM_Q5 My company is concerned with the environment within which it operates..	0.992		
PM_Q6 The impact upon which my company has upon the environment is tracked and measured..	0.988		
PM_Q2 - Said contribution is tracked and measured.	0.982		Non-financial Reward.
PM_Q3 Part of a Board level Director's total remuneration is dependent upon said contribution.	0.982		
Total number of corporate directorships held by board members		0.136	Board Services
Number of non-executive directors		0.138	
Board Size		0.561	
Total number of non-corporate directorships held by board members		0.791	
No. of CEO's or Chairpersons who serve on Board		0.939	
No. of under grad and grad degrees held by board		0.437	
Equity held by agents		0.158	Financial Motivation
Equity held by non-executives		0.972	

CHAPTER D2 – TESTING HYPOTHESISED PATHWAYS AND MODEL FIT

This chapter begins with a discussion of model fit and goes on to analyse the meaningfulness and significance of the hypothesised pathways that comprise the models arrived at in Chapter D1.

D2.1 Goodness of Fit

Hulland (1999) describes the primary objective of a PLS analysis as the maximisation of variance explained in all of the dependent constructs. He goes onto explain that PLS has no overall model goodness of fit measures and, instead, the degree to which its objective is accomplished can be determined by examining the R^2 values, interpreted as the variance explained in the dependent variable, for the dependent constructs, the item loadings (which were analysed in Chapter D1 and Appendix 2) and the significance of the regression coefficient.

D2.2 Testing the Significance of Pathways

The pathways in question are those that are hypothesised to exist between the independent variables and the dependent variables of performance (Return of Capital Employed and Return on Assets). Section C1.2 explains the development of the hypotheses that arose from the initial research model (Figure C1.2), however, the process described in Sections AP2.2 and AP2.3 resulted in the re-conceptualisation of the measurement model. Consequently, the hypotheses have been revisited and altered to reflect the resultant model:

H_1: The control of the agent construct (indicated by; the number of non executives, the degree to which the board are unaffiliated and the ratio of non executives on the board) has a significant impact upon corporate performance.

H_2: Duality has a significant impact upon corporate performance.

H_3: The ownership structure of a firm (indicated by the equity held by executives and the equity held by non executives) has a significant impact upon corporate performance.

H_4: Long-term institutional stock ownership has a significant impact upon corporate performance.

H_5: Short-term institutional stock ownership has a significant impact upon corporate performance.

H_6. The non-financial contribution of the agent (indicated by the answers to the questions: Q1 My company makes a significant contribution to the community in which it operates, Q5 My company is concerned with the environment within which it operates and Q6 The impact upon which my company has upon the environment is tracked and measured) has a significant impact upon corporate performance.

H_7. The non financial reward of the agent (indicated by the answers to the questions: Q2 The contribution that my company makes to the community in which it operates is tracked and measured and Q3 Part of a Board level Director's total remuneration is dependent upon contribution that my company makes to the community in which it operates) has a significant impact upon corporate performance.

H_8: The services provided by the board (indicated by the size of the board, the number of non executive directors, and answers to the following questions; Q1 Total number of corporate directorships held by board members; Q2 Total number of non-corporate directorships held by board members; Q3 No. of CEO's or Chairpersons who serve on Board; Q4 No. of under graduate and graduate degrees held by the Board) have a significant impact upon corporate performance.

H_9. The financial motivation of the agent (indicated by the equity held by executives, the equity held by non executives) has a significant impact upon corporate performance.

H_{10}. The outcomes of Hypotheses $_{1\text{-}9}$ will differ significantly on the basis of the type of firm (i.e. entrepreneurial and non entrepreneurial) to which they are applied.

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In order to test the significance of the hypothesised pathways, a Jack-knife test will be conducted using Partial Least Square software. Using Student t-value tables with n-1 degrees of freedom (where n is the number of samples) resulted in one-tail critical values of, respectively 0.05, 0.01 and 0.001 levels of significance, 1.64, 2.33 and 3.04. In addition to statistical significance, Chin (1998, pp.xiii) suggests examining whether the structural paths are of substantial strength, stating “standardized paths should be at least 0.2 and ideally above 0.3 in order to be considered meaningful.” However, given the exploratory nature of this research, the author has adopted a very liberal 0.10 benchmark.

D2.3 Analysis

Having generated an initial jack-knife test of significance, and in accordance with recommendations by Barclay and Benson (1990), an iterative process of eliminating non-significant pathways was utilised. This process gives rise to an "interim" solution. The next step is to sequentially eliminate pathways that fall below the adopted 0.10 level of meaningfulness until parsimony is achieved. The final solution for the research model is shown below in Tables D2.1 and D2.2.

Examining Table D2.1 it can be seen that the initial solution produced 14 significant pathways and explained 14% and 33% respectively of the ROCE and ROA variances (i.e., the effect of corporate governance alone explains 14% of a firm's return on capital employed). The sequential elimination of the insignificant pathways in the initial model results in the interim model which now explains 14% of ROCE and a noticeably different 17% of ROA. The final step taken was to iteratively remove those pathways that fail to meet Chin's (1998) suggested benchmark for pathway strength. This step results in a final solution which retains four significant and meaningful pathways and explains 14% of ROCE (which has remained constant throughout the process) and a slightly improved 17% of ROA.

Repeating the process for the Non Entrepreneurial data set (Table D2.2) results in an initial solution that comprises 15 significant pathways and explains 10% and 29% of ROCE and ROA respectively. The interim solution contains 17 significant pathways and explains a similar 10% and 27% of ROCE and ROA. The final solution retains 6 pathways that are both meaningful and significant and explains a marginally lower 7% and 26% of ROCE and ROA.

Table D2.1 – Solution -Entrepreneurial Data Set

Independent Variables / Construct		**Initial Standardised Coefficients**	**Initial t-statistics**	**Interim Standardised Coefficients**	**Interim t-statistics**	**Final Standardised Coefficients**	**Final t-statistics**
Control of Agent	ROCE	0.125	13.62^{c}	0.020*	12.44^{c}	---	---
	ROA	0.250	0.26	---	---	---	---
Duality	ROCE	0.222	1.37	0.016*	6.67^{c}	---	---
	ROA	0.200	4.42^{c}	0.181*	3.03^{c}	---	---
Ownership	ROCE	0.009	11.65^{c}	0.057*	13.31^{c}	---	---
	ROA	0.222	1.50	0.319	5.71^{c}	0.365	6.12^{c}
Long Term Investment Horizon	ROCE	0.094	11.99^{c}	---	---	---	---
	ROA	0.024	7.52^{c}	0.052*	7.93^{c}	---	---
Short Term Investment Horizon	ROCE	0.043	9.66^{c}	0.025*	14.27^{c}	---	---
	ROA	0.116	8.30^{c}	0.123*	7.86^{c}	---	---
Non-financial Contribution	ROCE	0.002	0.85	---	---	---	---
	ROA	0.118	7.85^{c}	0.069*	7.08^{c}	---	---
Non-financial Reward	ROCE	0.236	7.26^{c}	0.235	7.89^{c}	0.225	6.99^{c}
	ROA	0.023	8.71^{c}	0.016*	7.60^{c}	---	---
Services Provided by the Board	ROCE	0.350	3.67^{c}	0.340	8.42^{c}	0.308	2.79^{b}
	ROA	0.364	8.71^{c}	0.158*	8.05^{c}	---	---
Financial Motivation of Agents	ROCE	0.014	10.99^{c}	0.008*	6.37^{c}	---	---
	ROA	0.258	4.02^{c}	0.319	7.89^{c}	0.365	7.28^{c}
		R^2 Initial Solution		**R^2 Interim Solution**		**R^2 Final Solution**	
PM_ROCE		0.14		0.14		0.14	
PM_ROA		0.33		0.19		0.17	

NB: $^{a}p<0.05$; $^{b}p<0.01$; $^{c}p<0.001$

Table D2.2 – Solution - Non Entrepreneurial Data Set

Independent Variables / Construct		Initial Standardised Coefficients	Initial t-statistics	Interim Standardised Coefficients	Interim t-statistics	Final Standardised Coefficients	Final t-statistics
Control of Agent	ROCE	0.215	0.78	0.219*	1.68[a]	0.213	2.16[a]
	ROA	0.146	1.42	---	---	---	---
Duality	ROCE	0.141	3.94[c]	0.016*	8.81[c]	---	---
	ROA	0.092	0.89	0.104*	1.67[a]	0.103	2.92[b]
Ownership	ROCE	0.043	2.78[b]	0.001*	12.99[c]	---	---
	ROA	0.347	5.70[c]	0.353	6.02[c]	0.353	7.63[c]
Long Term Investment Horizon	ROCE	0.043	3.60[c]	0.047*	2.76b	---	---
	ROA	0.019	4.83[c]	0.007*	5.89[c]	---	---
Short Term Investment Horizon	ROCE	0.033	9.06[c]	0.002*	13.07[c]	---	---
	ROA	0.024	4.03[c]	0.008*	1.81[a]	---	---
Non-financial Contribution	ROCE	0.016	5.08[c]	0.047*	6.48c	---	---
	ROA	0.123	6.41[c]	0.136*	6.57[c]	---	---
Non-financial Reward	ROCE	0.002	7.68[c]	0.060*	12.03[c]	---	---
	ROA	0.166	6.27[c]	0.172*	5.83[c]	0.127	8.32[c]
Services Provided by the Board	ROCE	0.162	2.15[a]	0.149*	4.78[c]	---	---
	ROA	0.396	6.19[c]	0.391	6.41[c]	0.393	7.45[c]
Financial Motivation of Agents	ROCE	0.044	5.46[c]	0.026*	2.50[b]	---	---
	ROA	0.357	6.08[c]	0.363	6.42[c]	0.354	7.63[c]

	R^2 Initial Solution	R^2 Interim Solution	R^2 Final Solution
PM_ROCE	0.10	0.10	0.07
PM_ROA	0.29	0.27	0.26

NB: [a] $p<0.05$; [b] $p<0.01$; [c] $p<0.001$

D2.4 Conclusions

When comparing the models constructed for both data sets, Tables D2.1 and D2.2 show a significant overlap of those paths that remain significant and meaningful, i.e. paths between Ownership, Non Financial Reward, Services Provided by the Board and Financial Motivation and one or other of the two performance variables are retained for both Entrepreneurial and Non Entrepreneurial data sets. The Non Entrepreneurial data set, however, also retains pathways between Control of the Agent and Duality and the performance variables. The final solution of the entrepreneurial data set explains 14% of ROCE and 17% of ROA whereas the final solution of the non entrepreneurial data set explains 7% of ROCE and 26% of ROA. The following section uses this analysis to draw conclusions on the extent to which the research hypotheses are supported.

D2.5 Debate of the Research Findings

This section will discuss the reported results for each of the defined pathways, determining the extent to which the associated hypothesis is supported.

H_1: The control of the agent construct (indicated by; the number of non executives, the degree to which the board are unaffiliated and the ratio of non executives on the board) has a significant impact upon corporate performance.

The evidence presented in Tables D2.1 and D2.2 only support Hypothesis H_1 in cases where the firm is non entrepreneurial and where corporate performance is measured as return on capital employed.

Expressed in another way, these results lead the author to conclude that increasing the controls placed upon an agent will improve ROCE, but not in cases where the firm to be controlled is deemed to be entrepreneurial.

These results support the assertions of agency theory (section B1.2) in ventures where the founder / owner has passed control of the company to a professional manager. In so doing they support the research conclusions of, for example Daily and Dalton (1993), Dahya and McConnell (2007) and Weir & Laing (2001) all of whom also found relationships between single elements of the author's control of agent construct (e.g. number of directors, independence of directors) and corporate performance, however, in all three of the stated cases the measure of performance was ROA rather than ROCE and the firms studied were large established ventures listing on the main exchanges. Conversely, where an owner retains a managerial position, the results suggest that controlling his / her actions and decision making with a large number of unaffiliated / independent non executive directors does not have a significant impact on the extent to which the firm generates a return on the capital it employs. This conclusion, if considered in isolation, could be used to support the work of Dalton et al. (1998), who draw their sample from Fortune 500 companies and Chaganti et al. (1985) who match pairs of 42 failed retailing firms, who found no evidence of substantive relationships between board composition and various measures of financial performance, however, when considering both of the authors conclusions together, the adopted approach provides an explanation as to why previous research has generated such confounding evidence, i.e. that context specific variables alter the governance : performance relationship and that, consequently, the firm and its circumstances cannot be treated as ubiquitous entities. Stewardship theory (section B1.2) also provides an explanation for the author's findings in so much that research such as that conducted by Uhlaner et. al. (2007) and Boyd (1995) recognise the influence of a greater range of altruistic motivations that account for why a firm's founder would seek to protect the venture that he/she created and in so doing would take actions that support growth and success – without having to be driven to do so. Specifically, Uhlaner et al. (2007) conclude that owner commitment is positively associated with firm performance thus supporting the results of H_1 (and H_2) that suggest that attempting to control an owner who retains a leadership position within his /her firm will not impact its performance on the basis that the owner is demonstrating commitment to the firm through his / her continued day to day involvement.

In terms of performance, the results show that the choice of performance indicator is significant, i.e. the relationship between control of the agent and performance changes depending upon the measure of performance that is applied. Similarly, previous research by, for example, Weir and Laing (2001) applied three different measures, return on equity, return on investment and return on assets, to investigate the hypothesis that controlling the agent will effect performance and found, respectively, no relationship, a negative relationship and a positive relationship. These potentially confounding conclusions illustrate the need to specifically understand the nature of the performance measure and to explain how its properties (i.e. elements within the equation) might affect the observed relationship. In the case of the performance measures applied in this thesis, an explanation for the difference between return on capital employed and return on assets is clearly provided by the denominators of each equation. In the case of ROA, the equation includes current liabilities and as such the result will reflect the cost of debt funding. When considering the relationship between the construct of control and a performance measure that includes the cost of debt the author, in the absence of literature, speculates that as control of the agent increases, so does the trust placed upon the organisation by banks which, in turn, leads to greater gearing which leads to a greater influence of current liabilities on the ROA equation.

This influence will therefore lessen the observed impact of control on profitability which therefore weakens the significance of the relationship – hence only the relationship to return on capital employed is observed as being significant.

H_2: Duality has a significant impact upon corporate performance.

The evidence presented in Tables D2.1 and D2.2 only support Hypothesis H_2 in cases where the firm is non entrepreneurial and where corporate performance is measured as return on assets employed.

As has been illustrated in previous research (Section B1.4), Agency Theory suggests that increasing the degree of control that owners have over the leaders of companies will ensure that they act in the best interest of the firm, which, based on past research by, for example, Donaldson and Davis (1991), Rechner and Dalton (1991), Boyd (1995) has been defined as the maximisation of profit / corporate performance, specifically in theses cases, Return on Equity and Return on Investment. Therefore, in finding support for Hypothesis H_2, this research aligns with the theory of agency, however, the fact that it only supports the hypothesis under certain circumstances illustrates the importance of context in any debate concerning the effectiveness of a given model of governance, a conclusion supported by the likes of Zahra (1996) and Begley and Boyd (1986,1987) who use firm size, technological opportunity and entrepreneurialism as differentiators of circumstance in order to research how different types of firm perform under different governance constructs .

Support in literature for why a non-significant link was found to exist between duality and performance in entrepreneurial ventures can be found in Stewardship theory and specifically in the work of Uhlaner et al. (2007) which explains how the actions of the entrepreneurial leader of a firm are effectively controlled by his own ownership, both financial and emotional, of the firm and its objectives (so called owner commitment).

Building on these findings, the author speculates that, in those cases where an entrepreneurial owner / manager has appointed a professional, dual Chairman / CEO, the entrepreneur's presence on the Board (which he/she must have retained in order to satisfy the authors definition of an entrepreneurial firm) is sufficient to nullify the control exerted by the dual leader. Additional explanation as to why the relationship between duality and performance is different for entrepreneurial ventures is provided in research by Begley and Boyd (1987) into how the different characteristics of entrepreneurs and non-entrepreneurs affect performance. Begley and Boyd conclude that entrepreneurs are associated with higher growth, whereas non-entrepreneurs are associated with hard driving competitiveness and financial performance – given that ROCE is not a measure of growth, the results of this research can be seen to align with those of Begely and Boyd (1987).

