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What causes top management teams to make poor strategic decisions?

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What Causes Top Management Teams to Make Poor Strategic Decisions?

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Contents

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Certificate of Authorship

I certify that the work contained in this thesis has not been submitted previously to meet requirements for an award, either at this or any other institute of higher education. To the best of my knowledge and belief, this thesis contains no material published or written by another person except where due reference is made.

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In England in 1979, Roland Huntford published "Scott and Amundsen" an account of the race for the South Pole between the British and Norwegian explorers. Unlike previous English-language accounts, Huntford painstakingly examined the sources pertaining to the Norwegian expedition, as well as unflinchingly sifting through the welter of material that shed light on Scott. The results of his research debunked the Scott myth forever. The Norwegians won the race to the South Pole because they were experienced skiers and dog-sledge drivers and had professionally prepared. The English lost because they bumbled along with ponies (in the Antarctic!), had never troubled to learn to ski and because they were led by Scott (Alexander 1999, p. 124; Limited' & Science' 2012).

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List of Abbreviations

BSC	Balanced Scorecard Collaborative
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIO	Chief Information Officer
COO	Chief Operating Officer
CTO	Chief Technology Officer
CXO	Chief X Officer
DBA	Doctor of Business Administration
EIO	Executive Intelligence Officer
FTSE	Financial Times (and the London) Stock Exchange
GFC	Global Financial Crisis
MBTI	Myers-Briggs Type Indicator
NPV	Net Present Value
RPD	Recognition-Primed Decision Making
TMT	Top Management Team
US	United States

Abstract

This study investigates why top management teams consistently make poor strategic decisions even though executives typically have access to the data and tools required to make optimal business decisions in abundance. Research shows that high-performing organisations successfully make and implement good decisions (Rogers & Blenko 2006, p. 133). This indicates that good strategic decisions and their effective implementation provide a competitive advantage that directly leads to superior organisational performance. Indeed, when top management teams (TMTs) make strategic decisions, they are potentially conducting the highest leveraged activity they can for an organisation (Harrison & Pelletier 2000, p. 462). Considering that strong strategic decision making and execution capabilities are an organisational competitive advantage and represent activities of the highest value to which TMTs can contribute, it seems counter-intuitive that only around fifteen per cent of organisations have the ability to make and implement important decisions effectively (Harrison & Pelletier 2000; Rogers & Blenko 2006).

Using a grounded theory methodological approach with semi-structured interviews of executives from large Australia-based organisations, data and indications as to the root causes of poor strategic decisions were obtained. The collected data were categorised, analysed and abstracted into higher-level concepts. Analysis of the inter-relationships led to an understanding of the reciprocal effects of key concepts.

A grounded theory of strategic decision making was ultimately developed to address the research problem. The model is based on three key positive concepts—decision ecosystem, governance and leadership—and one negative concept—politics. For good decision making, the positive concepts should be present and robust. However, this study finds that this is an unlikely situation and that this represents a root cause for poor decision making. Additionally, Executives engaging in decision politics while making decisions is another significant root cause of poor strategic decision making. Decision politics are a manifestation of executive self-interest played out

using tactics to avoid losses, blame or risks. The negative decision politics concept can be suppressed when the positive concepts are strong and act collectively and interdependently. The leader, typically the chief executive officer, is the main factor in constructing a strong interdependent decision framework comprising the positive concepts known as ‘decision equilibrium’, that yeilds the optimum decision-making environment and suppresses decision politics, thereby improving organisational strategic decision making.

Key terms: strategic decision making, top management team, grounded theory, decision politics, self-interest, governance, leadership

Chapter 1: Introduction

The impetus for this study came from the researcher's experience both as a senior member of executive teams and as a CEO. This experience made him very aware that there is widespread understanding of various decision making models as well as continual discussion and knowledge as to what constitutes "good" versus "bad" decisions. Given this high level of understanding and debate amongst senior level management it should follow that poor strategic decisions are rare - yet this is not the case. This lead the researcher to move away from consideration of decision making models and whether or not a decision was "good" or "bad" to an entirely different focus - "what causes top management teams to make poor strategic decisions?"

The global financial crisis (GFC) that started in the United States (US) in late 2008 crippled the financial industry and plunged much of the world into deep economic recession. Many established organisations, even those not directly connected to the financial markets, failed and millions of people lost their jobs and homes (Permanent Subcommittee on Investigations 2011).

Analyses of the events leading up to the GFC clearly indicate that the problems had been escalating for some time, and the evidence was apparent to everyone in the industry. However, experts inside and outside the regulatory framework, fuelled by self-interest, ignored the warning signs and chose to focus on maximising their gains and minimising their losses by gambling with others' investments using high-risk strategies (Permanent Subcommittee on Investigations 2011; Sorkin 2009). To date, many economies continue to experience the adverse effects of the GFC, and the financial industry, in particular, is expected to suffer the fallout for years to come.

The GFC is a complex phenomenon, but most of its causes are attributable to poor decision making on strategic issues such as politically motivated relaxation of regulatory frameworks, high-risk lending strategies, unsustainable practices, poorly designed executive compensation schemes and promoting a culture of greed and self-

interest as acceptable behaviour (Permanent Subcommittee on Investigations 2011; Sorkin 2009).

While most poor strategic decisions do not result in a GFC, there are many examples of top management teams (TMTs), both internationally and locally, making poor decisions that result in a total business failure, such as Enron in the US and OneTel in Australia. However, these notable and highly publicised decision-making failures represent only a fraction of the phenomena because the current body of research suggests that most strategic decisions are destined to fail (Hall 2007; Harrison & Pelletier 2000; Rogers & Blenko 2006).

1.1 Background of the Research

Strategic decisions by TMTs constitute the highest leveraged activity within an organisation. Indeed, a consistent record of decision successes is the most significant contribution that TMTs can make in any kind of formal organisation (Harrison & Pelletier 2000, p. 462). Research by Bain & Company confirms that high-performance organisations are particularly adept at making good decisions consistently:

> What sets apart the high performers is the quality of their decision making. They make the most important decisions well and then they make them happen quickly and consistently. We found again and again that these achievers as decision-driven organizations, build for effective decision making and execution (Rogers & Blenko 2006, p. 133).

Considering that strong decision making and execution capabilities are an organisational competitive advantage, it is surprising to learn that according to current research, only around fifteen per cent of organisations have the ability to make and implement important decisions effectively (Rogers & Blenko 2006, p. 133). Compounding this issue, TMTs today have to deal with increasing information overload, faster business cycles and stakeholder pressure to continually provide better results (Friga & Chapas 2008, p. 8).

Where do bad decisions stem from? According to the available decision-making literature, they can result from many issues ranging from poor strategy to the way decisions are made (Abraham 2006; Hammond, Keeney & Raiffa 2003).

Current thinking on decision making is wide and varied but there is no general agreement of a definition of how to rate a decision as good or bad and how to go about making good decisions (Heavey et al. 2009; Michel 2007; Miller 2008; Rausch 2007). Indeed, Rausch (2007, pp. 9-10) believes that neither the literature nor the text books currently available provide guidance on all the issues that should be considered to ensure that decisions will be of high quality. Notwithstanding this limitation, executives who are predominantly measured and rewarded by the organisation's bottom line performance in growing profits and shareholder value are influenced in their decision making by potential outcomes (Singh & Schick 2007, p. 353).

When thinking about strategic decision making in business, it is possible to separate the conceptual framework into two parts of *the decision-making processes* and *the limitations imposed by the organisational capabilities* (Michel 2007, p. 34).

Spanning many years, there have been several streams of research into decision making. Original research focused on what should be done in order to make rational decisions, which is the prescriptive decision theory. This was followed by a period of research that gave rise to the first generation behavioural theory of decision making that describes what decision makers actually do. Currently, the second-generation behavioural theory for decision making is based on observations of professional decision makers—the way they make decisions and the cognitive process involved (Beach & Connolly 2005, p. 12).

Research shows that making rational decisions by following prescriptive decision-making rules yielded the most successful outcomes (Nutt 2007, pp. 620-1; 2008, p. 425). Unfortunately, rational decision making is often not a practical proposition due to limitations of time, cost and visibility of all potential solutions. However, even

when all factors necessary for rational decision making exist, around 45 per cent of managers simply use their instinct to make decisions (Hall 2007, pp. 100-1).

An organisation's strategy should provide alignment and integration around a common reference point directing human, informational and organisational resources towards desired outcomes for customers and shareholders (Kaplan & Norton 2004, p. 10). Organisational or strategic alignment is also defined as everyone rowing in the same direction; the tighter the linkage and the better the alignment, the stronger is the likelihood of success (Abraham 2006, p. 12). In other words, an organisation is aligned when all the tangible and intangible assets are aligned with the strategy to create value for customers and shareholders (Kaplan & Norton 2004). However, current research reveals that, in practice, organisational alignment is extremely difficult to achieve. Therefore, there is a potential for misalignment leading to poor decisions because priorities are not defined by an overarching business strategy but by the self-interest of those heading up the functional silos (Guttman & Hawkes 2004, p. 36).

Although a large body of knowledge is available to guide executives in the best ways to make business decisions, for example on how to avoid the pitfalls associated with organisational alignment and decision-making processes, the fact remains that most strategic decisions fail (Hall 2007; Harrison & Pelletier 2000; Rogers & Blenko 2006). This research aims to build on the detailed decision-making research silos within the existing body of knowledge by taking a step back to examine the problem from an end-to-end macro perspective to build a theoretical framework representing the phenomena.

1.2 Research Objectives

Strategic decision making is extremely important to an organisation's performance and it may be the highest leveraged activity that TMTs can execute (Harrison & Pelletier 2000, p. 463). In addition, TMTs typically have a good end-to-end view of the business and competition and easy access to the latest sophisticated decision tools

and data regarding their organisations. Given that this is the case, the research problem is '***What causes top management teams to make poor strategic decisions?***'

I addressed the research issue by interviewing senior level business people about their experience of the end-to-end process of strategic decision making and their beliefs on why the processes often failed.

I concluded that poor decision making by TMTs is mostly attributable to weak decision ecosystems, leadership or governance combined with business decisions being manipulated and undermined both intentionally and unintentionally by executives using political tactics to manage their self-interest principally by avoiding risks, accountability and losses. Failure to have an organisational state of decision equilibrium encompassing clear governance, leadership and a robust decision-making ecosystem creates levels of uncertainty that encourage and facilitate an executive's manipulation and undermining activities. Creating and maintaining decision equilibrium is the responsibility of the leader, usually the chief executive officer (CEO).

The research was principally concerned with qualitative analysis of how poor decisions are made rather than analysing past cases to prove that historical decisions were either good or bad. Discovering the main causes of poor decision making together with appreciating a TMT's level of understanding of decision-making issues allowed the development of a strategic decision-making framework. This framework spans the organisational issues and decision-making process issues identified in the conceptual framework to provide an integrated approach to understanding, analysing and improving organisational strategic decision making.

Contributions that this research makes, as shown in Chapter 5, include:

1. Development of a simple four-concept operating model that likely leads to significant organisational decision-making improvements for most organisations when implemented effectively.

2. An analysis of the relationships between organisational alignment: alignment of the business aim and motivation and motivational alignment: what the TMTs are motivated to achieve by incentives or self-interest. Discussion on the consequences of strategic misalignment when organisational and motivational alignment are not congruent.

3. A discussion on the drivers and consequences of an executive's expected lifespan being around three or four years.

4. A discussion on the possible reasons for high levels of dominant or overconfident CEOs in business including an examination of the consequences for organisational decision making due to dominant CEO behaviour.

5. An explanation of why individual and group cognitive styles influences decision making but not in measurable or material ways.

6. Analysis of how self-interest and situational gaming create decision politics that undermine the decision process to the extent possible under the boundary conditions created by the governance, leadership and decision ecosystem.

7. An explanation describing what decision leadership, decision governance and decision ecosystem are and why they are *critical* to effective organisational decision making.

8. A revised conceptual model highlighting new relationships and concepts developed during the research.

9. Development of a grounded theory and theoretical framework describing the constructive and destructive interrelationships between the positive concepts of decision governance, decision leadership and decision ecosystem interacting with the negative decision politics concept.

10. Implications for future continuing research including investigating a current governance issue that hides critical information from shareholders, understanding short and long-term trade-offs from a timelined self-interest point of view and suggestions to closely examine the drivers for hiring CEOs given their importance to decision making and the levels of dissatisfaction with them.

1.3 Significance of the Research

Making good strategic decisions and implementing them effectively directly relates to superior company performance. Further, good strategic decision making is a competitive advantage; yet, most organisations fail to build and adopt effective organisational decision making frameworks.

Research investigating organisational operating constraints has mainly focused on analysing strategic alignment (Abraham 2006; Guttman & Hawkes 2004; Kaplan & Norton 2004). Researchers have employed both quantitative and qualitative methods predominantly examining case studies through data analysis or follow-up semi-structured interviews.

Research into decision making has focused predominantly on three key areas: 1) quantitative case studies on the benefits of prescriptive rational decision-making methods compared with non-rational methods by analysing historical data for documented decisions (Miller 2008; Nutt 2008); 2) understanding the behavioural factors at play in decision making and subsequently developing strategies to minimise or eliminate those effects using qualitative and quantitative methods with data collection from case studies (Bazerman 2002; Beach & Connolly 2005; Eisenhardt, Kahwajy & Bourgeois 1997; Friga & Chapas 2008; Hall 2007); and 3) recognising that different personality types view decision making differently and understanding the effects of individual and group cognitive style on the decision-making process (Gallen 2006; Hough & Ogilvie 2005; Leonard, Beauvais & Scholl 2005).

Research to date seems to cluster into either examining the strategic alignment issues that determine decision choices or examining decision-making processes. Further, research has focused on historical cases and decisions, meaning that existing research is predominantly concerned with trailing indicators rather than leading indicators.