Other research initiatives, such as those executed by Rechner and Dalton (1991) and Weir and Laing (2001), neglect to consider the contextual differences associated with different types of firm (and specifically those associated with entrepreneurial firms) and consequently, the author suggests, arrive at different conclusions i.e. they respectively conclude that duality is negatively and positively associated with performance. Reasons for the confounding results could, as suggested, be explained by the different circumstances that exist within the firms studied (as proposed by the results of this thesis and backed by Begley and Boyd, 1986) – or could have been caused by the adoption of different measures of performance (Weir and Laing apply a measure of ROA whereas Rechner and Dalton apply return on equity, return on investment and profit margin – all of which were negatively associated with duality). With the impact of performance measure in mind, and as discussed with Hypothesis H_1, a reason for the rejection of the hypothesised association with return on capital employed can, the author suggests, be found in the fact that the calculation for ROCE excludes the effect of debt financing and in so doing fails to reflect the movements in funding that result from the lack of trust that is sometimes, according to agency theory, associated with the loss of control that comes with the appointment of a dual leader. As a consequence the differences to the ROA equation that are associated with duality are not shown up by the ROCE equation.

H_3: The ownership structure of a firm (indicated by the equity held by executives and the equity held by non executives) has a significant impact upon corporate performance.

The evidence presented in Tables D2.1 and D.2.2 support Hypothesis H_3 for both entrepreneurial and non entrepreneurial ventures but only where corporate performance is measured as return on assets employed.

This hypothesis supports the theory of agency and specifically the conclusions of Salancik and Pffefer (1980), Hill and Snell (1998, 1989) and Demsetz and Lehn (1985) all of whom found that ownership represents a form of power with which to support or oppose management - effectively increasing control of the agent and thus resulting in a similar association to that already found to apply to both entrepreneurial and non entrepreneurial ventures with the control and duality constructs, i.e.:

1) Functions of control have an effect upon leaders who did not establish and that do not hold significant (>10%) stakes in the companies that they are charged with managing. Consequently performance (specifically ROCE, and ROA where control is represented by Duality) of said firms is affected in line with the degree to which the agent is controlled.

2) The same effects become non-significant when the leaders of said firms are founders / owners (i.e. are defined by this research as being entrepreneurial).

3) The difference can be seen to be the extent of ownership, which is demonstrated by the associations observed between the ownership construct and corporate performance (specifically ROA).

Further support for an association existing between increasing ownership and increasing performance is provided by the work of Zahra (1996) who concludes that ownership among agents aligns objectives with other shareholders and as such has a positive impact upon firm performance. Daily and Dalton (1999) make a similar point by encouraging stock ownership amongst executives and non executives as a means of aligning motivations and consequently improving performance.

Furthermore, the results of this research illustrate that the behaviours that result from ownership have a greater effect on the performance indicator that includes the level of debt funding within a firm, i.e. ROA. The author speculates that the reason for this is that the ownership of stock by the board increases the level of confidence of potential investors (on the basis of objectives being aligned through common ownership) and consequently influences the level of debt available.

H_4: Long-term institutional stock ownership has a significant impact upon corporate performance.

H_5: Short-term institutional stock ownership has a significant impact upon corporate performance.

The evidence presented in Tables D2.1 and D2.2 do not support Hypotheses H_4 or H_5.

The case for considering the impact of differing investment horizons was based upon the works of, for example, Jacobs (1991) and Malatesta and Walling (1998) who state that executive compensation tends to be based upon short-term performance gains and that they therefore have little incentive to support initiatives aimed at generating long-term benefit. Similarly, Graves (1998) finds a negative association between the short-term investment horizons of fund managers, that are driven by quarterly rewards, and corporate entrepreneurship, which Zahra (1996), Le-Breton-Miller and Miller (2008) and Begley and Boyd (1987) conclude is an important indicator of firm growth and therefore financial performance. Zahra's work measures the effects of both long-term and short-term investment horizons and concludes that they have a polarised imapct upon entrepreneurship. More recent research by Neubaum and Zahra (2006) appears to recognise the importance of stewardship theory and tests the impact of investment horizons on corporate social performance (CSP) – finding, again, that short-term investors focus on short-term gain and therefore have a negative association with CSP. These conclusions all suggest that an association, of one kind or another, should be observed between investment horizons and corporate entrepreneurship which should, in turn, be reflected in corporate performance, the question, therefore, is why the research described in this thesis has failed to recognise such a relationship. One possible answer, as yet empirically unproven, could be the nature of those firms within the study population, i.e. companies listing on the Alternative Investment Market. Said market comprises relatively young and small firms the stock of which suffers from a general lack of churn / liquidity. The author speculates that this characteristic could mitigate the effects of differing investment horizons as the opportunity for short term turnover of stock is largely negated. This phenomenon would equally affect entrepreneurial and non entrepreneurial ventures within this market. Assuming that the lack of AIM liquidity explains why the significance of investment horizon is negated, this would highlight, once again, the need to consider context specific variables when seeking to govern individual firms – or groups of firms trading in markets exhibiting distinct conditions / tendencies. Another reason for the lack of an observed relationship could, the author speculates, be the adopted measures of performance, both of which are snap-shot reflections of historic performance, rather than long-term indicators of growth which is the measure to which entrepreneurship has been linked and that relative investment horizons have been seen to effect (Zahra,1996; Le-Breton-Miller & Miller, 2008, Begley & Boyd, 1987), hence, an association may have been observed if stock price or stock growth had been the focus of this study.

H_6. The non-financial contribution of the agent (indicated by the answers to the questions: Q1 My company makes a significant contribution to the community in which it operates, Q5 My company is concerned with the environment within which it operates and Q6 The impact upon which my company has upon the environment is tracked and measured) has a significant impact upon corporate performance.

The evidence presented in Tables D2.1 and D2.2 do not support Hypotheses H_6.

This construct specifically considers questions aimed at determining the awareness that those firms researched have of the environment / community and the extent to which this awareness / consequent contribution is tracked and measured. By questioning whether contribution is tracked and measured, the author is trying to determine whether having to report against non financial performance would drive a leader to perform in line with the objectives of the firm and therefore improve performance. The fact that no association is found to exist between such motivation and the corporate performance of those firms studied, suggests that the effects of awareness of environment / contribution to community are overridden by the evidently more potent controls associated with Hypotheses H_1 and H_2.

Positive answers to these questions linked with positive or negative trends in associated financial performance have been found to mean that motivating non executives with more than simple financial gain and giving them the power to control and influence actions and direction would have an impact on the performance of the company – for example Zahra (1996) concludes that aligning the objectives of owners and non executives through stock ownership increases entrepreneurship which, in turn increases growth. Conversely, Nicholson and Kiel (2007) specifically study the effects of stewardship theory (i.e. non financial motivation) on corporate performance and conclude that whereas stewardship influenced some elements of the seven cases that they considered, it could not explain the general pattern of observed performance results. The lack of support for the stated hypothesis within this thesis supports the conclusions of Nicholson and Kiel (2007) and suggests that although Stewardship theory (Section B1.2), and its pronouncement that managerial motivations go beyond the financial, may be correct, it does not seem to have significant impact upon firm performance and that non financial motivations are overridden by financially based controls. Such a conclusion is also supported by the recent work of Nordberg (2008) that poses the question of whether shareholder value should take precedence over corporate social responsibility (CSR) and concludes that managers are more inclined to make utilitarian judgements like those underpinning shareholder value. Although no support is found for hypothesis H6, the work of Nicholson and Kiel (2007), which did at least find evidence that stewardship theory impacts performance, along with the fact that support was found for hypothesis H7 (discussed below) illustrates that motivating agents is far from as simple as paying them more money or linking performance to stock ownership and that in order to understand how boards add value, researchers have to consider the potential relationships from a wider theoretical viewpoint.

H_7. The non financial reward of the agent (indicated by the answers to the questions: Q2 The contribution that my company makes to the community in which it operates is tracked and measured and Q3 Part of a Board level Director's total remuneration is dependent upon contribution that my company makes to the community in which it operates) has a significant impact upon corporate performance.

Evidence presented in Tables D2.1 and D2.2 shows that non financial reward has a significant impact upon corporate performance, specifically the return on capital employed, for entrepreneurial ventures and return on assets employed for non entrepreneurial firms. Hence support is found for hypothesis H_7 under these circumstances.

The second construct aimed at representing the Non Financial motivation of the firm's leaders (so called "non financial reward") differs from the first (H_6) in terms of the extent to which the indicators include elements of control / reward, i.e. rather than simply asking whether the firm makes a contribution to its community or is concerned about its environment (both of which it is easy to reflect without sincerity), this construct seeks evidence of application through the tracking and monitoring of the firms contribution and linking the outcome to the remuneration package. Although both H_6 and H_7 included questions relating to the monitoring of contribution, H_7 backs it with a financial motivation, evidently strengthening the impact that it has upon corporate performance by 'driving' the leaders to respect this objective.

Given that H_6 was not supported, it appears safe to assume that financially motivating an agent to comply with broader, altruistic objectives does alter performance and leads the author to conclude that non-financial motivations can be overridden by other forms of control – suggesting that agency theory can have a greater effect on corporate performance and can mitigate the effect of stewardship theory.

This is, to some degree, confounding as the findings of research by authors such as Uhlaner et al. (2007) suggest that the motivations and principles that apply to a leader that founded the firm and its vision (so called owner commitment) might not react to the financial motivations that evidently drive the leaders of non entrepreneurial ventures (Conyon, 1998; Conyon & Nicolitsas, 1998). That said, Nicholson and Kiel (2007) conclude that motivations and contributions are more complex than those explained by a single theory and that instead the simultaneous consideration of theories of agency, stewardship and resource dependency are required in order to understand how governance effects performance (supporting the conclusion and approach that underpins the research conducted within this thesis). This complexity could, the author speculates, explain why the association described within Hypothesis H_7 is supported and yet Hypothesis H_6 is not supported.

That said, the measures do not allow the in-depth exploration of this theory and future research should therefore seek to specifically explore how and when Stewardship theory moderates the effects of the managerial and governance controls stipulated by agency theory (Section E1.6).

The fact that, in the case of entrepreneurial ventures, the significance of the association described by Hypothesis H_7 is negated when the performance measure excludes current liabilities from its equation suggests that the banks providing debt are influenced by the non financial drivers of a firm – providing support for the perceived increased priority and profile being given to firms to "corporate social responsibility" policies. Empirical support for this supposition is provided by the work of Neubaum and Zahra (2006) who, in a study of Fortune 500 firms, conclude that the activism of investors is positively associated with corporate social performance – thus as the evidence of CSP increases, so does investment (indicated by current liabilities) and so performance is altered.

H_8: The services provided by the board (indicated by the size of the board, the number of non executive directors, and answers to the following questions; Q1 Total number of corporate directorships held by board members; Q2 Total number of non-corporate directorships held by board members; Q3 No. of CEO's or Chairpersons who serve on Board; Q4 No. of under graduate and graduate degrees held by the Board) have a significant impact upon corporate performance.

The evidence presented in Tables D2.1 and D2.2 shows that the services provided by the board were found to have a significant impact upon the corporate performance in both entrepreneurial and non entrepreneurial firms. Specifically, an association was found with the ROCE measure of performance in entrepreneurial ventures and the ROA measure of performance in non entrepreneurial ventures. Hence support is found for hypothesis H_8 under these circumstances.

The purpose of testing this construct was to explore the extent to which factors other than the controls stipulated by agency theory are important considerations when building a Board (i.e. the extent to which resource dependency theory (section B1.2) is significant). In this case it is evident that the quality of the board and the increased access to scarce and finite resources that stems from broadening and numerically increasing the construction of the board has a significant impact upon corporate performance. Empirical support for this conclusion is provided by, for example; D'Aveni (1990), Goodstein and Boeker (1991) and Finkelstein (1992) who apply similar measures of board quality and board size in order to arrive at the same conclusion.

The evidence shows that the observed association is significant for both entrepreneurial and non entrepreneurial ventures, however, closer analysis of the t-statistics contained in tables D2.1 and D2.2, shows that the significance is greater within non entrepreneurial ventures, speculatively indicating that loosing the intimate knowledge and personal commitment of the firms founder (which Ulhaner et al.., 2007, concluded was positively associated with firm performance) can increase the importance of a "quality" board. Given that current liabilities (as included within the ROA equation) appear to have significance in non entrepreneurial ventures, the author speculates, that the availability of debt funding is effected by the quality / numerical size / broadness of the board, i.e. the bigger and better the board, the greater its access to sources of finance (although empirically proven to be the case in research by Pfeffer and Salancik, 1978, Gedajlovic et al., 2004 and Goodstein and Boeker, 1991, this conclusion would be worthy of exploration in the prevailing environment within which the availability of credit is severely constrained). That said, the same association should, intuitively, apply to entrepreneurial ventures and, in fact, analysis of the interim model (Table D2.1) shows that it was, at that point, significant to both ROCE and ROA. One speculative reason for the difference could be that the founders themselves (with their passion and knowledge of the firm's vision) are the primary consideration when investors are deciding whether or not to make debt available[13].

H_9. The financial motivation of the agent (indicated by the equity held by executives, the equity held by non executives) has a significant impact upon corporate performance.

The evidence presented in Tables D2.1 and D2.2 supports Hypothesis H_9 in cases of entrepreneurial and non entrepreneurial firms but only where corporate performance is measured as return on assets.

These conclusions lend support to the theory of agency and specifically the conclusions of researchers such as; Coughlan and Schmidt (1985), Warner et al. (1988) and Jensen and Murphy (1990) who find the leaders of companies to be self serving and motivated by the returns they receive for the decisions that they take. Furthermore, it follows that as the potential of personal gain increases, so does the motivation of the agent to increase performance (Conyon, 1998; Conyon & Nicolitsas, 1998). That said, within the limitations of this thesis, the association appears to be equally significant for entrepreneurial and non entrepreneurial ventures, suggesting that financial gain remains an important motivator for founders that retain control of their firm (although it is less clear as to whether the founder is motivated by

[13] The importance placed upon the continued involvement of founders by investors / suppliers of financing was discussed during the focus group formed to consider the impact of this research on business. Strong anecdotal support for the concept that financiers often invested in the entrepreneur / founder rather than the idea or vision was provided by two of the entrepreneurs and an investment banker – all of whom had had considerable practical experience.

pure financial returns or by the success of his company as evidenced by the growth of its capital value).

The fact that it is with ROA rather than ROCE that the association exists, speculatively suggests that the extent to which a company can declare that its leaders are motivated to drive increases in the stock value is a deciding factor in the ability of said firm to secure debt funding. Similarly, increasing the financial returns to be gained from stock growth appears to effect decisions taken on the capital structure of the firm.

H_{10}. The outcomes of Hypotheses $_{1\text{-}9}$ will differ significantly on the basis of the type of firm (i.e. entrepreneurial and non entrepreneurial) to which they are applied.

When comparing the results for both Entrepreneurial and Non Entrepreneurial ventures, Tables D2.1 and D2.2 illustrate a considerable overlap of those paths that are found to be significant and meaningful, i.e. associations between Ownership, Non Financial Reward, Services Provided by the Board and Financial Motivation and one or other of the two performance variables are found to be significant for both Entrepreneurial and Non Entrepreneurial data sets. That said, in the case of Non Entrepreneurial firms significant pathways are also found between Control of the Agent and Duality and the performance variables. This suggests that controlling the agent and divorcing the roles of chairperson and chief executive officer (which in itself is another function of control) have a significant impact upon performance in firms where the owner of said firm has handed responsibility of managing performance (i.e. generating a return on the capital and assets employed) to an unrelated professional agent. Such relationships are central tenets of Agency theory and the fact that they are not present in firms where the Owner retains managerial control provides a strong indication of support for this theory and leads the author to conclude that hypothesis H_{10} is supported.