However, in 2008, McKinsey & Company surveyed 1,139 companies on which factors, from a range of choices, most affected their strategic decision-making capabilities. The survey results confirm that companies that consider both strategic business issues and decision-making processes when developing strategy typically achieve superior results (Dye, Sibony & Truong 2008, p. 1). It, therefore, made reasonable sense for new research to span both strategic alignment and decision making to enable a better understanding of the issues surrounding decision making rather than treat them as separate issues. Again, the few research articles, for example Rogers and Blenko (2006), that span both the decision-making process and strategic business issues are principally concerned with analysing quantitative historical indicators; therefore, the opportunity still exists to examine qualitative indicators spanning strategic alignment and decision making.

The findings of Chapter 2 indicated that there are research gaps in *qualitatively* understanding poor decision making by TMTs. These gaps include:

- understanding the relative importance of factors influencing strategic decision making spanning both an organisation's operating constraints and its decision-making processes
- development of a predictive framework to anticipate decision-making issues in organisations by examining their organisational strategic alignment and their organisational decision-making processes
- discovering to what extent practicing executives are aware of and understand the critical issues associated with effective decision making.

While making and implementing good decisions directly relates to superior company performance, consequences of poor decision making can be catastrophic.

Follow-up investigations of spectacular and catastrophic events caused by poor decisions are generally well documented; however, countless smaller and less damaging poor decisions are made every day in most organisations and the cumulative cost of those decisions to businesses and governments would be massive when considered on a larger scale.

This research is principally concerned with a *qualitative* analysis on how poor decisions are made rather than analysing past cases to prove that historical decisions were either good or bad. Discovering the main causes of poor decision making together with appreciating a TMT's level of understanding of decision-making issues allowed development of a strategic decision-making theoretical model (Figure 5.1). This framework spans both the strategic alignment business issues and the decision-making processes to provide an integrated approach to understanding, analysing and improving organisational strategic decision making.

Narrowing the total possible causes for poor decision making into a strategic decision-making theoretical model for analysis is a process similar to that used to analyse other complex issues such as causes of road accidents. As an example, there are hundreds of possible causes of serious vehicle accidents on Australian roads but high-level analysis shows that the most critical factors are currently age (under 24), gender (male), alcohol consumption and time of day (10pm to 5am). In the past 30 years, identifying high-level factors and implementing simple but targeted overarching moderators such as seatbelts and random breath testing has provided major breakthroughs in reducing road fatalities by over 60 per cent (RTA 2004, p. 1).

Using the same kind of rationale that slashed the road toll by 60 per cent, this decision-making research identifies the high incidence causes for poor decision making and demonstrates that it may be possible to achieve disproportionably large improvements in decision making by addressing those high incidence causes as a priority.

1.4 Research Methodology and Data Analysis

Quantitative platforms such as strategic plans, organisational goals, strategic alignment and defined rational decision criteria should form the basis of good strategic decisions (Nutt 2008). However, research also shows that in practice decision making is a very subjective process heavily dependent on a person's cognitive style and invisible personal biases (Beach & Connolly 2005; Brafman & Brafman 2008; Chapman 2006; Hall 2007; Hammond, Keeney & Raiffa 2003).

To quote from a recent McKinsey Global survey on strategic decision making:

> Since its inception nearly three decades ago, behavioural economics has upset the pristine premise of classical economic theory—the view that individuals will always behave rationally to achieve the best possible outcome. Today it's clear that the vagaries of individual and group psychology can cause irrational decision making by both individuals and organizations, resulting in less than ideal outcomes (Dye, Sibony & Truong 2008, p. 1).

This research aimed to understand the causes of poor decision making by analysing inputs from business executives. Further, this line of enquiry assumed that individuals create their own versions of reality influenced by their personal values, traits and biases and that those realities will be transitory and situational. Therefore, since this research is not an objective reality and is involved in collecting and interpreting subjective data in natural decision-making settings, a qualitative research paradigm is required.

Behavioural theory predicts that executives will have subjective or distorted views of both their previous decision-making activities and the observed effectiveness of decision making by others (Bazerman 2002; Beach & Connolly 2005; Brafman & Brafman 2008; Kida 2006). These distorted views make it difficult to use case studies as a basis for understanding decision making because executives may tend to *reverse engineer* their explanations to suit the outcomes rather than admit any failure on their part (Kida 2006, pp. 201-14). Additionally, case studies are by their nature trailing indicators of past decisions and may not represent the future behaviour concerning decision making.

Ethnography probably provides an excellent method to observe and understand how a TMT makes decisions by embedding the researcher into day-to-day activities over a long period for in-depth study and observation (Nueman 2006, p. 381). However, it is very difficult to gain access to such an environment and the research findings may only be applicable to that group. Anticipated difficulty of access to data and non-generalisability therefore made ethnography an unsuitable research method.

Since grounded theory combined with intensive interviewing techniques for data collection allows the researcher to focus on the research topic and avoid many of the pitfalls of data errors through interpretation and cognitive rationalisation, grounded theory was selected as the main method for this research.

Grounded theory is a type of inductive social theory that builds towards abstract theory by making comparisons of empirical observations of social phenomenon (Nueman 2006, p. 60). Research using grounded theory begins with gathering rich data from research participants consisting of their views, feelings, intentions and actions as well as the contexts and structures of their lives (Charmaz 2006, p. 11). Rich data includes such things as extensive field notes, written personal accounts, interviews and information in records and reports. Based on detailed analysis of the rich data, theories emerge and are investigated until conclusions can be drawn.

Grounded theorists begin their studies with certain research interests and a set of general concepts. These concepts provide ideas to pursue and sensitise the researcher to ask particular kinds of questions about the topic (Charmaz 2006, p. 16). However, researchers need to be mindful of asking ‘loaded questions’ based on preconceived ideas that might drive responses in narrow prescriptive directions.

Intensive interviewing is used as a useful data-gathering tool in many kinds of qualitative research methods to enable the researcher to have directed conversations that provide in-depth information on the research topic (Charmaz 2006, p. 25). Grounded theory methods are particularly suited to intensive interviewing since both

are open-ended yet directed, shaped yet emergent and paced yet unrestricted approaches (Charmaz 2006, pp. 28-9).

The combination of grounded theory methods for data analysis and intensive interviewing for data collection allowed the researcher to collect in-depth information directed at the topic of interest. The directed questioning allowed the researcher to guide the conversation away from past case studies and other areas where participants might feel the desire to justify or rationalise past events towards future intentions and thereby avoid some of the psychological tendencies to contaminate past data. Additionally, the researcher collected rich data to provide greater context and insights into the drivers behind the activities being analysed.

Data analysis was conducted in-line with established grounded theory methods by analysing rich data for emerging trends. Initially coded into fragments, in later phases, once concepts emerge, data is coded in a more focused way. The researcher wrote memos that provide explanations for groups of codes as a further step in analysing data and to prompt data analysis early on in the research process (Charmaz 2006, p. 74). After reaching data sampling saturation, the researcher completed data sorting, and the work of reconstructing theory based on the collected data began using a constructivist approach.

1.5 Outline of the Thesis

This thesis is comprised of five chapters beginning with the current chapter, which introduces and contextualises the research by presenting background information, the research aims and methods used to address them.