Much has been said within this debate about the importance and influence of agency theory which in the case of this thesis has been based upon a financial representation of performance, i.e. ROCE and ROA. A cautionary view is however presented by Tosi (2008) who, in a review of agency theory and managerial capitalism states his belief that empirical evidence is equivocal and new constructs based on measurements other than those suggested by finance and economics should be explored, this has been reflected in the recommendations for future research (Section E1.6).

In light of these conclusions, the next the next chapters of the thesis will discuss the contribution that this research makes to theory and practice.

PART E
CONCLUSIONS

This final part of the thesis comprises two chapters. Chapter E1, provides a review of the thesis' research objectives and the extent to which they have been met. It then proceeds to discuss the contributions that the conclusions of Section D2.5, and the research itself, make to both the theoretical understanding of the link between corporate governance and corporate performance and the impact that these findings have upon managerial practice. This chapter also includes recommendations for future research.

CHAPTER E1 – REVIEW OF RESEARCH OBJECTIVES AND CONTRIBUTIONS

E1.1 Introduction

The literature review in Part B leads to the identification of two major gaps in the extant body of research relating to corporate governance and the way it impacts corporate performance. Firstly, said research fails to consider how the simultaneous application of theories of agency, stewardship and resource dependency combine to explain corporate performance (Section B1.3). Secondly it has tended to treat "the firm" and the environment in which it operates as ubiquitous entities and, in so doing, has failed to consider how context specific variables could alter or affect the efficacy of the recommendations that result from research (Section B1.9). The result is a body of evidence that lacks generalisability and that fails to conclude whether or not key elements of corporate governance have a positive or negative effect on corporate performance. The aim of this research (Section A1.3) was, therefore, to address these identified gaps and, in so doing, further advance academic understanding and improve managerial practice.

E1.2 Research Objectives

Six objectives were defined in Section A1.3 as a means to achieving the overall aim of the research. The extent to which each of these objectives has been met is now debated in turn:

Objective 1: To identify the key constructs of corporate governance and performance as defined by the simultaneous application of the theories of agency, stewardship and resource dependency (Section B1)

In order to meet the stated objective it was necessary to consider the research questions that arise from the consideration of agency, stewardship and resource dependency theories. In so doing the author developed four constructs of governance (Section B1); control of the agent (based on agency theory and indicated by the independence of a firms directors, the percentage of unaffiliated directors on the board, duality, the size of the board and the ratio of inside to outside directors, Section B1.4); the motivation of the agent (based on both agency and stewardship theories and indicated by equity held by agents, equity held by non executives and non financial motivation, Section B1.5); the services provided by the board (based on resource dependency theory and indicated by the quality of the board members, the number of the external board members and the overall size of the board, Section B1.7) and the ownership structure (based on agency theory and indicated by the equity held by the agents, the equity held by the non executives, stock concentration and the investment horizon of the owners, Section B1.6). A graphical representation of the research model comprising these constructs is presented in Figure C1.2.

Objective 2: Develop a comprehensive conceptual model to enable the evaluation of the corporate governance to corporate performance relationship and the effects of context specific variables (Section C1).

The review of extant literature discussed in Part B concludes that corporate governance guidelines and academic research has, thus far, failed to sufficiently reflect the effect that context specific variables have upon the relationship between corporate governance and corporate performance. In order to bridge this gap in understanding, a moderating construct was built to embody the variables represented by entrepreneurial ventures (Section B2.1).

The resultant research model (Figure C1.2) comprises constructs of agency, stewardship and resource dependency theories (developed to satisfy objective 1), as well as the concept of context specific variables. Its application has therefore provided the basis for the development of a set of nine research hypotheses (Section D2.2), the testing of which provides an explanation of the corporate governance to performance relationship and the effect of context specific variables - as such, objective 2 is considered fulfilled.

Objective 3: To operationalise the research constructs

The research constructs have been operationalised through an extensive review of the extant literature (Section C3.1). In addition, expert opinion was sought in order to increase the face and content validity of the measurements constructs (Sections C2.2.1, D1.2). The resultant constructs were conceptualised as formative and reflective latent variables (Section C3.2). Both RLV's and FLV's were examined for accuracy (Section AP2.2), face and content validity (Section AP2.1). The RLV's were then tested for convergent validity (Section D1.4.1) and reliability (internal consistency and composite reliability, Section AP2.3.1). The FLV's were tested for multicolinearity (Section AP2.4). The results obtained satisfied the set criteria.

As a direct result of these tests the initial research model (Figure C1.2) was re-conceptualised (Tables D1.1 and D1.2). Consequently, the research hypotheses (Section C1.2) were also revisited and adjusted to reflect the final research model (Section D2.2).

Objective 4: To evaluate the extent to which the identified constructs of corporate governance explain corporate performance (Part D).

Each of the 9 hypothesised pathways between the re-conceptualised constructs / measures of corporate governance (Tables D1.1 & D1.2) and the two measures of corporate performance were tested for significance and meaningfulness (Chapter D2) and the results are summarised below in Table E1.1.

Table E1.1 – Significance and Meaningfulness of Pathways

Research Hypothesis	Entrepreneurial Ventures		Non-Entrepreneurial Ventures	
	ROCE R^2=14%	ROA R^2=17%	ROCE R^2=7%	ROA R^2=26%
H_1. Control of Agent			✓	
H_2. Duality				✓
H_3. Ownership		✓		✓
H_4. Long Term Investment Horizon				
H_5. Short Term Investment Horizon				
H_6. Non Financial Contribution				
H_7. Non Financial Reward	✓			✓
H_8. Services Provided by the Board	✓			✓
H_9. Financial Motivation		✓		✓

✓ = Pathway found to be both significant and meaningful

Table E1.1 shows that the Entrepreneurial sample retains four significant and meaningful pathways; Ownership → ROA; Non-financial Reward → ROCE, Services Provided by the Board → ROCE and Financial Motivation of the Agent → ROA. The R^2 of the final model shows that corporate governance explains 14% and 17% respectively of the returns generated on capital and assets employed.

For, non-entrepreneurial ventures, six pathways were found to be statistically significant and meaningful; Control of Agent → ROCE, Duality → ROA, Ownership → ROA, Non Financial Reward → ROA, Services Provided by the Board → ROA and Financial Motivation of the Agent → ROA. The R^2 statistic for the non entrepreneurial ventures illustrates that the final model of corporate governance explains 7% and 26% respectively of the returns gained from capital and assets employed.

Debate of these results was presented in Section D2.5, and the way they relate to literature and managerial practice is discussed in Sections E1.3 and E1.4.

Objective 5: To evaluate how this explanation is altered in line with a firm's context specific variables, specifically those represented by entrepreneurial ventures (Part D).

As illustrated in Table E1.1, the author's research has concluded that the relationship between corporate governance and corporate performance is significantly different where the firm in question meets the author's definition of an entrepreneurial venture. Specifically, the performance of entrepreneurial ventures is less affected by the extent to which the agent is controlled. Furthermore, governance of entrepreneurial ventures has a relatively greater impact on ROCE than it does in non entrepreneurial ventures where governance explains a noticeably higher percentage of ROA. These differences are debated, along with all of the results, in Section D2.5.

Objective 6: To provide managerial recommendations on a wider set of factors to consider when designing governance processes that more accurately reflect their individual circumstances.

Section E1.4 contains a discussion on the manner in which the results of this research can improve management practice.

Debate contained within Chapter D2 has described the way in which the research conducted has, under the stated circumstances, found support for 7 of the 10 hypotheses and, as such, is regarded to have made an original contribution to the scholarly and managerial understanding of corporate governance.

The next two sections delineate the theoretical and managerial contributions of this research.

E1.3 Theoretical and Methodological Contributions

To the author's knowledge this is the first study to simultaneously consider the research questions posed by the three theories of agency, resource dependency and stewardship and to test the extent to which the impact that they have upon corporate performance is affected by the context specific variables represented by the entrepreneurial venture. Specifically, it makes five contributions to the theoretical understanding of the relationship between corporate governance and corporate performance:

1) The body of literature reviewed in the course of this research (Part B) was found to have individually explored the relationship between elements of corporate governance and corporate performance from the stand-alone theoretical viewpoints of agency, stewardship or resource dependency theories. By simultaneously considering these three theories in a single framework, the author has provided evidence as to how the questions that each theory raises collectively provide a theoretically broader explanation of corporate performance. Specifically, where agency based studies were found to have drawn individual conclusions on the way in which board composition (Daily, Johnson & Dalton, 1999) or duality (Slatter & Lovett, 1999) have affected firm performance, the research conducted within this thesis has found that constructs

of non financial motivation (as suggested by stewardship theory) and services provided by the board (as suggested by resource dependency theory) all have a significant impact and that they combine with agency inspired constructs of control, duality, ownership and financial motivation, to respectively explain 14% and 17% of the returns generated by entrepreneurial ventures on capital and assets employed and 7% and 26% of those generated against the capital and assets employed by non-entrepreneurial ventures.

2) Where extant research has been found to consider corporate governance in singular, isolated terms of, for example, duality, number of external directors or the independence of the board, the research described herein has taken multiple indicators of corporate governance and constructed multi-faceted constructs that aim to more completely represent the complexities of governance theory. The application of the resultant measurement model has provided evidence against which 10 research hypotheses have been tested using partial least squares (PLS). This approach and use of PLS has allowed the author to consider and correctly specify each construct and to simultaneously consider the impacts of multiple elements of governance theory. In so doing, given that such an approach has not been found to have been previously applied, the research makes an original contribution to academia by addressing the methodological shortcomings of previous research and therefore clarifying their conflicting conclusions.

3) The review of literature contained in Part B also concluded that extant research had tended to consider its object, i.e. the firm, as a ubiquitous entity and had failed to consider how findings might differ in line with the context specific variables with and within which the firm operates. The author found several attempts to understand how individual aspects of difference might effect or alter prior conclusions on how

governance effects performance, hence research was found to have explored the moderating effect of firm size, firm geography, the nature of the industry in which the firm operated etc. However, the tendency to consider a single, broad aspect of circumstance was considered to lack depth and therefore, in order to add the next level of detail and context to the understanding of how governance effects performance, the author proposed to research several granular aspects of circumstance through a vehicle described as the 'entrepreneurial venture'. In so doing this research makes an original contribution to theory by concluding that the circumstances represented by the entrepreneurial venture have a significant impact upon the theoretical relationship that has been defined by extant research to exist between the ways in which a firm is governed and the way it performs (Hypothesis H_{10}, debated in section D2.5).

4) By concluding that the relative investment horizon of institutional owners has a non-significant effect upon corporate performance, the author has contributed to academia by adding clarity to the extant body of evidence that has otherwise failed to clearly define the manner in which financial performance is affected, i.e. Jacobs (1991) and Malatesta and Walling (1998) link the structure of executive compensation to short-term performance gains; Graves (1998) finds a negative association between short term investment horizons and corporate entrepreneurship; Zahra (1996) considers both long and short term investment horizons and concludes that they have polarised effects upon entrepreneurship, Neubaum and Zahra (2006) test the impact of investment horizons on corporate social performance - but none were found to specifically consider the association between investment horizons and specific measures of financial corporate performance.

5) In electing to use two subtly different indicators for performance – return on assets and return on capital employed – the author has empirically shown that different performance indicators behave differently in relation to corporate governance and has been able to debate the effects of governance on funding structures as well as performance. Previous research into the association between governance and performance has failed to debate the effects that different performance measures have upon the conclusion; Weir and Laing (2001) employ return on assets employed as their dependent variable and simply state that there is little evidence that performance improves in line with the adoption of governance best practice, Slatter and Lovett (1999) link governance to corporate decline, Daily and Dalton (1994) and Hambrick and D'Aveni (1992) positively link governance to corporate failure and Donaldson and Davis (1991) find a positive association between governance and shareholder return – 3 different results to the same basic question. Daily and Dalton (1993) employ the same performance measures as the author, ROCE and ROA, however, the fail to debate or consider the difference between the two sets of results. Therefore, the author maintains that by specifically discussing the ways in which governance effects ROCE and ROA in different ways in different types of company (entrepreneurial and non entrepreneurial) a contribution has been made to understanding why confounding results have been generated by previous studies.

The results (Table E1.1) indicate that taking a single view of performance would have lead to an entirely different set of conclusions and suggest the need of future research to explore additional performance indices (section E1.6)

E1.4 Contribution to Management / Practice

In order to assess the managerial implications of this research, the author carried out a series of discussions with a number of business leaders. In order to ensure an effective and informed debate the author applied the following criteria to potential participants:

- **Board experience** – participants must be serving members of a board of directors or must have had recent have experience of governing companies.
- **Diversity** – given that one of the central tenants of this thesis is that context specific variables will alter the governance to performance relationship, participants should represent a range of firm types, circumstances and contexts.
- **Duality** – at least one participant should be operating a dual role of Chairperson and CEO.
- **Entrepreneurial Ventures** – in order to debate the relevance of the authors chosen vehicle through which to observe context specific variables, at least one participant should conform to the author's definition of an entrepreneur.

Appendix 3 provides an outline of each of the participants and confirms that these criteria have been satisfied.

A transcript of the resultant debate, in the form of the main quotations, is also attached in Appendix 3.

A summary of the main contributions that have arisen from the findings of this research and the subsequent practitioner debate will now follow:

Control of agent

Having concluded that controlling the agent, by employing an appropriate number and ratio of non executive directors, ensuring their independence and separating the roles of Chairperson and Chief Executive (so called Duality, Donaldson and Davis, 1991, Rechner and Dalton, 1991) only has a significant impact upon the performance of non entrepreneurial firms (Section D2.5, Table E1.1), the author has illustrated that the characteristics and motivations associated with different types of leaders (defined herein as 'entrepreneurial') will influence the way in which they react to different forms of control (thus finding support for both Agency, Berle and Means,1932; Williamson, 1964; Jensen and Meckling, 1976 and Stewardship, Uhlaner, 2007, theories) . This leads to a conclusion that existing governance guidelines, that treat firms and their leaders as homogenous entities, will be limited in their effectiveness and that owners and the wider stakeholders of a given firm could be mislead by a false sense of security arising from the visible signs of compliance to corporate governance best practice and regulation. Furthermore, the managerial debate (Appendix 3) added that, whereas regulation and guidelines are felt to prevent the worst cases of criminality and fraud, it is felt that they do little to control the more subtle aspects of risk taking.

Specific recommendations – in light of the findings of this research and the subsequent debate that they have generated amongst practitioners, the author recommends that guidelines move beyond measuring control and compliance in terms of physical manifestations of boards, their structure and their membership and instead seek a more flexible approach that reduces bureaucracy and places the onus upon transparency for shareholders (i.e. provide them with sufficient information on the CEO and his board for them to make up their own minds as to whether they wish to invest, or, if they hold a sufficient stake, replace the board and its governance processes). The subject of governing risk illustrates the complexity of corporate governance and the futility of attempting to manage it in simple terms of numerically measured control. Although beyond the scope of this research, the author recommends risk as an area for future research (Section E1.6).

Ownership

This research concludes that the ownership structure of a firm (indicated by the equity held by executive and non executive directors) has a significant impact upon corporate performance in both entrepreneurial and non entrepreneurial ventures (Section D2.5). When considering this outcome in conjunction with the conclusions reached with regards to 'Control' (i.e. that controlling the agent has an insignificant impact upon performance in entrepreneurial ventures), the author illustrates that ownership has a wider effect across leadership types than elements of control alone. Theoretical support for such conclusions stems from both Agency and Stewardship theories (specifically Salancik and Pfeffer, 1980, Hill and Snell, 1998, 1989 and Demsetz and Lehn, 1985) and the work of Zahra, 1996 and Daily and Dalton, 1999 both of which encourage ownership as a means of aligning motivations. Also worthy of consideration is the conclusion that the extent of executive and non executive ownership influences the amount of debt available to a firm (indicated specifically herein by current liabilities within the ROA ratio).

Specific Recommendations – in light of the findings of this research and this subsequent debate, the author recommends that governance guidelines and practitioners consider the distinction between majority and minority owners, question the extent to which ownership has truly aligned objectives (i.e. whether a minority holding provides sufficient motivation) and specifically consider how different types of investors may create misalignment (rather than consider all agent ownership as positive).

Motivation of the Agent

This research has split the concept of motivation into financial and non financial constructs, concluding, that both can have a significant impact upon corporate performance (Section D2.5) supporting both Agency and Stewardship theories (whilst, once again, illustrating the need to consider an integrated theoretical approach to the research of corporate governance). Specifically, however, this research has concluded that financial motivation outweighs the effects of non financial motivation – thus supporting the specific conclusions of Coughlan and Schmid (1995), Warner et al. (1998) and Jensen and Murphy (1990) who find corporate leaders to be self-serving and motivated by the returns they receive for the decisions they take.

Specific Recommendations – the findings of this research along with the subsequent comments stemming from practitioner debate lead the author to recommend practitioners and investors / owners to consider a wider range of motivations when constructing governance systems but also recognise that controlling and the linking of financial remuneration to these motivations has been found to have a greater effect on performance.

Services Provided by the Board

This research has found that the services provided by the board (indicated by the size and quality of the Board) have a significant impact upon performance in both entrepreneurial and non entrepreneurial ventures (Section D2.5), as such it supports Resource Dependency Theory (Pfeffer and Salancik, 1978) and, specifically, the work of D'Aveni (1990), Goodstein and Boeker (1991) and Finkelstein (1992). That said, closer analysis of the data (Tables D2.1 and D2.2) leads the author to speculate that the need for and influence of a 'quality' board increase where the founder of a firm has departed.

Specific Recommendations – the findings of this research along with the subsequent practitioner debate lead the author to recommend that policy makers increase the emphasis placed upon the selection of appropriately skilled board members and encourage the kind of transparency that allows prospective investors to judge the strength of a board on more than its size and ability to control. The latter aspect of governance has been found to be of significance and is rightfully monitored and reported upon, but this research shows that services provided by the board can also have a significant impact upon performance and as such this aspect should receive equitable attention – particularly in professionally managed firms where the original founder no longer influences decisions.

Context Specific Variables

A central tenet of this research is that context specific variables embodied within the entrepreneurial venture make it different from other ventures and that as such it will react in different ways to systems of governance. Specifically, this research concludes that, although overlapping in places, there is sufficient evidence to conclude that entrepreneurial ventures are significantly different in terms of their sensitivity to elements of control and, to a lesser degree, the services provided by the board (Section D2.5). Although support in literature for this conclusion can be supplied from the bodies of work encompassed by Agency, Stewardship and Resource Dependency theories, the author has found that the specific moderating influence of context specific variables has only been research in part (Zahra, 1996; Levinson, 1971, Braun and Sharma, 2007, Le-Breton-Miller and Miller, 2008) and that the specific conclusions drawn here in the context of corporate governance provide a unique contribution to both theory and practice (Section E1.3).

Specific Recommendations – the findings of this research along with this subsequent practitioner debate lead the author to recommend that policy makers concentrate on setting minimal standards that apply across the broadest definitions of firm type and that provide protection against fraudulent and criminal activity. Effort should then be placed upon providing guidance that is tailored to address the more granular circumstances that have been illustrated herein as being significant to firm performance. The overall aim should be to install systems that prevent criminality, reduce bureaucracy, increase transparency whilst affording sufficient flexibility for the reflection of individual circumstances.

By way of a summary, existing guidelines and corporate governance regulation is seen as too general and, consequently, ineffective as anything other than a means of installing a picture of control and a potentially misleading sense of security. The implications of this research are that managers, owners and policy makers have to dig deeper into the role of the governance system and what it is that they need it to deliver given their specific circumstances and operating environment. In order to achieve this, business must be supported by researchers who progressively break down the constructs of governance and progressively provide a greater degree of granularity to the understanding of the association between governance and performance and how this is moderated by other context specific variables.

With this in mind, the next sections will build upon the lessons learned throughout this research process, recognise its limitations and suggest areas for future research.

E1.5 Limitations of the Research

Considerable effort has been made to ensure the robustness of this study and therefore its contribution to the development of theory as well as its contribution to management practice. However, the findings must be considered in the light of the following limitations that define the parameters of this study:

- In attempting to consider the impact of "context-specific variables" on the relationship between corporate governance and corporate performance, the author recognises that the number and type of such variables is almost limitless and has therefore elected to concentrate upon those that are embodied within the defined "Entrepreneurial Venture". This is clearly not an exhaustive exploration of context specific variables and leaves considerable scope for future research to increase the granularity of understanding and to progressively decrease the likelihood of confounding results that could be caused by the omission of other factors.
- In electing to use the population of the Alternative Investment Market as its sample frame, this research was able to approach and gather data from a cross section of firm types representing a range of industries. It is clear that the firms researched are not representative of larger firm types and are principally operating in the United Kingdom.
- The scale developed to measure the non-financial motivation of the agent was highly exploratory and was consequently found to be problematic, reducing the accuracy to which the parameter was measured. Although the author has attempted to control for potential errors caused by this phenomenon (Sections C2.2.1 and C4.4), there remains a risk that the effectiveness of these controls could have caused the data issues experienced.

- Due to time constraints it was decided that the research, and specifically corporate performance, would be based upon a single snap-shot in time without any consideration of trend or environment (either at the firm, industry or wider economic level) (Boyd, 1995). The alternative would have been to examine growth over a certain period during which environmental conditions (in terms of The Economy, The Market or industry level trends) could have been gauged and their effects mapped onto relative performance.

The above specified limitations are not considered to detract from the contribution of the study, however, they do provide opportunity and guidance for future research.

E1.6 Suggestions for Future Research

Further research is required in order to address the limitations discussed in Section E1.5, to advance the contribution to business and thus aid progress in management science as a whole. Although, the research here has made a number of contributions (Section E1.3 and E1.4), this author believes that the following suggestions represent opportunities for further research:

1) In light of the often conflicting conclusions relating to the direction that a given element of corporate governance has with corporate performance (e.g., duality has been found to have a negative, positive and neutral effect upon performance), this research has concentrated upon establishing whether an association of any direction exists. Future research should therefore seek to explore the direction (i.e. positive or negative) of the relationships that have been found to exist between the constructs of governance and corporate performance.

2) This thesis has identified and defined the entrepreneurial venture as a vehicle through which to observe a number of relevant context specific variables. Having found that said variables alter the relationship that governance has with performance, the author recommends that future research should seek to further sub-divide industries, geographies, firm sizes, stock listings and operating conditions in order to progressively increase the extent to which the governance of corporations is understood and can be managed in order to protect the investments made in them and to optimise the returns they generate. Specifically, this research has considered entrepreneurial ventures listing on the London AIM market. A comparison with those listing on the FTSE market and overseas markets such as Nasdaq would further consolidate the conclusions drawn.
3) This research has taken a snap-shot view of governance structure and performance, however, in light of the conclusion that context specific variables will moderate the impact that any given governance model has upon performance, it follows that research should seek to track the relationship over time and explore how firms adapt their model of governance to reflect changing circumstances, how changes in the environment have effected the governance to performance association and consequently provide guidelines that suggest best practice for a wider range of circumstances.
4) As discussed in section E1.5 and illustrated in Appendix 1, the scale adopted to measure financial motivation was highly exploratory and proved problematic. The author therefore recommends further research into how best to measure the motivations (financial and non financial) of the agents employed to govern, the application of these improved measurements will

increase the richness of the motivational constructs of the model prescribed herein and in so doing will enhance understanding as to how this aspect of governance effects performance.

5) The results of this research indicate that the choice of performance indicator can significantly affect the conclusion drawn. With this in mind, future research should, as recommended by Tosi (2008), seek to apply a range of different performance measures (internal, external, industry specific, non financial etc.) and thus increase the degree to which a particular model of governance can be linked to a particularly desirable outcome. Given the recent collapses of global financial institutions such as Lehmen Brothers (and further to debate arising from the process described in Section E1.4) the author would suggest a risk adjusted return measurement be applied with a view to testing the extent to which corporate governance influences the risks taken in pursuit of returns.

6) The choice of Return on Capital Employed and Return on Assets as indicators of performance has illustrated how governance structures can be seen to influence the capital structure of a company which in itself could have a significant impact upon the effectiveness of a said governance structure to influence performance. This finding is not empirically demonstrated by this research and so the author recommends a specific study aimed exploring the association. The differences found between the effect that governance has upon ROCE and ROA also indicates that Governance can have a significant impact with specific elements of performance rather than performance itself , the author therefore suggests that performance ratios be progressively broken

down into their constituent parts with a view to determining the precise nature of the governance : performance relationship.

7) The debate of results relating to Hypotheses H6 and H7 (Section D2.5) speculates on why these similar (both are constructs of non financial motivation) hypothesis are respectively rejected and supported by the empirical data. In light of this speculation and the exploratory nature of the scale employed to measure non financial performance, future research should seek to gain clarity on how and when Stewardship theory moderates the effects of the managerial and governance controls stipulated by agency theory.

8) As discussed is section E1.2, the inclusion of the measure of stock concentration into the ownership construct was found to create issues and was consequently removed. The author therefore calls for additional research to be conducted into the effects that the concentration of ownership, as part of a multi theoretical model of corporate governance, has upon corporate performance.

APPENDICES

APPENDIX 1 – Postal Survey

Dear Sir / Madam,

I am currently researching at Kingston University for a doctorate concerning the link between the way in which a firm is governed and the extent to which it performs. I am specifically interested in how this relationship is moderated by the firms associated ownership / control structure and with this in mind am particularly interested in considering firms where the founder (or relative of the founder) retains a board level position and greater than a 10% holding in the firm's stock.

To this end, I am writing in the hope that you will agree to complete the attached brief questionnaire. The results provided will be combined with information contained within your annual report and accounts (a copy of which you have already kindly supplied) and analysed in such a way as to allow empirically backed conclusions to be drawn on each of the hypotheses that I also attach as annex 1, for your information.

Once completed, I would obviously be delighted to supply you with a summary of my findings.

The questionnaire should take no more than 15 minutes of your time and your support in this matter would be greatly appreciated.

If you have any questions or if you require references, please feel free to contact me by return of this mail or on the telephone number provided below. Alternatively my supervisor, Professor Stavros Kalafatis can vouch for the validity of my request and can be contacted at the address below.

With best regards

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Questionnaire

Previous empirical studies have suggested that the "quality" of a company's Board of Directors will have a positive effect upon the governance of the company and therefore on its performance. With a view to establishing the relative quality of your respective Board can you please supply answers to the following questions:

1.1 What is the total number of corporate directorships held by executive and non-executive members of your company's Board?

1.2 What is the total number of non-corporate directorships held by executive and non-executive members of your company's Board?

1.3 How many "Chief Executive Officer" positions are held by the current executive and non-executive members of your Board?

1.4 How many graduate and post graduate degrees are held by the current executive and non executive members of your Board.

When considering the extent to which a non-executive Director is able, willing and likely to challenge proposals tabled by his fellow Board members, and thus protect the best interests of investors, independence is considered a key attribute. In order to establish the relative independence of your non-executive Directors, can you please answer the following questions :

2.1 Of your non-executive Directors, what percentage are neither former executive Directors or advisors of your company?

2.2 Of your total Board of Directors, what percentage are non executives who have served in the role for less than or equal to 4 years?

Much of the need for Corporate Governance is based upon the theoretical misalignment of objectives between owners (shareholders) and their appointed agents (the Board / Management Team). Research into this misalignment assumes personal financial gain in return for financial performance to be the primary motivation of both parties, however, in order to gain a greater understanding of Board motivations, can you please indicate, within the context of your own firm, the extent to which you agree or disagree with the following statements:

	Disagree 1	2	3	4	Agree 5
The industry within which my firm operates is regulated or subject to strong public opinion					
The regulator or public opinion is more concerned with service levels, consumer prices or intellectual property than pure financial returns					
Non Executive remuneration is mostly dependent upon the financial performance of the firm.					
Non Executive remuneration comes primarily in the form of a fixed salary.					
Non Executive remuneration comes primarily in the form of a stock awards.					
Non Executives can directly influence the performance indicators upon which their remuneration is dependent					
Non Executives employed on your Board are in the latter stages of their careers.					

Non Executives employed on your Board are largely older than 50 years old.					
Non Executives employed on your Board have <u>had</u> successful careers.					
Non Executives employed on your Board have limited opportunity of advancement within the structure of your company.					
The perceived success of your company will reward your Non Executives with positions on the Boards of other companies.					
Non Executives employed on your Board are highly competitive individuals.					
A small percentage of your Non Executives total wealth or current income is tied to the performance of your firm.					
Non Executive remuneration within your firm is largely fixed					
Non Executive remuneration within your firm is largely variable					
Non Executive remuneration within your firm is "long-term" (i.e. rewards accrue over a period of 3-5 years)					

Finally, performance is often measured in terms of market performance or accounting parameters such as return on assets employed etc. Some firms however also place significant emphasis upon non financial indicators of performance. In order to understand the motivations of your particular firm can you please indicate, within the context of your own firm, the extent to which you agree or disagree with the following statements:

Disagree **Agree**

	1	2	3	4	5
My company makes a significant contribution to the community in which it operates					
Said contribution is tracked and measured.					
Part of a Board level Director's total remuneration is dependent upon said contribution.					
The firm employs a community relations manager.					
My company is concerned with the environment within which it operates.					
The impact upon which my company has upon the environment is tracked and measured.					
Part of a Board level Director's total remuneration is dependent upon environmental impact.					
The incentive plans of my company's board are aligned with its long term (3-5 year) strategy.					

Finally, given that my research proposes that the relationship that may or may not exist between the way in which a firm is governed and the way in which it performs will be moderated by the extent to which the firm has "entrepreneurial" management, I would appreciate a positive or negative response to the following question:

3.1 Does the founder of your company still hold a managerial position and greater than or equal to 10% of the company's total stock?

Would you like a copy of the final report ?

Thank you, your time and thoughts are greatly appreciated.

Please mail the completed survey to gary.norgate@bt.com

APPENDIX 2 - Measurement Accuracy and Testing for Multicolinearity

AP2.1 Accuracy of the RLV

Section C3.2 explains why the construct for Non Financial Motivation is conceptualised as reflective, and the following section presents investigations aimed at testing its accuracy. Specifically, the author will seek to assess the extent to which the measures of the RLV are reliable (i.e. the extent to which they could be repeatedly applied and be relied upon to produce consistent results) and valid (i.e., the extent to which the set of measures / indicators correctly defines the concept of, in this case, non financial motivation). The author will first establish the validity and then the reliability of the measures.

AP2.1.1 Validity of the RLV

Validity relates to whether researchers can determine whether a measure actually measures the concept that it is supposed to. In this research the author is assessing the extent to which the six questions that indicate the construct, Non Financial Motivation, actually do so.

The extent to which a measurement scale is valid is dependent upon several factors (Hair et al., 2006):

1. The way in which the scale was constructed (i.e., the validity of theoretical and practical knowledge applied in its formation);
2. Its ability to predict the construct that it measures; and

3. The relationships that the scale has with the measures applied to other constructs.

The first two of these factors has been discussed in Section AP2.1, in order to understand the final factor, tests for convergent validity were conducted.

Convergent Validity

Convergent validity refers to the extent to which indicators within a specific construct share a high proportion of variance in common; i.e., the extent to which indicators within the same construct correlate and explain the variance of the construct (DeVellis, 1991, Hair et al., 2006). Given that we are assessing the relationship between indicators and their ability to collectively represent the unobservable latent variable, it follows that such an assessment only applies to reflective latent variables (see Figure C3.2 and related debate).

Two approaches to the assessment of convergent validity were utilised for the purposes of this research, namely; Exploratory Factor Analysis (EFA) and Average Variance Extracted (AVE).

Exploratory Factor Analysis (EFA) – Factor analysis is a multivariate technique that provides the tools for analysing the structure of the interrelationships (correlations) between a large number of variables (Hair et al., 2006). In order to design an appropriate factor analysis, the author has employed the decision process described by Hair et al.(2006):

Step 1: Define the Objectives of the EFA – the objective of the EFA is, in this case, to test for convergent validity and, in so doing, condense or summarize the information contained within the original indicators into a smaller set of new factors with the minimum loss of information.