Chapter 2 reviews the literature associated with decision making by TMTs from several perspectives including achieving organisational strategic alignment and current thinking on decision-making processes and associated behavioural traits that affect how we make decisions. The information facilitates the creation of a conceptual model that shapes the starting point and initial questions for the investigation.

Chapter 3 outlines the basis for selecting grounded theory as a method for data collection, interpretation and analysis and theory development as well as addressing ethical issues.

Chapter 4 includes the research findings that are analysed and presented as key concepts including a preliminary grounded theory based on an extensive and non-linear inductive grounded process.

Chapter 5 provides a critical comparison of the research findings and the existing body of knowledge to yield a comprehensive discussion on factors affecting decision making and their relationship to the research objectives. This chapter also includes a final grounded theory, supporting a high-level abstracted concept map.

1.6 Key Definitions

Definitions adopted by researchers are often not uniform. Therefore, the following key and controversial terms have been defined to establish the positions taken in this research:

Executive: A collective term used to describe a person in a senior role within an organisation. This person, as a minimum requirement, reports to the CEO or could be a board member or chairperson.

Chairperson: The leader of a governance team that oversees the performance of an organisation which is led by a CEO and their TMT. In this research, chairperson also includes those persons leading **public-sector governance organisations** and is not limited to private sector or public organisations.

Chief Executive Officer (CEO): The person who is responsible for an entire organisation and who is responsible for the performance of the TMTs as their leader. This person reports to the board.

The Board: The team of people who collectively represent shareholder and other stakeholders' interests in determining the overall business aims of an organisation. The board is led by the chairperson. The board has a direct and controlling interest in the performance of an organisation.

Top Management Team: The CEO together with those people reporting to the CEO in an organisation.

Chief X Officer (CXO): A member of the TMT excluding the CEO, an owner of a functional part of a business, such as chief financial officer (CFO), chief operating officer (COO), chief technology officer (CTO) and chief information officer (CIO).

Management Consultant: A person who has specialist expertise and works for the board, CEO or TMT. This person has first-hand experience in observing how those groups function.

Stakeholders: Individuals or groups not directly employed by an organisation but have a vested interest in how an organisation is performing. Stakeholders are typically but not limited to shareholders, market analysts, customers and regulators.

Shareholders: In this research, this is a collective term for individuals or groups who have a direct and controlling interest in the performance of an organisation. In a public company, a traditional shareholder is represented through a board member. In non-public organisations, this includes **individuals who** are directly represented by the board or governance committee such as the Australian Federal Treasury might be regarded as a shareholder in semi-government organisations.

1.7 Delimitations

Since they are mainly concerned with the high technology industries the type of participants will limit this research. However, they were chosen in this research for two principle reasons. First, the researcher is familiar with the high technology industry and has access to executive-level research subjects. Second, the product life

cycle in high technology is typically much faster than in many other industries and this leads to shorter timeframes for strategic decision making. These shorter decision-making cycles may mean that executives have more exposure to the research issues on a more regular basis constituting a rich source of data. Thus, the research may not apply to other industries or industries with longer or shorter life cycles.

Since the participants engaged in face-to-face meetings, the researcher may have imprinted certain ideas and concepts on them and thereby unintentionally influenced the data.

This research is not concerned with understanding what constitutes good or bad decision making. The research is specifically concerned with identifying the factors that collectively create an environment for poor decision making by top management. Also, this research does not include detailed statistical or quantitative analysis of the data collected although quantitative terms such as ‘most discussed’ or ‘highly emotional’ are used to occasionally provide context.

This is a qualitative research project and it triangulates many of the findings with existing literature. However, the research may not be repeatable because of other factors such as access to participants and changing business circumstances.

Most of the participants were working in Australia; therefore, research findings may not be applicable to other countries. Additionally, since TMTs in Australia are often male dominated, most participants were male. In theory, males and females use slightly different cognitive methods for managing decision-making mental processes (Goldenberg 2001, p. 89). The research findings may therefore not be applicable to female decision-making behaviour to the same extent as they are to male decision-making behaviour. The unit of analysis for this research is the TMT.

1.8 Conclusion

This chapter sets the foundation for the thesis. It introduces the research problem, issues, aims and justification. It explains the basis for selecting the methodology and justifies it. It highlights the document layout, definitions and research delimitations. On these foundations, the thesis proceeds with a detailed description of the research.

Chapter 2: Research Issues

A large amount of research has been dedicated to understanding the factors that affect decision making and the decision-making processes of both individuals and teams. This thesis is concerned with understanding how seemingly well-qualified management teams with access to vast amounts of relevant information make poor strategic decisions.

This chapter discusses the history of decision-making research from organisational, process and individual points of view with an emphasis on TMTs and takes into consideration the external and internal pressures they are subjected to.

2.1 What Is a Poor Strategic Decision?

According to Michel (2007, p. 33), the company that wins today is the one that makes the best decisions and acts on them quickly. Most scholarly literature agrees with Michel (2007) in a broad sense but there exists considerable debate about what represents good decisions, or for that matter a poor decision.

Views on how decisions should be determined as ‘good’ range from assessments of decision outcomes to assessment of the decision process regardless of outcomes. Recently, Rausch (2007, pp. 9-10) claimed that neither literature nor the text books currently available provide guidance on the issues that should be considered to ensure that decisions will be of high quality. However, Rausch does hold the view that outcomes are ***not*** a true measure of the quality of the decision (2007, pp. 10-1). He believes that sound criteria are needed to ensure, objectively, that a decision will be as good as the available information permits. Unfortunately, no proven criteria for sound decision making validated by empirical research currently exists (Rausch 2007, p. 10). However, maximising shareholder value is the dominant goal that influences management decision making in business practice. Most executives, managers and entrepreneurs are measured by the organisation’s bottom line

performance in growing profits and shareholder value (Singh & Schick 2007, p. 353). If maximising shareholder value is the dominant goal influencing management decision making, then clearly decision outcomes are also important factors in assessing decisions.

According to Michel (2007, p. 33), the best decisions are those that are aligned with the strategic intent of the organisation and developments in the market and that support the organisation's ability to perform. Bain and Company's research asserts that making good decisions means being clear about which decisions really matter followed by prompt effective action (Rogers & Blenko 2006, p. 133). Creating an Executive Intelligence Officer (EIO) to bridge the gulf between strategists and intelligence is a potential contributor to better decision making according to the Society for Competitive Intelligence (Little & Fahey 2006, p. 4). Eliminating cognitive bias and introducing healthy conflict are favoured by those researchers concerned with the psychological aspects of team-based decision making such as Hall (2007) and Simons and Peterson (2000). Interestingly, the apparent formulas for good decision making seem to be correlated with the discipline of various researchers. This finding is reminiscent of the truism 'when the hammer looks for a solution, it always sees the nail', which seems consistent with the human tendency of over confidence and seeking confirming evidence for our own theories. However, to a large extent, having so many valid descriptions of the keys to making good decisions validates Rausch's (2007) assertion that a definitive description of sound decision making is unlikely to exist in the near future.