Step 2: Designing an EFA – In this case the author is assessing correlations between items and as such will conduct an R-type factor analysis. All items are metric and, in terms of sample size; the observations to scale items ratio exceeded the suggested level of 5:1, furthermore the total number of respondents exceeded the suggested minimum limit of 50.

Step 3: Assumptions in EFA - The efficacy of the EFA can fluctuate with sample size and so the first test undertaken aims to judge the adequacy of the sample. In order to conduct this test the author has applied; The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy – A value close to 1 indicates that the patterns of correlations are relatively compact, that the sample of the domain represented by the items is adequate and that factor analysis should therefore produce reliable results. Kaiser (1974) recommends accepting values greater than 0.5. Values in the range of 0.5-0.7 are considered mediocre, 0.7-0.8 good, 0.8-0.9 great and values greater than 0.9, superb (Hair et al., 2006). Table's AP2.1 and AP2.2 show how the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is within the acceptable "mediocre" range for the Entrepreneurial data set and in the "good" range for the non Entreprenuerial data set. In both cases, Bartlett's test of spherecity is significant at 5%.

Table AP2.1 -Sampling Accuracy for Entrepreneurial data set

KMO Measure of Sampling Accuracy		0.607
Bartlett's test of Spherecity	Approx. Chi2	37.088
	df.	15
	Sig.	0.001

Table AP2.2 – Sampling Accuracy for Non Entrepreneurial data set

KMO Measure of Sampling Accuracy		0.762
Bartlett's test of Spherecity	Approx. Chi2	48.655
	df.	15
	Sig.	0.000

Similarly, the Anti Image Matrices show the KMO values for individual items on the diagonal. Each of these indicators should also be greater than the previously mentioned 0.5. The rest of the anti image matrices (i.e., the off-diagonal numbers) represent the partial correlations between variables. For a good factor analysis, these correlations should be small. Bartlett's test of sphericity is a measure that determines whether there is any correlation between the variables that we will include in the analysis. The result of the test should be significant at a chosen level – in this case 5% (i.e., sig. should be less than 0.05).

Tables AP2.3 and AP2.4 are anti image matrices and show how the KMO measures of each individual item are within the "mediocre – good" ranges (within the Entrepreneurial data set PM_Q3 and PM_Q5 are marginally below the 0.5 limit but given the outcome of the overall KMO and the results of the other tests, these items are retained) and how the correlations between the off-diagonal numbers are small.

The tests carried out as Step 3 clearly indicate that the items, or indicators, chosen to represent the construct; non financial motivation of the agent, meet the set criteria and benchmarks and consequently:

- Convergent validity is confirmed;
- All items are retained for exploratory factor analysis.

Table AP2.3 Anti-image matrix for Entrepreneurial data set.

Anti-image Matrices

		PM_Q1	PM_Q2	PM_Q3	PM_Q4	PM_Q5	PM_Q6
Anti-image Covariance	PM_Q1	.641	-.158	-.062	-.246	-.175	-.005
	PM_Q2	-.158	.677	-.263	-9.5E-005	-.054	-.051
	PM_Q3	-.062	-.263	.611	-.032	.277	-.180
	PM_Q4	-.246	-9.5E-005	-.032	.756	-.029	-.110
	PM_Q5	-.175	-.054	.277	-.029	.617	-.263
	PM_Q6	-.005	-.051	-.180	-.110	-.263	.695
Anti-image Correlation	PM_Q1	.693[a]	-.239	-.099	-.353	-.279	-.007
	PM_Q2	-.239	.679[a]	-.409	.000	-.084	-.074
	PM_Q3	-.099	-.409	.469[a]	-.048	.452	-.276
	PM_Q4	-.353	.000	-.048	.738[a]	-.042	-.152
	PM_Q5	-.279	-.084	.452	-.042	.476[a]	-.402
	PM_Q6	-.007	-.074	-.276	-.152	-.402	.642[a]

a. Measures of Sampling Adequacy(MSA)

Item KMO

Table AP2.4 anti-image matrix for Non Entrepreneurial data set.

Anti-image Matrices

		PM_Q1	PM_Q2	PM_Q3	PM_Q4	PM_Q5	PM_Q6
Anti-image Covariance	PM_Q1	.539	-.102	-.010	-.026	-.202	-.099
	PM_Q2	-.102	.387	-.140	-.044	.037	-.208
	PM_Q3	-.010	-.140	.469	-.277	.044	.030
	PM_Q4	-.026	-.044	-.277	.524	-.044	.008
	PM_Q5	-.202	.037	.044	-.044	.657	-.154
	PM_Q6	-.099	-.208	.030	.008	-.154	.439
Anti-image Correlation	PM_Q1	.843[a]	-.224	-.020	-.050	-.339	-.203
	PM_Q2	-.224	.769[a]	-.328	-.099	.074	-.504
	PM_Q3	-.020	-.328	.695[a]	-.558	.078	.066
	PM_Q4	-.050	-.099	-.558	.737[a]	-.076	.017
	PM_Q5	-.339	.074	.078	-.076	.765[a]	-.287
	PM_Q6	-.203	-.504	.066	.017	-.287	.763[a]

a. Measures of Sampling Adequacy(MSA)

Step 4: Deriving factors and assessing overall fit - In order to extract the appropriate number of factors (i.e., minimum number of factors that would account for the maximum portion of the variance of the original items) the author has applied percentage of variance criterion with a cut-off of 60% (Hair et al.,2006) and Kaiser's criterion - retaining all factors with a Latent Root / Eigenvalue of greater than 1.

Tables AP2.5 and AP2.6 contain the output from an exploratory factor analysis of both the Entrepreneurial and non Entrepreneurial data sets. In both cases the analysis has extracted two factors with Eigenvalues greater than 1 that cumulatively meet the 60% cut-off point.

Table AP2.5 - Exploratory Factor Analysis of Entrepreneurial Venture Data Set

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.330	38.840	38.840	2.330	38.840	38.840	2.139	35.643	35.643
2	1.418	23.629	62.469	1.418	23.629	62.469	1.610	26.826	62.469
3	.792	13.197	75.666						
4	.669	11.145	86.811						
5	.454	7.560	94.371						
6	.338	5.629	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component	
	1	2
PM_Q5	.757	-.439
PM_Q1	.736	.231
PM_Q6	.673	.191
PM_Q4	.651	.178
PM_Q3	.028	.901
PM_Q2	.381	.695

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Factor analysis suggests the use of two separate constructs / RLV's to represent non financial motivation of the agent.

Table AP2.6 – Exploratory Factor Analaysis for Non Entrepreneurial Venture Data Set

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.196	53.260	53.260	3.196	53.260	53.260	2.347	39.110	39.110
2	1.209	20.151	73.412	1.209	20.151	73.412	2.058	34.302	73.412
3	.599	9.977	83.389						
4	.425	7.078	90.467						
5	.323	5.385	95.853						
6	.249	4.147	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component	
	1	2
PM_Q5	.816	-.030
PM_Q6	.808	.272
PM_Q1	.796	.245
PM_Q3	.119	.904
PM_Q4	.143	.863
PM_Q2	.402	.602

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Step 5: Interpreting the factors - Although there are "no unequivocal processes or guidelines to determine the interpretation of the factors" (Hair et al. 2006) the author has followed their suggestions and, employed factor rotation (Varimax) to "achieve a simpler, theoretically more meaningful factor pattern" and then visually grouped the resultant factor loadings and considered the results against the theoretically derived conceptual foundation. The criteria for the significance of factor loading for the extracted common factors was stipulated to be greater than 0.4 as suggested by Hair et al. (2006).

In the case of the Entrepreneurial data set (Table AP2.5) the items indicated within the rotation matrix as those that meet the level of 0.4 and that belong in the same construct are: Factor 1 = PM_Q1,4,5,6 and Factor 2 = PM_Q2,3.

In the case of the non Entrepreneurial data set (Table AP2.6), the two constructs have slightly different indicators: Factor 1 = PM_Q1,5,6 and Factor 2 = PM_Q2,3,4.

This outcome illustrates that the position of Question 4 (Non Executive remuneration comes primarily in the form of a fixed salary) is unclear, i.e. it resides in construct 1 within the entrepreneurial data set and construct 2 within the non-entrepreneurial data set. The author speculates that the issue has been caused by the fact that the question relates to a financial form of motivation and as such is measuring a construct other than non financial drivers. Consequently, Question 4 has been removed.

Average Variance Extracted (AVE) – Having conducted an exploratory factor analysis, the next test of convergent validity is Average Variance Extracted (AVE). AVE represents the extent to which measures of a given construct correlate with measures of the same construct. The benchmark for acceptability should be greater than 0.5 (Fornell and Larcker (1981, pp.46), i.e., *"if AVE is less than 0.5, the variance due to measurement error is larger than the variance captured by the construct and the validity of the individual indicators, as well as the construct, is questionable."*

Table AP2.7 reflects that the Non Financial Motivation RLV has, as a result of the Exploratory Factor Analysis explained above, been split into two different RLVs. The same table reports that, for the entrepreneurial data set the AVE for the first and second constructs were found to be 0.960 and 0.840 respectively – both comfortably above the benchmark of 0.5. Similarly, when applied to the non entrepreneurial data set the tests result in an AVE of 0.960 and 0.965 for the first and second constructs respectively – again, comfortably above the benchmark. The author therefore concludes that on the basis of the AVE scores the variance captured by the constructs and the validity of the individual indicators is acceptable.

Table AP2.7 Average Variance Extracted

	Entrepreneurial Data Set	Non Entrepreneurial Data Set
Non Financial Motivation – Construct 1.	AVE = 0.960	AVE = 0.960
Non Financial Motivation – Construct 2.	AVE = 0.840	AVE = 0.965

Table AP2.8 lists the questions that reside within each of the two non-financial management constructs. Construct 1 comprises questions relating to whether or not a contribution to community / environment exists, whereas the questions of Construct 2 relate to the extent to which the contribution is compelled through tracking and reward. The two constructs are therefore, from this point forward, renamed as Non-financial Contribution and Non-financial Reward.

Table AP2.8 – Renaming the Non-financial Motivation Constructs

Non-financial Motivation Construct 1.	**Construct Re-named**
PM_Q1 - My company makes a significant contribution to the community in which it operates	Non-financial Contribution
PM_Q5 My company is concerned with the environment within which it operates..	
PM_Q6 The impact upon which my company has upon the environment is tracked and measured..	
Non-financial Motivation Construct 2.	
PM_Q2 - Said contribution is tracked and measured.	Non-financial Reward
PM_Q3 Part of a Board level Director's total remuneration is dependent upon said contribution.	

These two constructs will now be tested for reliability.

AP2.1.2 Reliability of the RLV

Reliability is an assessment of the degree of consistency between multiple measurements of a variable (Malhotra & Birks, 2000; Hair et al., 2006). A number of approaches have been recommended to assess and improve the reliability of the measurement scale, these include scorer reliability, test-retest reliability, alternative form reliability and internal consistency reliability (DeVellis, 1991; Malhotra & Birks 2000).

Scorer Reliability: Scorer reliability measures the degree of agreement between persons scoring a subjective test, as such, it is an assessment of scorer judgement. In the case of this research, the RLV in question has been measured by responses to a rating scale and consequently scorer reliability is considered unnecessary.

Test-retest and Alternative-form Reliability: One way in which reliability could have been improved is through the application of a test-retest technique. This method would involve conducting the survey, re-issuing the survey to the same person following a 2-4 week gap (Malhotra and Birks 2000) and then testing for correlation between the two sets of results – a high correlation would indicate a high degree of scale reliability. In this case however, the sample set is small and the target respondents all senior executives with busy schedules, as such, given the unliklihood of such respondents completing two similar surveys in a short space of time, this method, along with the similar "Alternative- form" test in which equivalent scales are issued to the same respondents in the same 2-4 week timeframe, were not deemed practical.

Internal Consistency and Composite Reliability – concern the degree to which two measures of the same concept are correlated. There are two widely used measures for this test; Cronbach's alpha and the internal consistency measure developed by Fornell and Larcker (1981). The latter authors argue that their measure is superior to alpha since it uses the item loadings obtained within the measurement model – on this basis the author has elected to use the internal consistency measure in preference to Cronbach's alpha. Guidelines provided by Fornell and Larcker (1981) suggest 0.7 as a benchmark for internal reliability which will provide a measure of the construct's composite reliability.

In PLS, individual item reliability is assessed by examining the loadings (or simple correlations) of the measures with their respective construct (Hulland, 1999). The rule of thumb for this measure of reliability is to employ a benchmark of 0.7 or more which implies that there is more shared variance between the construct and its measure than error. Those indicators that met the benchmark criteria and, following the execution of a Jackknife analysis, shown to be statistically significant were retained.

Table AP2.9 Internal Consistency and Composite Reliability of the Entrepreneurial Data Set

Entrepreneurial Data Set		
Non Financial Motivation(1)	**Internal Consistency = 0.98**	
AVE = 0.960	**PLS Loading**	**t-Values**
PM_Q1 - My company makes a significant contribution to the community in which it operates	0.969	97.58^{c}
PM_Q5 My company is concerned with the environment within which it operates..	0.986	226.68^{c}
PM_Q6 The impact upon which my company has upon the environment is tracked and measured..	0.969	79.40^{c}
Non Financial Motivation(2)	**Internal Consistency = 0.94**	
AVE = 0.840	**PLS Loading**	**t-Values**
PM_Q2 - Said contribution is tracked and measured.	0.892	6.17^{c}
PM_Q3 Part of a Board level Director's total remuneration is dependent upon said contribution.	0.946	8.88^{c}

NB: $^{a}p<0.05$; $^{b}p<0.01$; $^{c}p<0.001$

TableAP2.10 Internal Consistency and Composite Reliability of the Non Entrepreneurial Data Set

Non-Entrepreneurial Data Set		
Non Financial Motivation (1)	**Internal Consistency = 0.99**	
AVE = 0.960	**PLS Loading**	**Significance**
PM_Q1 - My company makes a significant contribution to the community in which it operates	0.99	88.55^{c}
PM_Q5 My company is concerned with the environment within which it operates..	0.99	94.85^{c}
PM_Q6 The impact upon which my company has upon the environment is tracked and measured..	0.99	101.42^{c}
Non Financial Management (2)	**Internal Consistency = 0.98**	
AVE = 0.965	**PLS Loading**	**Significance**
PM_Q2 – Said contribution is tracked and measured.	0.98	22.71^{c}
PM_Q3 Part of a Board level Director's total remuneration is dependent upon said contribution.	0.98	24.46^{c}

NB: $^{a}p<0.05$; $^{b}p<0.01$; $^{c}p<0.001$

Tables AP2.9 and AP2.10 provide an assessment of the measures that make up the RLV.

Composite Reliability – In both cases, the composite reliability of the construct is above the 0.7 benchmark.

PLS Loadings – In all cases the individual item loadings are all above the benchmark of 0.7.

Significance – In all cases the indicators within the RLVs are significant at the 0.001 level.

Conclusion – all indicators are reliable and significant and are therefore retained.

AP2.2 Testing Multicolinearity of the FLV's

One of the concerns when employing formative latent variables is the potential for multicolinearity among their indicators, i.e., the potential for separate indicators within a construct to explain each other as well as the dependent variable. The following passage from Mathieson, Peacock, Chin (2001 pp.107) illustrates the issue: *"The inclusion of non-significant formative measures should not affect the estimates and any re-analysis after dropping non-significant items is not required. Because PLS is based on standard ordinary least squares regression, mis-specification due to the inclusion of 'irrelevant' items will not bias the estimates of significant items. The only potential problem is if the degree of correlation for the 'irrelevant item' and the other items is high, whereupon standard error estimates can increase."*

In such cases where multicolinearity exists it becomes difficult to determine the effect of any single variable. Consequently the formative latent variables within the model were tested by analysing the variance inflation factor (VIF), tolerance, eigenvalue, condition index and variance proportion statistics, all of which will allow the author to determine the extent to which the explanatory power of each indicator is free from the influence of the others (Hair et al., 2006).

With specific reference to variance inflation factor (VIF) and tolerance (1/VIF), there are several benchmarks suggested within literature that can be applied in order to conclude whether the extent of muticollinearity within a given construct is an issue:

- If the largest VIF is greater than 10 there is cause for concern (Hair et al., 2006; Field, 2005)
- Tolerance below 0.1 indicates a serious problem.
- Tolerance below 0.2 indicates a potential problem (Menard, 1995)

Tables AP2.11-AP2.18 present tables of eigenvalues, condition indices and variance proportions, which as mentioned previously provide further tests of multicolinearity (Hair et al., 2006).

Large variations in the eigenvalues (or condition index – which is simply another representation of eigenvalue) highlight issues in the accuracy of the regression model. Variance proportions provide an indication of dependence between indicators. Consequently, where there are instances of a condition index that is greater than 30, no two indicators should have a variance proportion greater that 0.9 (Field, 2005).

Each construct was regressed against the Return on Capital Employed (ROCE) variable. Tables AP2.11 – AP2.18 provide the detailed output from the analysis of both the Non Entrepreneurial and Entrepreneurial data sets (a key to the abbreviations used to explain each indicator, e.g. CA_Ratnon, is contained in Table AP2.19).

As an example of the analysis conducted, Table AP2.11 (the non entrepreneurial data set for the control of the agent latent variable), illustrates how the Variance Inflation Factors are comfortably below the benchmark of 10. Similarly all tolerance statistics are greater than the lower limit of 0.2.

The next statistics to consider are the Eigenvalues and condition indices. Here it can be seen that there are no large variations within the individual sets of Eigenvalues and that the condition indices are all comfortably below the limit of 30. In cases where the condition indices are >30, a further test would be necessary by reading left to right across from the lowest Eigenvalue, in the case of Table AP2.11 it can be seen that there are no instances where there are two variance proportions that exceed the limit of 0.9. This same process of interpretation was repeated for each of FLV's – with similar results. This leads the author to the conclusion that there is no multicolinearity and that, consequently, all of the stated indicators have been retained.

This analysis concludes our tests for data validity and reliability and provides us with a final, valid model, shown as Tables D1.3 and D1.4 that Chapter D2 will test for goodness of fit and for the significance of its hypothesised pathways.

Multicollinearity tests for Non Entrepreneurial data set.

Table AP2.11 - Testing for Multicolinearity within the Control of Agent latent variable

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	CA_Ratnon	.372	2.690
	CA_Unafnon	.573	1.745
	CA_Numnon	.534	1.872

a. Dependent Variable: PM_ROCE

All variance inflation factors are comfortably below the limit of 10

All tolerances are greater than the lower limit of 0.2

large variation
eigenvalues

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	CA_Ratnon	CA_Unafnon	CA_Numnon
1	1	3.486	1.000	.01	.00	.01	.02
	2	.316	3.322	.11	.00	.03	.60
	3	.157	4.715	.31	.00	.68	.03
	4	.041	9.200	.58	.99	.28	.35

a. Dependent Variable: PM_ROCE

Condition index below the limit of 30

No instances of two variance proportions greater than 0.9 on the same small Eigenvalue

Table AP2.12- Testing for Multicolinearity within the Financial Motivation of the Agent LV

Coefficients(a)

Model		Collinearity Statistics	
		Tolerance	VIF
1	MA_EqA	.643	1.554
	MA_Eqnon	.643	1.554

a Dependent Variable: PM_ROCE

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MA_EqA	MA_Eqnon
1	1	2.288	1.000	.07	.05	.07
	2	.502	2.135	.51	.00	.47
	3	.210	3.299	.42	.95	.47

a. Dependent Variable: PM_ROCE

Table AP2.13 Testing for Multicolinearity within the Ownership latent variable

Coefficients[a]

		Collinearity Statistics	
Model		Tolerance	VIF
1	OWN_EqA	.643	1.554
	OWN_Eqnon	.643	1.554

a. Dependent Variable: PM_ROCE

Collinearity Diagnostics[a]

				Variance Proportions		
Model	Dimension	Eigenvalue	Condition Index	(Constant)	OWN_EqA	OWN_Eqnon
1	1	2.288	1.000	.07	.05	.07
	2	.502	2.135	.51	.00	.47
	3	.210	3.299	.42	.95	.47

a. Dependent Variable: PM_ROCE

Table AP2.14 – Testing for Multicolinearity within the Services Provided by the Board latent variable

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	SP_BQ1	.462	2.166
	SP_BQ2	.812	1.231
	SP_BQ3	.542	1.846
	SP_BQ4	.912	1.096
	SP_Numnon	.428	2.339
	SP_Bsize	.486	2.059

a. Dependent Variable: PM_ROCE

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions						
				(Constant)	SP_BQ1	SP_BQ2	SP_BQ3	SP_BQ4	SP_Numnon	SP_Bsize
1	1	5.140	1.000	.00	.01	.01	.01	.01	.00	.00
	2	.765	2.592	.00	.00	.49	.05	.08	.00	.00
	3	.517	3.154	.00	.04	.38	.29	.03	.01	.00
	4	.299	4.143	.01	.00	.05	.02	.76	.06	.01
	5	.172	5.471	.07	.53	.03	.27	.00	.06	.01
	6	.086	7.742	.16	.41	.04	.36	.12	.48	.00
	7	.022	15.237	.75	.00	.01	.01	.00	.39	.98

a. Dependent Variable: PM_ROCE

Multicollinearity tests for Entrepreneurial data set.

Table AP2.15 - Testing for Multicolinearity within the Control of the Agent latent variable

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	CA_Numnon	.649	1.541
	CA_Ratnon	.275	3.631
	CA_Unafon	.441	2.269

a. Dependent Variable: PM_ROCE

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	CA_Numnon	CA_Ratnon	CA_Unafon
1	1	4.350	1.000	.01	.01	.00	.00
	2	.462	3.068	.03	.73	.00	.00
	3	.107	6.388	.63	.07	.00	.28
	4	.027	12.784	.20	.15	.95	.01

a. Dependent Variable: PM_ROCE

Table AP2.16 - Testing for Multicollinearity within the Financial Motivation of the Agent latent variable

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	MA_EqA	.971	1.029
	MA_Eqnon	.971	1.029

a. Dependent Variable: PM_ROCE

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MA_EqA	MA_Eqnon
1	1	2.275	1.000	.04	.04	.08
	2	.609	1.933	.04	.04	.92
	3	.117	4.412	.92	.92	.00

a. Dependent Variable: PM_ROCE

Table AP2.17 - Testing for Multicolinearity within the Ownership latent variable

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	OWN_EqA	.971	1.029
	OWN_Eqnon	.971	1.029

a. Dependent Variable: PM_ROCE

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	OWN_EqA	OWN_Eqnon
1	1	2.275	1.000	.04	.04	.08
	2	.609	1.933	.04	.04	.92
	3	.117	4.412	.92	.92	.00

a. Dependent Variable: PM_ROCE

Table AP2.18 - Testing for Multicollinearity within the Services Provided by the Board latent variable

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	SP_BQ1	.464	2.156
	SP_BQ2	.600	1.667
	SP_BQ3	.374	2.676
	SP_BQ4	.916	1.091
	SP_Numnon	.407	2.458
	SP_Bsize	.408	2.451

a. Dependent Variable: PM_ROCE

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions						
				(Constant)	SP_BQ1	SP_BQ2	SP_BQ3	SP_BQ4	SP_Numnon	SP_Bsize
1	1	5.132	1.000	.00	.01	.01	.01	.01	.00	.00
	2	.879	2.416	.01	.03	.13	.06	.06	.00	.00
	3	.392	3.619	.01	.14	.54	.03	.22	.00	.00
	4	.317	4.022	.01	.04	.17	.07	.65	.03	.01
	5	.154	5.773	.01	.65	.09	.67	.01	.06	.00
	6	.102	7.086	.33	.13	.01	.13	.03	.37	.00
	7	.023	14.891	.64	.00	.05	.03	.02	.53	.99

a. Dependent Variable: PM_ROCE

AP 2.3 – Testing the Accuracy of the Construct Structure

Table AP2.19 below, summarises the constructs and associated indicators that resulted from the literature review (Chapter B1) and the consequent methodology design (Part C). Table AP2.19 also highlights the coding that was applied for use with the chosen modelling tool, PLS Graph. The structure of each construct provides a theoretically reasoned starting point from which to test the accuracy of the model.

Table AP2.19 – Coding of constructs, measures and indicators

Coding	Variable / Construct	Measure / Indicator	Measurement
CA_Dual	Control of Agent	Duality	Binary 1 = dual, 0 = separate
CA_Numnon	Control of Agent	No. of non exec Directors	Binary 1 = > or equal 3, 0 = <3
CA_Ratnon	Control of Agent	Ratio of non execs	% of non execs/total board size
CA_Indinon	Control of Agent	Independence of non execs	% of non execs who are neither former directors or advisors
CA_Unafnon	Control of Agent	Unaffiliated non-execs	% of total board that are non execs who have served <4 years
SP_BQ1	Services Provided by Board	Board Quality	Total number of corp directorships held by board members
SP_BQ2	Services Provided by Board	Board Quality	Total number of non-corp directorships held by board members
SP_BQ3	Services Provided by Board	Board Quality	No. of CEO's or Chairpersons who serve on Board
SP_BQ4	Services Provided by Board	Board Quality	No. of under grad and grad degrees held by board
SP_Numnon	Services Provided by Board	No. of non exec Directors	Absolute number
SP_Bsize	Services Provided by Board	Overall Board Size	Absolute number
OWN_EqA	Ownership	Equity Held by Agents	% of total stock held by senior execs
OWN_Eqnon	Ownership	Equity held by non-execs	% of total stock held by non execs
OWN_SC	Ownership	Stock Concentration	% of the company's tot stock held by any one group
OWN_LT	Ownership	Long-term institutional investors	% of companies stock held by short-termers
OWN_ST	Ownership	Short-term institutional	% of companies stock held by long-termers

		investors	
MA_EqA	Motivation of Agent	Equity held by agents	% of total stock held by senior execs
MA_Eqnon	Motivation of Agent	Equity held by non-execs	% of total stock held by non execs
	Motivation of Agent	Non-financial motivation	Extent to which non execs are motivated by non financial factors
MA_Q1	Motivation of Agent	Non-financial motivation	The industry within which my firm operates is regulated or subject to strong public opinion
MA_Q2	Motivation of Agent	Non-financial motivation	The regulator or public opinion is more concerned with service levels, consumer prices or intellectual property than pure financial returns
MA_Q3	Motivation of Agent	Non-financial motivation	Non Executive remuneration is mostly dependent upon the financial performance of the firm.
MA_Q4	Motivation of Agent	Non-financial motivation	Non Executive remuneration comes primarily in the form of a fixed salary.
MA_Q5	Motivation of Agent	Non-financial motivation	Non Executive remuneration comes primarily in the form of a stock awards.
MA_Q6	Motivation of Agent	Non-financial motivation	Non Executives can directly influence the performance indicators upon which their remuneration is dependent
MA_Q7	Motivation of Agent	Non-financial motivation	Non Executives employed on your Board are in the latter stages of their careers.
MA_Q8	Motivation of Agent	Non-financial motivation	Non Executives employed on your Board are largely older than 50 years old.
MA_Q9	Motivation of Agent	Non-financial motivation	Non Executives employed on your Board have <u>had</u> successful careers.
MA_Q10	Motivation of Agent	Non-financial motivation	Non Executives employed on your Board have limited opportunity of advancement within the structure of your company.
MA_Q11	Motivation of Agent	Non-financial motivation	The perceived success of your company will reward your Non Executives with positions on the Boards of other companies.
MA_Q12	Motivation of Agent	Non-financial motivation	Non Executives employed on your Board are highly competitive individuals.
MA_Q13	Motivation of Agent	Non-financial motivation	A small percentage of your Non Executives total wealth or current income is tied to the performance of your firm.
MA_Q14	Motivation of Agent	Non-financial motivation	Non Executive remuneration within your firm is largely fixed
MA_Q15	Motivation of Agent	Non-financial motivation	Non Executive remuneration within your firm is largely variable
MA_Q16	Motivation of Agent	Non-financial motivation	Non Executive remuneration within your firm is "long-term" (i.e., rewards accrue over a period of 3-5 years)
MA_Q17	Motivation of Agent	Non-financial motivation	Part of a Board level Director's total remuneration is dependent upon environmental impact.
PM_ROCE	Performance	Internal	ROCE

		financial measures	
PM_ROA	Performance	Internal financial measures	Return on Assets employed
PM_Evi	Motivation of the Agent	Non Financial Motivation	Binary 1 = evidence of contribution to community, 0 = no evidence
PM_Q1	Motivation of the Agent	Non Financial Motivation	My company makes a significant contribution to the community in which it operates
PM_Q2	Motivation of the Agent	Non Financial Motivation	Said contribution is tracked and measured.
PM_Q3	Motivation of the Agent	Non Financial Motivation	Part of a Board level Director's total remuneration is dependent upon said contribution.
PM_Q4	Motivation of the Agent	Non Financial Motivation	The firm employs a community relations manager.
PM_Q5	Motivation of the Agent	Non Financial Motivation	My company is concerned with the environment within which it operates.
PM_Q6	Motivation of the Agent	Non Financial Motivation	The impact upon which my company has upon the environment is tracked and measured.
EN_Found	Is company Entreprenuerial ?	Is founder or founders family still in managerial control and do they hold > or equal to 10% of companies total stock	Binary 1 = yes, 0 = no

Section D1.3 explains the need to test the initial conceptual model for accuracy prior to running more detailed tests of validity and reliability. The following notes provide details of the steps taken to refine the measurement model. The process adopted involved building each construct according to its initial theoretical conceptualisation, executing PLS Graph, observing the resultant weights and loadings, re conceptualising the construct where necessary and then, sequentially, adding the next construct – progressively building the conceptual model and addressing issues as they arise.

Conceptualisation of the Control of Agent and Financial Performance Constructs

Figure C1.2 illustrates that the "Control of the Agent" construct was conceptualised as comprising 5 measures (Section C3.1.1) i.e. the presence of duality, the number of non executive directors, the ratio of outside to inside directors, the independence of the non executive directors and the percentage of unaffiliated non executive directors. Furthermore, in Section C3.2 rationale for a formative structure is provided.

Figure C1.2 also illustrates the dependent variable, Financial Performance, as comprising 2 measures (Section C3.1.6); return on capital employed and return on assets.

Figure AP2.1 illustrates the constructs as entered into PLS Graph.