In a seemingly obvious statement, Rausch (2007, p. 11) argues that the highest quality decision is likely to be one that considers all issues deserving thought with respect to the situation. Recently, empirical research has consistently shown comprehensiveness as the most fundamental aspect of strategic decision making (Heavey et al. 2009; Miller 2008).

However, there are some consistently common threads in various scholarly articles that highlight a core set of decision-making factors regarded as key for making effective decisions in business. These factors include consideration of all of the

relevant information, timeliness, analysis of multiple strategic alternatives, alignment between strategy and reward systems, competitive analysis, ethical analysis, appropriate expertise, risk assessment, positive team dynamics, leadership and *outcomes*. Conversely, it may be reasonable to assume that not considering some of these core decision-making factors can be indicative of poor decision making.

Behavioural tendencies can also lead to poor decision making even when proper consideration is given to the core business factors because hidden psychological biases adjust how individuals view situations. Behavioural decision-making theory was initially prompted by the observation that individuals do not follow a rational decision-making process but are subjected to their own cognitive limitations and systematic processing errors (Beach & Connolly 2005, p. 12). When initially framing their view of a situation, people are greatly influenced by their own individual value systems and those opinions are shaped by sub-conscious biases and heuristics. Further, our personality affects how we perceive the various decision options. We are significantly influenced by our emotional state when choosing options and our emotional state can change quickly.

This research is concerned with identifying the core decision-making factors and behavioural tendencies that, if absent or compromised, can be consistently related to poor decision making in TMTs. Further, if an identifiable sub-group of core factors and behavioural tendencies emerge as consistent causes, then what are the implications for business and how might these be managed in the future?

2.2 OneTel in Australia

The story of OneTel's demise is an excellent example of how combinations of flawed decision-making methods in conjunction with hidden psychological factors can negatively affect a company. In mid-2001, the mobile telecommunications company OneTel Australia collapsed. They had launched their mobile phone service despite not having completed installation of their new wireless network and without a working billing system. Consequently, lured by attractive discounted charging rates, OneTel subscribers were forced to roam onto competitive Telstra and Optus

networks for a service. Subsequently OneTel were cross-charged for service from their competition at higher levels than they could recover from their subscribers. Compounding OneTel's problems of providing a service at a significant loss, they did not have a working billing system to process and collect the subscriber usage fees. Predictably, OneTel ran out of cash and spectacularly collapsed amid accusations of illegally trading while insolvent. Hall (2007, p. 98) uses this example to describe how flaws in decision making can escalate when executives are under pressure, overconfident or part of a group.

2.3 Concept Model

To understand why organisations fail to make effective decisions, it is useful to consider the issue from the viewpoint of the two central themes or parent disciplines that form the basic components of organisational strategic decision making. These parent disciplines are the framework of the organisation's operating constraints and the decision-making processes.

Understanding the framework of an organisation's operating constraints has often taken the form of analysing strategic alignment from both an organisational and a motivational alignment point of view (Abraham 2006; Guttman & Hawkes 2004; Kaplan & Norton 2004).

The concept model below is a diagrammatic representation of these components (Figure 2.1).

Figure 2.1: Conceptual model of organisational strategic decision-making (developed for this research)

2.3.1 Parent Discipline: Strategic Alignment

An organisation's strategy should provide alignment and integration around a common reference point directing human, informational and organisational resources towards desired outcomes for customers and shareholders (Kaplan & Norton 2004, p. 10). Organisational or strategic alignment is also defined as everyone rowing in the same direction; the tighter the linkage and the better the alignment, the stronger is the likelihood of success (Abraham 2006, p. 12). In other words, an organisation is aligned when all of the tangible and intangible assets are aligned with the strategy to create value for customers and shareholders (Kaplan & Norton 2004). The lack of an effective strategy will lead to organisational misalignment.

How likely is strategic misalignment to occur? The Balanced Scorecard Collaborative (BSC) statistics quote (Punniyamoorthy & Murali 2008, p. 423):

- 95 per cent of a typical workforce does not understand its organisation's strategy
- 90 per cent of organisations fail to execute their strategies
- 86 per cent of executive teams spend less than one hour per month discussing strategy
- 60 per cent of organisations do not link budgeting to strategy.

Based on these BSC statistics, organisational misalignment almost certainty exists in many organisations.

In a strategically misaligned organisation, confusion about the overall strategy is created. Priorities are not defined by an overarching business strategy but by the self-interest of those heading up the functional silos (Guttman & Hawkes 2004, p. 36). It could, therefore, be assumed that actions based on the self-interest of the TMT introduce competing business drivers into the organisation, which then form the basis for poor strategic decisions.

2.3.2 Immediate Discipline: Motivational Alignment

Motivational alignment is concerned with ensuring that all aspects of a decision maker's personal motivation are correctly aligned with the goals of the business from a financial, risk profile, timeline and recognition point of view. However, care must be taken to ensure that alignment from top to bottom in an organisation does not undermine the willingness to question decisions and breed a self-serving problematic environment. Checks and balances must be implemented to ensure proper governance is in place and to ensure that motivational alignment predominantly created by senior management for senior management is in fact accurately aligned with stakeholder interests.

Agency theory assumes that agents (e.g. TMT or CEO) may have interests that differ from those of the principal (e.g. owners or shareholders) and that the agent is self-centred and risk averse (Chan 2008, pp. 130-1). According to Ross (1973, p. 134), who was one of the first researchers to bring agency theory to prominence, 'The

[agent–principal] relationship is one of the oldest and commonest modes of social interaction'. Researchers such as Eisenhardt (1989) suggested that aligning the interests of the agent and the principal combined with close monitoring could yield a workable solution. This kind of strategic alignment arrangement could be an outcome-based incentive aligning the interests of the TMT with those of the shareholders. The incentives could be based on improved share price, profitability, market-share or other measures. Agency theory suggests that failure to align the agent and principal's interests may lead to strategic decisions taken by TMTs that are not in the best interest of the company.

However, motivational alignment by linking the TMT's compensation to organisational performance may lead to a change in the decision-making behaviour promoting risk avoidance by the management team (Larraza-Kintana et al. 2007, p. 1013). TMTs—being relatively risk averse and having a large proportion of their income dependent on organisational results—may tend to choose lower risk strategies when compared to the board members who are typically much more diversified and risk neutral (Larraza-Kintana et al. 2007). Compensation schemes tied closely to organisational performance in uncertain environments may lead to sub-optimal strategic decision making as managers try to minimise personal risk. Risk minimisation behaviour can be especially problematic in fast growing markets such as high technology markets where product life cycles are becoming shorter and where a key requirement of TMTs is making risky choices by choosing future products and services.

Sub-optimal strategic decision making also can occur when real or perceived career risks taken by the agents contrast with moderate corporate risks for principals. Consequently, misaligned risk profiles of principals and management promote risk-avoidance behaviour within the management and affect decision making (Lovallo & Sibony 2006, p. 23).

Bender and Moir (2006, p. 84) point out that although some people see agency theory as a one-dimensional portrayal of modern executives, much of the regulation surrounding executive remuneration appears to be driven by an agency theory

approach. A string of recent corporate scandals is one of the reasons for the need for regulation. Agency theory's insistence on linking compensation of managers as closely as possible to a firm's performance has resulted in incentives reinforcing selfish extrinsic behaviour by management teams and company directors (Certo et al. 2008; Frey & Osterloh 2005). Suggestions have been made that remuneration schemes without performance incentives may overcome issues around agency theory.