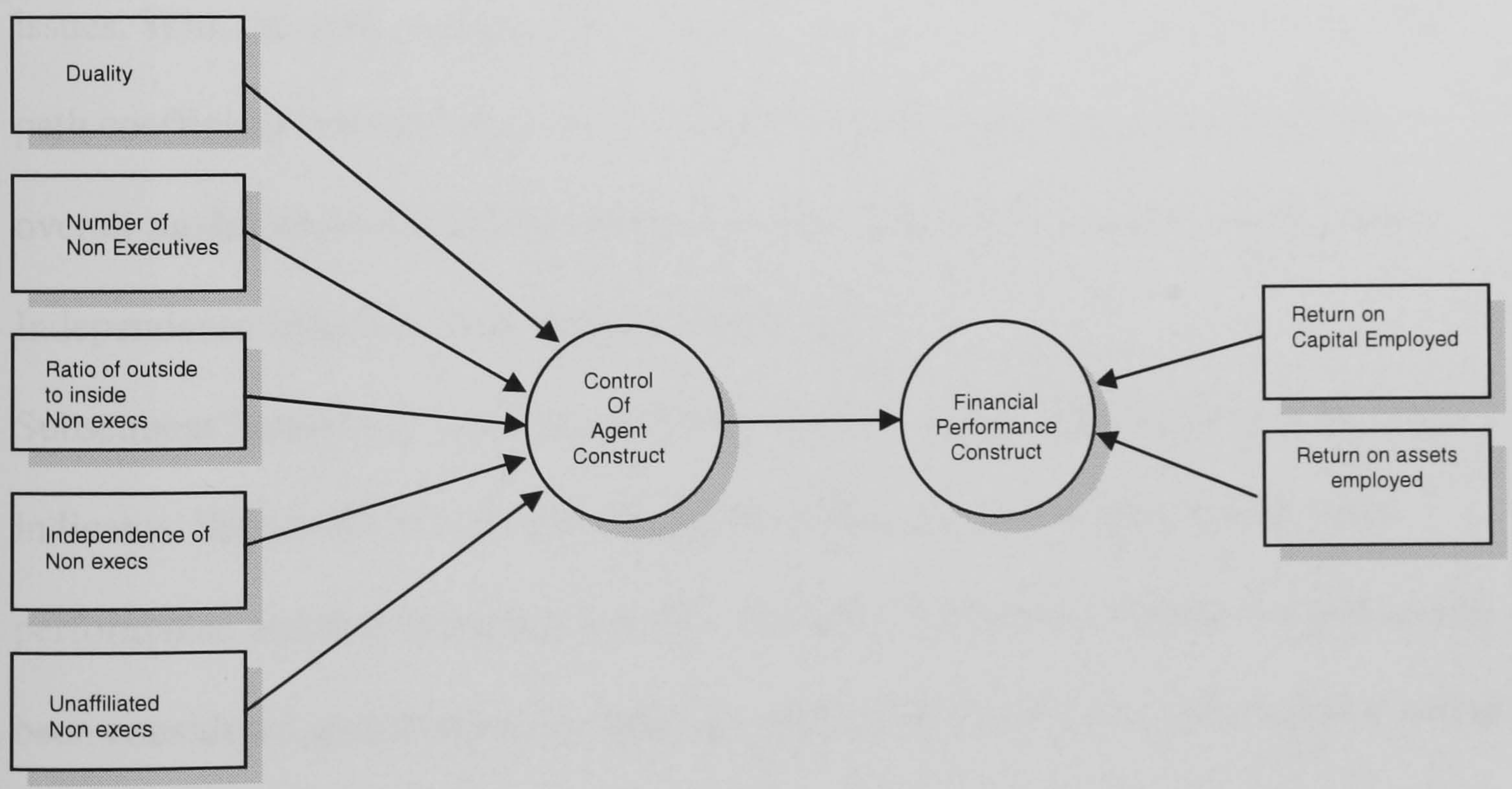

Figure AP2.1: The Control of Agent Construct and its relationship with Financial Performance.

The execution of PLS Graph gave rise to the following observations.

Observations: The weights between each indicator and the Control of Agent construct were <1, except the Independence of Non Execs indicator which, for both entrepreneurial and non entrepreneurial data sets, failed the benchmark.

Conclusion / Actions: The independence of non-executive directors is considered to be an important element of governance (Section B1.4.2) and yet appears not to fit within this measurement model. Therefore, without a theoretical basis for the rejection of this indicator, attention was turned to its measurement. In order to assess the independence of a non executive director the author had used data relating to career history contained within the formal report and accounts. As the data appeared in an audited public document, the author concluded that the data are accurate, however, on reflection the information included could have been selective or inconsistent and as such could have lead to the consequently observed modelling issues. With this risk in mind, the indicator was removed and the model re-run. The path coefficient between the construct and dependent variable and the R^2 of the overall model were unaffected and therefore the decision was taken to remove the Independence indicator from the research model.

Subsequent iterations illustrated problems with the weight associated with the Duality indicator. Section B1.4.1 reviews literature relating to the effect of duality upon performance and this illustrates that this obviously important indicator has previously been considered as a stand alone indicator within the governance : performance model – rather than as an indicator within a wider "agent control" construct. With this in mind, duality was removed from the CA construct and treated as an independent determinant of corporate performance. The result bought the weights of the other indicators of the construct within benchmark.

This step resulted in a conceptualisation of the "Control of Agent" construct that met the weighting benchmarks.

Conceptualisation and Introduction of the Non Financial Motivation Construct

Non Financial Motivation was conceptualised as a reflective latent variable (Section C3.2).The initial conceptualisation of this construct comprised 24 indicators. PM_Evi, PM_Q1-Q6 and MA_Q1-17 (see Table AP2.21 for explanation). Figure AP2.2 illustrates the construct as entered into PLS graph.

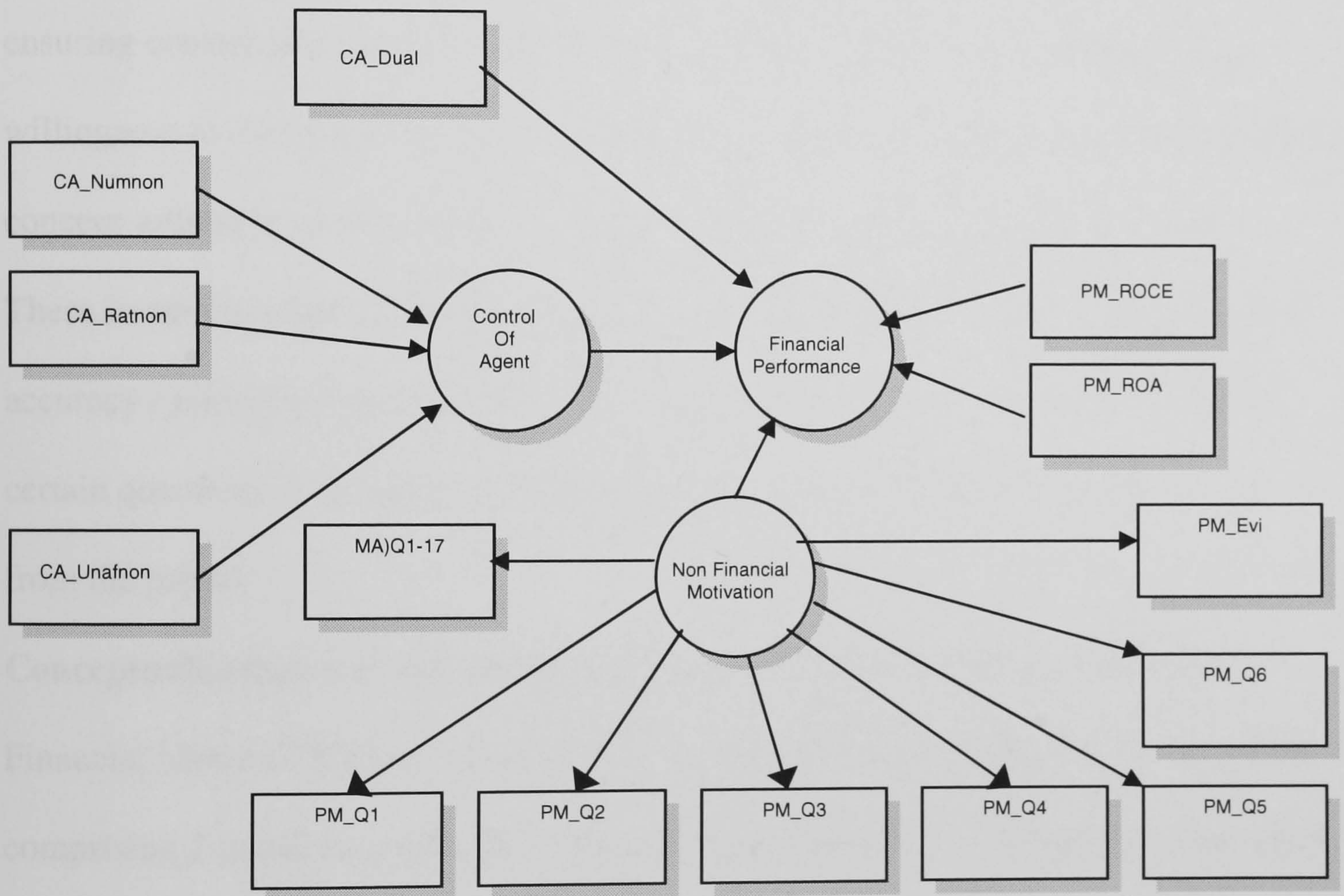

Figure AP2.2 – Conceptualisation and Introduction of the Non Financial Motivation Construct

Observations: The item weights between each indicator and the Non financial Motivation construct were greater than the benchmark of 0.7, except the PM_EVI indicator which generated an item loading of less that 0.7 for both entrepreneurial and non entrepreneurial data sets. Similarly the questions MA_Q1-17 created significant issues to weights and loadings across the entire model.

Conclusion / Actions: On reflection, the author concluded that the PM_Evi indicator was measuring no more than the presence of the other indicators (i.e. if the answers for PM_Q1-Q6 were positive, the PM_Evi would exist), consequently it was removed from the construct.

The inclusion of questions MA_Q1-17 had a negative effect on the weights and loadings across the model. Closer examination of the nature of the questions and additional discussions with experts and respondents (as a part of the process of ensuring content and face validity) revealed issues with the scale relating to an un-willingness to comment on the age of directors, their relative successes and a general concern around how responding to the questions may impact the image of the firm. These issues have led the author to believe that data may have been corrupted and its accuracy / integrity compromised. As a consequence, despite attempting to remove certain questions in an attempt to isolate the issues, these questions were removed from the model.

Conceptualisation and Introduction of the Financial Motivation Construct.

Financial Motivation was conceptualised as a Formative latent variable (Section C3.2) comprising 2 indicators, MA_EqA, MA_Eqnon. Figure AP2.3 illustrates the construct as entered into PLS graph.

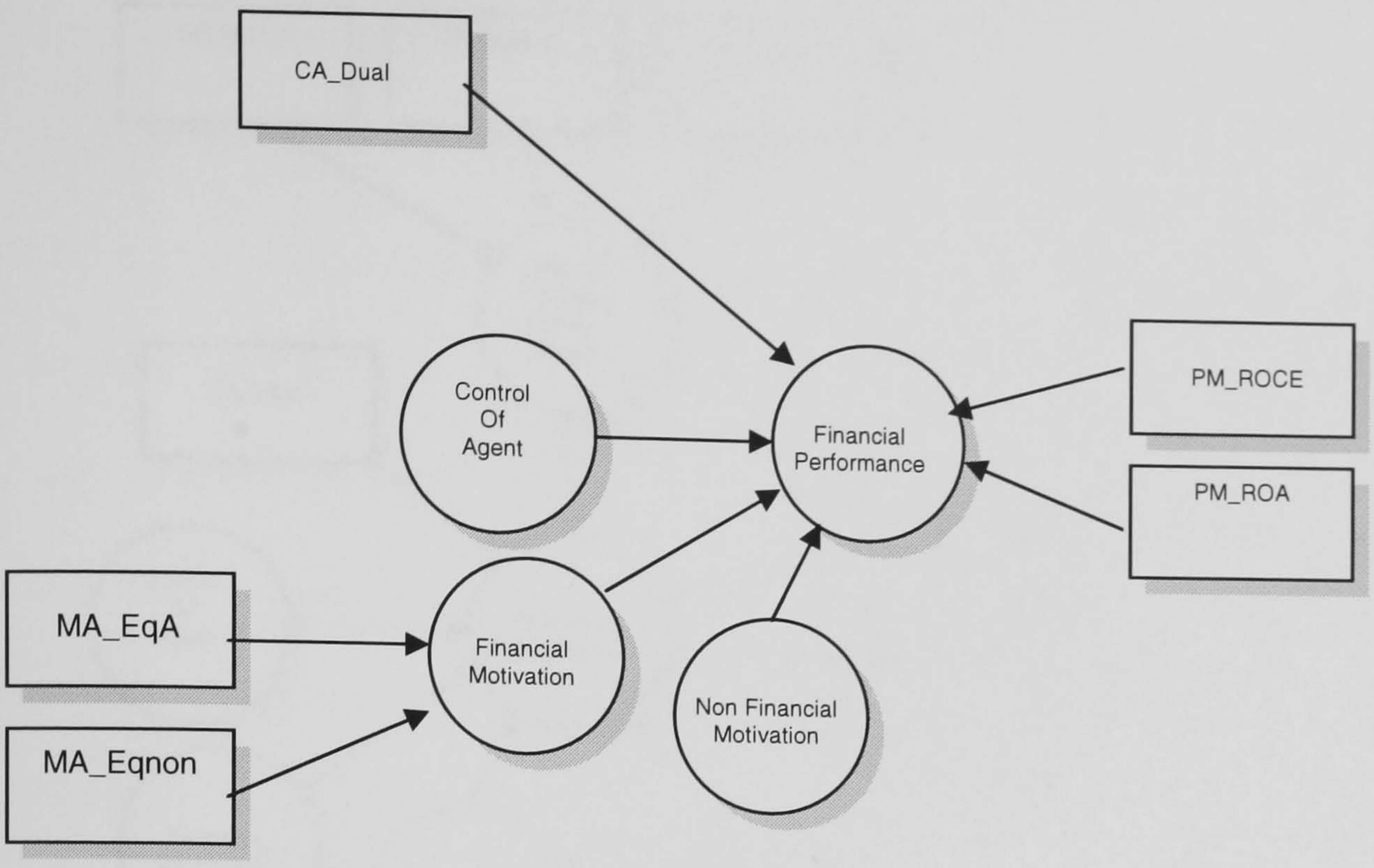

Figure AP2.3 Conceptualising and Introducing the Financial Motivation Construct

Observations: When the model was run, the weights were both observed to be less than the benchmark of 1.0 and as such no further action was necessary.

Conceptualisation and Introduction of the Ownership and Services Provided by the Board Constructs

Both Ownership and Services Provided by the Board constructs were conceptualised as formative latent variables (Section C3.2). The constructs were modelled the following indicators:

OWN_EqA	% of total stock held by senior execs
OWN_Eqnon	% of total stock held by non execs
OWN_SC	% of the company's tot stock held by any one group
OWN_LT	% of companies stock held by short-termers
OWN_ST	% of companies stock held by long-termers
SP_BQ1	Total number of corp directorships held by board members
SP_BQ2	Total number of non-corp directorships held by board members
SP_BQ3	No. of CEO's or Chairpersons who serve on Board
SP_BQ4	No. of under grad and grad degrees held by board
SP_Numnon	Absolute number
SP_Bsize	Absolute number

Figure AP2.4 illustrates the constructs as entered into PLS graph.