Interestingly, in contrast with the traditional agency theory model, a positive association for risk taking by TMTs has been identified when compensation was more variable (Larraza-Kintana et al. 2007, p. 1015). Larraza-Kintana et al.'s (2007, p. 1014) research using surveys and archival data shows that executives may be more motivated in their decision making by preservation of the pay that maintains their standard of living than the performance-based incentive or bonus components that represent attempts to create strategic alignment. Research shows that wealth protection is a major concern for TMTs. Executives regard their not-at-risk salary component differently from their at-risk or incentive salary component. The not-at-risk component is regarded as their basic standard of living funding and the incentive is regarded as a type of upside funding. This means that executives are less likely to take business risks in their decision making if the decision creates risk for the non-incentive component of their income and threatens to affect their standard of living (Larraza-Kintana et al. 2007, p. 1015).

In a more controversial tone, Professor of Finance at Harvard Michael Jensen (2003, p. 380) has the view that 'Almost every company uses a budget system that rewards people for lying and punishes them for telling the truth. Indeed in some cases the more managers lie, the more money they make'. Clearly, Jensen does not believe that effective implementation of agency theory is a practical answer to the issue of management and control of self-interest on the part of agents responsible for creating the budgeting systems that reward dishonest actions by rewarding themselves.

Even without considering agency issues, there is strong empirical evidence that even honest people are subject to a sub-conscious 'self-serving bias'. In situations

characterised by ambiguity or discretion, it is typical that managerial decision-making judgements of what is beneficial for others conflates with what one considers beneficial for oneself (Frey & Osterloh 2005, p. 24). This tendency is one of the core issues for consideration when designing executive compensation schemes and can be especially problematic when successive levels from the board level down are measured on the same criteria because it may undermine the willingness to question decisions.

It is common practice for executives to determine their own executive compensation packages in self-serving ways. Considering the agency theory view that agents will always favour their own interests before their principal and that executives have a hidden self-serving bias, it seems that there is considerable scope to develop compensation schemes in the best interest of the employee over those of the organisation if unmonitored. In environments where compensation schemes are not in-line with shareholder interests, or agents are not closely monitored, or boards have similar compensatory mechanisms as the agents, the ingredients exist for TMTs and boards to consciously or sub-consciously create an environment for their own best interests over those of the other stakeholders (Certo et al. 2008, p. 219).

Although boards notionally represent the shareholder as the principal, when considering takeovers or mergers for example, boards often find themselves making decisions where they stand to benefit personally and therefore become the agent and principal simultaneously. This gives rise to questions about their decision-making capability and their independence and undermines the foundations of boards representing shareholders (Certo et al. 2008).

Misaligned time horizons occur when managers are motivated to focus on projects with a short-term payback that suit their immediate needs rather than long-term projects with larger potential organisational upside (Lovallo & Sibony 2006, p. 22). In fast turnover industries such as high technology industries, a manager reasons that they may not be in their current role or even organisation when some of the current projects payoff. Their natural tendency either consciously or sub-consciously is to

focus on projects that may not be best for the organisation but will provide them with the best personal result in the timeframe they expect to be involved.

In summary, motivational alignment is important to ensure that TMTs make decisions that are in the best interests of the company. With motivational misalignment, there is an opportunity for decision makers to consciously or sub-consciously be motivated by a self-serving bias that supports their individual interests over the best interests of the organisation. Motivational alignment is not only the challenge of aligning financial interests of agents and principals but must also consider the elements of relative risk profiles, timelines and recognition. One of the most effective ways to design motivationally aligned incentives is to ensure that they are consistent with a clear-shared organisational vision and goals and are monitored closely.

2.3.3 Immediate Discipline: Organisational Alignment

Organisational alignment is both vertical and horizontal. Vertical alignment is the configuration of the corporate strategy and decisions from the top of an organisation down through the various levels. Horizontal alignment refers to coordination of efforts across the organisation (Kathuria, Joshi & Porth 2007, p. 505). Expressed another way, vertical and horizontal alignment is the organisational implementation of a shared vision and organisational goals owned by the TMT. Organisational alignment enables both the senior management and management teams at every level to speak with one voice and to channel resources into an agreed-upon strategic framework (Guttman & Hawkes 2004, p. 36). Organisational alignment provides a framework to define priorities that support an overarching business strategy promoting an integrated companywide consistency. TMTs play a pivotal role in the definition of the overarching business strategy and ensuring that it is implemented organisation wide (Guttman & Hawkes 2004, p. 36). Failure to align the organisation and the organisations goals can result in a fragmented senior management team competing for resources and defining the goals of their respective business areas in isolation. One of the most problematic aspects of organisational alignment is the balance between the pressures of short-term needs and those of the longer term.

Organisational resource misalignment can occur when organisations focus heavily on short-term bottom line lagging indicators of performance such as financial measures that are 'after the event' dependent on actions and decisions taken months or years earlier and ignore current and leading long-term indicators such as current customer preferences, industry trends and shareholder expectations (Pandey 2005, p. 52).

Organisations are often under pressure to make short-term decisions at the expense of long-term decisions such as trade-offs for quarterly profitability at the expense of long-term strategies (Laverty 2004, pp. 949,50). Systematically overvaluing short-term rewards and undervaluing long-term consequences is called short-termism (Irving 2009; Laverty 2004). According to research conducted by Marginson and McAulay (2008, pp. 274-8), the causes of short-termism can be attributed to four key drivers: stock markets, performance measures, the individual and the organisation.

Meeting market expectations is a key part of a CEO's responsibility in US-style, Western economies such as Australia although Porter (1992, p. 67) notes that this is not the case, to the same extent, in Japan and Germany. In order to meet these expectations, CEOs are pressured into short-term decisions, trading long-term performance to meet quarterly expectations and secure capital (Drew 2009; Marginson & McAulay 2008; Nicholson & Cook 2009). However, several studies have revealed that the organisations that choose long-term strategies such as research and development spending and long-term value creation are rewarded by significant positive returns (Marginson & McAulay 2008, p. 275).

Since investors do not have access to long-term forward-looking indicators, they must make their decisions based on short-term performance information. The importance of short-term performance information to the investment community and the close proximity of the TMT to the investment community leads Marginson and McAulay (2008, p. 275) to controversially hypothesise that short-termism would be greater in TMTs than in lower levels of the organisation where interaction with the investment community is rare. However, based on their research results, they were not able to show a significant correlation between proximity to the investment

community and short-termism so the issue remains controversial (Marginson & McAulay 2008, p. 275).

Another potential cause of short-termism is attributed to performance measurements such as meeting budget expectations because budget cycles are typically being measured over short-term periods. Marginson and McAulay (2008, p. 288) also hypothesise that in organisations where greater importance is placed on meeting budget expectations, the greater is the possibility of those organisations considering decisions from the short-term perspective leading to short-termism; this hypothesis is yet to be proved.

Individual role ambiguity is a proven cause of short-termism attributed as a human response to uncertainty. The short-termism behaviour is a coping mechanism to deal with uncertainty by seeking more certain outcomes in order to regain control. TMT members who experience role ambiguity may value the reduction in uncertainty that accompanies short-term requirements even where this is detrimental to long-term performance (Marginson & McAulay 2008, p. 277).

Marginson and McAulay (2008, p. 277) hypothesise that short-termism can manifest in individuals as a result of a desire to conform to group norms as a form of social conditioning. This hypothesis is yet to be proven and their quantitative research shows little support for the concept.

TMTs must take action to secure the long-term value of an organisation (Porter 1992, p. 77) but short-term results must also be achieved if the organisation is to survive (Marginson & McAulay 2008, p. 274). The quandary of balancing short-term and long-term requirements leaves TMTs with two possibilities. First, taking short-term decisions that support long-term strategic alignment or, second, taking short-term decisions at the expense of long-term strategy (Marginson & McAulay 2008, p. 274). Clearly, when faced with this choice, a TMT decision to choose short-termism at the expense of long-term strategic alignment would constitute a form of poor decision making.

McKinsey surveyed 1,000 company directors around the globe in 2005 and found that there is a new willingness for boards to get more deeply involved in the day-to-day business issues and balance attention between the short-term and the long-term health of the organisation (Felton & Fritz 2005, p. 50). Bender and Moir (2006, p. 85) interviewed 35 executives from FTSE companies regarding executive compensation, many of who commented on the need to balance short-term and long-term incentives and to balance financial and non-financial measures.

In summary, vertical and horizontal alignment is essential to drive informational and organisational resource integration but directing human integration involves motivational alignment. Individuals should be motivated to support the organisational strategy through a series of carefully monitored measures to ensure alignment of incentives, recognition and risks (Bender & Moir 2006; Chan 2008; Eisenhardt 1989; Frey & Osterloh 2005; Larraza-Kintana et al. 2007; Ross 1973). Principally, because of differing risk profiles or timelines, employees may have different motivations from owners. In theory, owners align their interests with employees by creating and monitoring reward systems that drive employee behaviour in the best interests of the organisation. In practice, many shareholders allow senior management to design and develop incentive systems themselves. Consciously or sub-consciously, employees will tend to have a self-serving bias when faced with situations characterised by ambiguity or discretion (Frey & Osterloh 2005, p. 24). This self-serving bias may lead to decisions that are not in the best interests of the organisation where individual misalignment exists.

2.3.4 Parent Discipline: The Decision-Making Process

Decision making consists of a sequence of events: diagnosis, action selection and implementation (Beach & Connolly 2005, p. 2). The need for diagnosis is triggered by anomalous events that can be caused by internal or external changes. The process of investigating what to do can be a non-linear exercise that loops around and changes as the options are uncovered, until finally, an action (option) is selected. Implementation involves turning the selected action into a workable solution that

may deviate from the original action plan but end up in the desired outcome (Beach & Connolly 2005, p. 4).

There have been several streams of research into decision making spanning many years; they present what should be done in order to make better decisions. The prescriptive theory of decision making focuses on how well decision makers comply with prescriptive (normative) models as a determinant of how good the decisions are. Decision processes that followed the formula laid down in the models were regarded as rational decision making and those that did not follow the formula as irrational (Beach & Connolly 2005, p. 5). Decision aids are used to help decision makers stay on a rational path when making decisions.

Psychologists began to study the way actual decision making, unaided by rational models, took place and how it compared to the rational models of prescriptive theory. This train of research gave rise to the behavioural theory of decision making that describes what decision makers actually do (Beach & Connolly 2005, p. 6). This first generation of behavioural theory essentially took the work produced by prescriptive theorists and adjusted it to represent the affects of peoples' cognitive limitations and their systematic processing errors (Beach & Connolly 2005, pp. 7-11).

Due to dissatisfaction with the first generation behavioural decision-making theories, the second generation of behavioural theory is based on observations of professional decision makers—the way they make decisions and the cognitive process involved (Beach & Connolly 2005, pp. 9-11). This research is still in the early stages and no encompassing theories have emerged, although some mini-theories have emerged focusing on different aspects (Beach & Connolly 2005, p. 11).

Recent cross organisational research analysing 202 organisational decisions and their outcomes showed that prescriptive rational decision-making processes were more successful no matter what the urgency, importance, resource level, initial support, decision-maker level, industry sector or type of decision (Nutt 2008, p. 425). Given the effectiveness of rational decision processes, it is puzzling to find that in business, a large proportion of decisions do not follow the prescriptive theories. According to

Friga and Chapas (2008, p. 8), it is quite common to discover a lack of systematic decision making in TMTs.

Real-world decision makers often face decisions that cannot be broken down into precise questions with known attributes suitable for systematic decision making. Their decision-making tasks range from relatively simple clearly defined decisions suitable for rational techniques to those that are well defined but complex and subject to probabilistic certainties all the way through to very complex and not probabilistically certain where rational prescriptive theory is clearly not practical (Scherpereel 2006, p. 132).

When TMTs make strategic decisions, they are performing the highest leverage activity they can for an organisation. Indeed, a track record of decision successes is the most significant contribution that TMTs can make in any kind of formal organisation (Harrison & Pelletier 2000, p. 462). The quality of decisions directly relates to the business outcomes of an organisation. Based on research conducted by Bain & Company, it has been shown that high-performance organisations also have strong abilities to make good decisions and to execute them (Rogers & Blenko 2006, p. 133). In many respects, TMTs are judged by the quality of the decisions they make and rewarded for their success or criticised for their failures.

Considering that strong decision making and execution capabilities are in effect an organisational competitive advantage, it is surprising to discover that most strategic decisions are destined to fail. According to Professor Paul Nutt, who has been studying how TMTs make business decisions for over 20 years, two of every three business decisions are based on failure-prone practices (Hall 2007, p. 96).

Decision-making research has fascinated researchers for hundreds of years and originally focused on using a gambling analogy to create prescriptive methods of making rational decisions. Later research expanded to include behavioural research examining the way decisions are actually made without using rational aids. Although the prescriptive steps to making rational business decisions are well understood and research shows that rational decision-making processes results in better decisions

(Nutt 2008), 45 per cent of executives continue to rely more on instinct than facts and figures in running their businesses (Hall 2007, pp. 100-1).

The next part of this research covers the development of decision-making research and theory as it applies to business from a rough timeline point of view starting with prescriptive decision making and moving to naturalistic decision making. Prescriptive decision-making models simplify situations and ignore psychological considerations to deliver workable methods suitable for straightforward business issues. Although prescriptive decision-making models have shortcomings, they are still widely taught in business schools and popular in everyday decision-making situations. Naturalistic decision theory embraces the psychological aspects of decision making and focuses on understanding the complexity of a situation through the use of descriptive models for decision analysis.