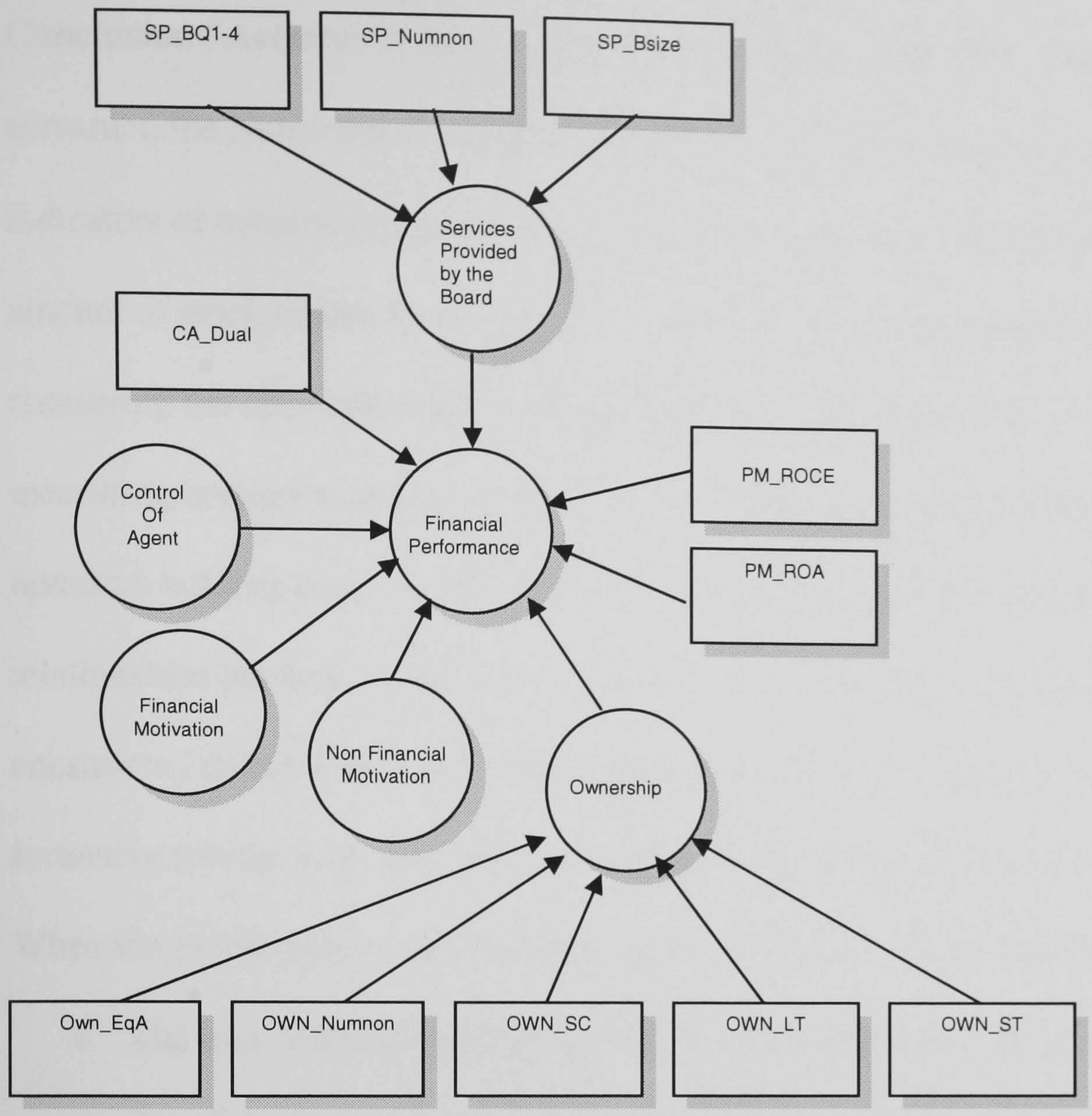

Figure AP2.4 Conceptualising and Introducing the Ownership and Services Provided by the Board Constructs

Observations: When the resultant model was run, the following observations were made (note: as the model increased in complexity, so did the affect that newly introduced constructs had upon existing weights and loadings, hence, observations are now recorded across the entire model):

- The item loadings within the Non Financial Motivation RLV are all > 0.7.
- Weights within the Financial performance FLV are both <1.
- Within the Services Provided by the Board FLV all weights are <1.
- Within the Ownership FLV, OWN_LT,ST, EqA, SC are all problematic.
- Within the Control of Agent FLV, all weights are <1.
- Duality – single indicator.

Conclusion / Actions: With a view to addressing the issues of the ownership construct, the author speculated that rather than fitting into a single construct, the indicators of ownership comprised of four different groups – one measuring the amount of stock owned by the agents (executives and non executives), the second measuring the concentration of stock owned by a single individual or group, the third measuring investors holding stock for the short term and, finally, the fourth measuring investors holding stock for the long term. When considered in a single construct, these relationships became problematic, therefore, the author split them into four separate constructs / determinants. All of the constructs were conceptualised as being formative (on the basis that they had originally formed part of an FLV.

When the model was re-run, the following observations were recorded:

- The item loadings within the Non Financial Motivation RLV are all greater than 0.7.
- Weights within the Financial performance FLV are both <1.
- Within the Services Provided by the Board FLV all regression coefficients are <1.
- Within the Ownership FLV, OWN_EqA and Eqnon, regression coefficients are <1.
- Within the Control of Agent FLV, all regression coefficients are <1.
- Duality – long term investment, short term investment all single determinants.
- Stock Concentration – problematic.

When attempting to include Stock Concentration as a part of the Ownership construct or as stand alone determinant, it was observed to have a disruptive effect upon the other weights and loadings of the model. Consequently it was removed. Finding a theoretical support for the issues proved difficult as a prior study (Zahra, 1996) had empirically tested this measure with success. The author has therefore included a recommendation for future research in Section E1.6.

Observations: Having re-run the model, the latest changes were observed as having had a marginally negative impact on the R^2 (explanatory power) of the overall model and the meaningfulness of the path coefficients. The removal of the stock concentration determinant gave rise to the following observations:

- The item loadings within the Non Financial Motivation RLV are all greater than 0.7.
- Weights within the Financial performance FLV are both <1.
- Weights within the Financial motivation FLV are both <1.
- Weights within the Services Provided by the Board FLV are <1.
- Weights within the Ownership FLV are <1.
- Weights within the Control of Agent FLVare <1.
- Duality, long term investment and short term investment variables – all single determinants.

Conclusion / Actions: The model now includes all of the conceptualised constructs and all weights and loadings are within the stated benchmarks, therefore no further action is necessary and the model can now be tested for accuracy with the non entrepreneurial data set.

Testing the Model with the Non Entrepreneurial Data Set

Up until this point, the measurement model had been tested with the data relating to Entrepreneurial firms. Having arrived at a measurement model that has an initial indication of accuracy, the next step was to test the model with the non entrepreneurial data set.

Observations: The change of data set resulted in a range of problematic weights and loadings.

Conclusion / Actions: By splitting the financial performance construct into individual measures of Return on Capital Employed and Return on Assets, all weights and loadings, for both data sets, were found to be within the stipulated benchmarks. The author speculates that the observable nature of performance (i.e. it can clearly be quantified in a way that financial motivation, for example, cannot) means that it is more accurately measured by individual ratios rather than as an unobservable construct with multiple indicators. On reflection, assessing financial performance as two separate measures provides granularity and deeper understanding – as such the author believes the decision to split the originally conceptualised construct is justified.

Testing for Outlying Data-points

Given that the measurement model is now indicating a level of accuracy for both data sets, the next step is to test for outlying data points using a Jack Knifing and cross-validation technique.

On the basis that the nature of the firms studied will vary widely in terms of their relative size and performance, it is evident that the standard deviation around the mean ROCE and ROA measures is too wide and so the measured removal of outlying data points is necessary.

The first data set to be worked upon contained the non entrepreneurial ventures. Blindfold analysis was used to identify and remove the top outlying data points in sequence.

This process resulted in the removal of the following 11companies:

The following 11 companies were removed:

Advanced Medical Solutions PLC
Bid Times PLC
Barkers Norman Broadbent PLC
Desire Petroleum PLC
Deltex Medical Group PLC
ISG PLC
Savoy Asset Management PLC
Smart Approach Group PLC
Sibir PLC
Stone Martin PLC
Virotec International PLC

The same process was then run for Entrepreneurial Ventures, resulting in the removal of the following 5 companies:

Andrew Sykes PLC
Cassidy Brothers PLC
First Derivatives PLC
John Lewis of Hungerford PLC
Sector Guard PLC

As a result of this process, all weights and loadings conformed to the stipulated benchmarks.

In terms of the companies removed, the author has attempted to find theoretical justification, however, as can be seen, the companies are not related in terms of an industry sector, neither are they remarkable in terms of their respective stages of development, relative size (although they typically rank among the larger market capitalisations on the AIM list) or board structure, with these points in mind the author has concluded that their status as outlying data points is a random phenomenon caused by the mathematical combination of their respective responses.

The resultant measurement models to be tested for reliability and validity prior to being used for the testing of hypotheses are shown as Tables AP2.1 and AP2.2.

APPENDIX 3 – Management Round-Table Debate

Participant Outlines

Participant 1 (P1) – CEO, founder and significant shareholder (>10%) of a mobile banking company that is currently listed on the Alternative Investment Market.

P2. – Non Executive Director a NHS Strategic Health Authority.

P3. – Entrepreneur, ex-Investment Banker and, currently, founder, Chairman, CEO and owner of a pre-Initial Public Offering company providing software based inventory management solutions.

P4. – Chief Strategy Officer of Italy's second largest telecommunications service provider and advisor to the Chairman of its Egyptian parent company.

P5. – Owner, founder, Chairman and CEO of a company offering leadership development consultancy services to the Boards of FTSE 100 / Fortune 500 companies.

These five people represent a wealth of international managerial and, specifically, governance experience and conform to the stated criteria.

Transcripts

P2 "I believe the issue is that most of corporate governance is run on guidelines from many different reports (Higgs, Sarbanes Oxley etc) which have no "teeth" and tend to get confused, especially within global companies. Although standardisation is probably impossible on a global scale, best practice needs to be adopted through legislation rather than leave guidelines open to local or regional interpretation".

P5 "For US public companies, the guidelines that emerged following the Enron and Worldcom blow- ups are fairly effective at preventing systemic fraud. But a resulting challenge is the complexity of the guidelines. Governance is a subject that should be clear to business executives and their shareholders, not just experts and lawyers. How can we make governance less onerous and expensive while making companies more transparent? How can governance be used to improve performance? I don't see these goals at odds."

P4 "Current best practice would not have prevented the collapse of the banking institutions – Boards were either operating in ignorance of the real risks, hiding them from each other, or simply didn't understand them".

P2 "In the public sector there is a lack of independence caused by the old-boys network. This is also leading to lack of critical skills at the top."

P3 "Its too easy to tick the boxes of corporate governance without having to actually comply – in fact corporate governance has become a game of appearing to comply without actually doing so."

P1 "One size fits all governance systems are a real issue, they encourage compliance without ever really being effective – there are just too many variables."

P2 "In my opinion the saying "you don't know what you don't know" applies to the boardroom where people who are not necessarily familiar with the day to day business of the organisation but who are brought onto the board for specific skills are reliant on the information provided by the executive team. Reports are systematically filtered through the company to provide a precise report at board meetings - but some of the information filtered could be vital to corporate governance. The gaps exist in effective questionning of the executives."

P4 "There are more regulations than ever and none of them are having a material effect – they are however slowing business down and creating a false sense of security."

P4 "I have just completed a long and painful court case with an investor in my previous company. We outwardly complied with all of the governance best practice and yet my motivations were entirely different from those of the private equity firm who held the majority of the shares in the company. The result was that the Private Equity firm did all it could to suppress the views of the minority owners – corporate governance legislation does not cater for divergent motivations and address the balance of power that suppresses them".

P5 "Enron and Worldcom were booking losses inappropriately. They were both overstating profits. You had executives basically looting the companies. My take is that the US remedy of CEOs and CFOs signing off on financial statements does a decent job at preventing such blowups from happening again."

P2 "With the recent turmoil at financial institutions, I think the issue is more about the role of risk management in corporate governance. What is the responsibility of the board, particularly when financial instruments are so complicated? What should the treasurer and CFO be doing? Wall Street is ingenious at coming up with new structures. Markets are ahead of regulators. Even many CFOs didn't understand the risks."

P4 "My issue is that governance best practice has been dumbed down in order to be understood – the result is just too simple and cannot possibly reflect the complexities of the relationships and circumstances that it seeks to govern."

P3 "You just can't trust such a simplistic structure to govern every kind of circumstance."

P1 "Governance stops most cases of criminality but doesn't stop the self serving agendas of founders, managers or majority owners – its just too simple."

P5 "Because my company is private, I look for performance impact and the basics: checks and balances on senior management decisions; protection against fraud; and clean financial controls. Corporate governance is costly, so I want all this with the minimum level of bureaucracy and bloat. On a board level, as we are private, it's less about governance and more about advisory".

P2 "We are so much in the public spot-light that we have to be seen to comply with all guidelines – and we do. The problem is the quality of the board, the majority of our board members lack any real business experience and struggle to advise on anything non-medical."

P2 "I have just been offered the Chair of another health authority which is failing badly – my primary concern when appointing new board members is the knowledge and contacts that they bring"

P3 "Sometimes the choice of Board member is forced upon the owner by an investor – this has happened to me and even when the board member resigned, they were still effectively able to influence outcomes through the term sheet that underpinned their investment – none of these issues are reflected in the current governance guidelines. The use of return on assets as a performance measure through which to understand the impact that investors / lenders can have is an interesting concept as it might highlight this phenomenon– I'd like to see someone taking a look at risk adjusted returns as a measure of performance."

P4 "Nobody is going to invest in a company with no visible signs of control or governance – but this just comes back to my previous point regarding compliance creating a false sense of security."

P3 "In my experience, investors tend to invest in the people who own the concept and vision for the company – the entrepreneurs - governance comes to the forefront once they have invested and they want to control the direction of the company.

P1 "Founders have much broader motivations than other owners or investors, you have to motivate them in different ways as they often have the clearest vision of what's needed for success and can often bring in important resources that others cannot access."

P5 "As a founder and owner, I embody the firm and its vision, I don't care too much about outward compliance with guidelines – I'm more interested in making my firm a success. The problems start when members of the board disagree, so, if I can, I choose board members who are like minded and who can contribute to my success without them having any real ability to control me".

P1 " the issue of duality and too much power being in the hands of the CEO is over done – particularly in small companies where the bank or other significant investors have a greater say – not surprised that you didn't find a relationship."

P2 "The NHS currently provides induction training for all new NEDs and Chairs to cover governance and we are issued with guidelines but I am pressing for at least an annual update on corporate governance to ensure that we are all reminded of our duties on "conformance" as well as "performance". The Department of Health is rigorous in its performance measurements at the Strategic Health Authority and the majority of senior management time is taken to prepare league tables etc which are widely reported (and sometimes misquoted) in the press. Because we are responsible for 80% of the health budget for our local population our board is driven by their needs rather than individual circumstances - everything comes back to delivering value for money in the knowledge that we are accountable as a board to the population as well as government".

P5 "I agree that practitioners need a clearer understanding of how the effectiveness of corporate governance structures is moderated by the circumstances of the firm to which they are applied. I haven't seen much in the way of clear frameworks or discussion on this. Corporate governance practices sometimes appear rote rather than customized to a given firm and its performance objectives".

P3 "The effectiveness of a governance system is dictated by its ability to facilitate effective challenge – given that the ability to challenge will largely depend upon the individual circumstances of the firm / its board, I'd say a circumstance specific system of governance is essential."

P1 "Ownership is key and its nature varied – different structures require different rules. There is a huge difference between the needs of the developing and developed company."

P1 "I own and run a private company, its crazy to think that my performance would be influenced by a governance system in the same way as a large public entity – existing guidelines are just too rigid and are driving inappropriate behaviors."

P4 "I can certainly see and appreciate the need for simplicity but I think that its gone too far and that the result has lost its impact and worth."

P2 "I think that there is a need for a basic set of best practice guidelines with which companies should comply – but there also needs to be some sub-division and a greater degree of understanding that dictates different guidelines to better suit a range of different scenarios."

P3 "One thing that occurs to me is that the non executive director is not in itself a ubiquitous entity and that it often represents a range of different people (from the individual to a specific investor) – some with very personal agendas, therefore it follows that in certain circumstances different rules to control the non executive may be necessary!"

P2 "I certainly see circumstances changing over time and, in my own case, I can see that these changes lead different requirements from the Board – hence understanding how circumstances relate to need and hence performance is very important."

P5 "I'd like to see new and better practices emerge around the role of risk management."

P3 "For me governance guidelines need to consider the role of private equity in developing firms and specifically the controlling influence of the term sheet and consequent existence of shadow boards that circumvent the controls that governance guidelines insist upon and that our outwardly evident without actually being effective."

P2 "I think more focus should be placed upon the quality of the Board rather than its numeric properties – to build on an earlier statement, governance may largely prevent criminality – but it doesn't prevent incompetence."

P4 "There are no new tricks and no short-cuts to super returns, I'd agree with the statements made about understanding and therefore controlling risk taking."

P1 "As a founder running a developing company, I'd like to see some recognition of my unique circumstances reflected in governance guidelines, I have unique challenges and require a unique mix of support from regulators, investors and my Board – I need as much protection as I do control".

P2 "Clarity of expectations at government level of what corporate governance entails; greater accountability to stakeholders/share holders; more standardised reporting (either on a national or industry level) so that anyone severely out of line can be highlighted immediately".

P5 "What is the appropriate role for risk management in corporate governance on an industry by industry basis? How can we improve transparency and controls there without unduly tamping down financial innovation?"

P2 "I really need to push for more training and updates from my own organisation and I want to work with the Strategic Health Authority on formulating questions to be asked by NEDs and Chairs within the area to satisfy them that their board is performing correctly and applying corporate governance throughout their organisations. Corporate governance is not just the responsiblity of the board - it is everyone's responsiblity."

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