2.3.5 Immediate Discipline: Decision-Making Methods—Simple Rational Models to Complex Psychological Concepts

Original decision-making research focuses on how to make effective decisions. While prescriptive decision making consistently yields good results (Nutt 2008), psychologists noted that in many cases, decision makers do not naturally follow the steps prescribed. Additionally, some problems are so complex that it is impossible to satisfy many of the constraints of prescriptive decision making such as knowing all possible solutions. However, even in situations where prescriptive decision-making conditions can be met, decision makers often chose alternative decision-making strategies (Bazerman 2002, p. 5).

2.3.5.1 Prescriptive Decision Theory

Prescriptive decision theory is the application of normative rational models to decision- making typically including the following steps (Bazerman 2002; Beach & Connolly 2005; Nutt 2007, 2008; Robbins et al. 2001):

- define (frame) the problem (diagnosis)

- select the action (policy and choice)
    - identification of the decision criteria
    - allocation of weights to the criteria
    - identify solution alternatives
    - gather data to evaluate solution alternatives
    - evaluation of solution alternatives
    - selection of best solution alternative
- implement and monitor the best solution alternative.

In theory, proper application of a rational decision model should produce the best decision for the problem at hand (Nutt 2008). It is important to note that a rational decision-making process can only be effective if the fundamental decision inputs and outputs have been established including the overall business objectives and desired outcomes.

Rational decision-making models make several assumptions including (Robbins et al. 2001, p. 166):

- the problem is clear and unambiguous and complete information is available
- all viable alternatives and the consequences of selecting each one are known
- decision criteria are clearly understood
- decision criteria are constant
- time or costs are not constraints
- maximum payoff is the criteria for the decision choice.

2.3.5.2 The Role of Decision Framing and Expertise in Problem Diagnosis

A decision frame is a mental construct of elements and the relationships among them that are associated with a situation that is of interest to a decision. The frame ties situational events to the decision makers' ongoing experience, thereby endowing those events with meaning; it tells the decision maker what is going on (Beach & Connolly 2005, pp. 16-29). People are quick to amend or completely replace frames

when faced with disconfirming evidence. Importantly, if a person has not recognised and framed a situation correctly, they are in danger of taking steps based on wrong information and subsequently, they are in danger of making a poor decision.

One of the benefits of experience is the ability to quickly recognise situations and place them into the correct framing. Once situations are framed correctly, action can be taken based on experience of what has and has not worked in the past. However, caution should be exercised because research in 2002 revealed that 45 per cent of executives said they rely more on instinct than on facts and figures in running their businesses and this quick on-the-run approach often results in poor decision making (Hall 2007, pp. 100-1). Running their business on instinct means using a decision-making model known as recognition-primed decision making (RPD) defined as the sub-conscious process created out of distilled experience (Beach & Connolly 2005, pp. 32-3).

Since decision frames form the basis of how we initially see problems, we need to think about how other people frame the same problem to avoid the risk of being misinterpreted and to reach agreement. Discussing differences to arrive at a mutually shared idea aligns decision frames and avoids misunderstanding. However, decision frame alignment is achieved more subtly through shared beliefs and values in the form of culture (Beach & Connolly 2005, pp. 23-8). In organisations, a shared framing effect compounds over time as those that share the company culture stay and those that do not share it find it easier to leave than effect a change (Beach & Connolly 2005, p. 25).

In familiar situations, strongly shared beliefs and values when combined with expertise will allow TMT decision makers to quickly recognise and frame decision problems and formulate effective solutions promoting coordinated decision making. However, the affect of reinforcing the company's culture results in an organisation that becomes more and more resistant to change over time and less able to deal with new problems (Beach & Connolly 2005, p. 27).

Strongly shared company culture and decision framing has been the subject of research called ‘groupthink’. The concept of groupthink was first proposed by Irving Janis of Yale University as a group-level information bias. He identified that senior decision makers that focused solely on building relationships as a way of forming an effective team might develop bad decision-making habits in order to preserve team unity. Janis found that consensus decisions might lead a group to believe that all their decisions were perfect and that any dissenting views are suppressed to preserve unity (Peterson 2007, p. 75).

The most controversial aspect of Janis’s groupthink theory is the idea that team characteristics traditionally seen as having a positive influence on decision-making and team effectiveness such as cohesion and collective efficacy can lead to negative decision-making outcomes (Kerr & Tindale 2004, p. 640).

2.3.5.3 The Role of Policies, Habits or Scripts in Action Selection

Policies, habits and scripts are essentially the same thing when discussing decision making. They are the experience base (precedents) for decisions taken by people when they come across familiar situations. Policy essentially determines how the decision maker makes his or her decision after they have framed it. Policy use is based on the recognition of a situation to be familiar enough to be able to determine what to do.

Recognition policy is used when a situation is so similar to a previous situation that the decision maker immediately knows what to do and how to do it. *Inference* policy is used when a decision maker finds that they can determine what to do next by making an educated guess. *Choice* policy is typically used in strategic decision making because the situation requires detailed analysis and neither recognition nor inference provides adequate guidance for the decision maker to choose the best solution (Beach & Connolly 2005, pp. 32-62).

RPD is the most researched form of *recognition policy*; it involves critical real-time decisions in situations such as fire fighting, police activities and military activities.

The researched situations involve individuals taking decisions in familiar environments after extensive training where they can draw on their past experience to make fast and accurate decisions (Beach & Connolly 2005, p. 33). The RPD model has three levels: 1) where a situation matches a previous scenario and the same action can be applied, 2) where the decision maker performs mental simulations for an evaluation varying past actions and 3) where past actions are analysed to eliminate flaws and mental simulations are performed to find a solution (Beach & Connolly 2005, p. 33). Often, the available time is the determining factor in which the level of RPD is used, for example, in a situation such as a war zone, there may not be sufficient time to analyse several scenarios before being required to take action.

Inference policy decisions are statistical in nature and essentially use information about past experiences to project what is likely to happen in the future. This decision-making process can be computerised as a multiple regression analysis but it fundamentally uses past data comparisons to provide the policy for a future decision. When executives make decisions based on their feel for a situation—an educated guess—they use intuitive decision making. Research shows that intuitive decision making is usually associated with situations where high levels of uncertainty exist or there are time pressures (Robbins et al. 2001, p. 174).

Choice policies are used when recognition-primed or inference policies are insufficient, decisions are difficult and there is enough time to permit analysis. Prescriptive decision-making theory describing how to make choices is a core part of rational decision making, and therefore, it is a main element in strategic decision making and an important part of this research. However, it must be understood that the normative models used in prescriptive decision making are not trying to replicate what decision makers actually do; rather, they are simplifying the problem in order to provide solid methods to make decisions (Beach & Connolly 2005, p. 7).

2.3.5.4 Rational Decision Choice

Once a situation has been identified as requiring a choice, prescriptive decision theory requires the decision maker to follow the decision cycle steps by first identifying the solution alternatives with the aim of selecting the alternative with the most desirable consequences.

Following the identification of the various decision alternatives, the decision maker enters the information-gathering step. According to recent research, specifying the problem as a quantitative performance gap between the current situation and a desired situation as opposed to a qualitative or impressionistic gap yields better information searches and consequently better information identification (Nutt 2007).

Decision analysis is carried out using essentially a gambling analogy where the decision maker assigns probabilities and values to each possible solution and then selects the solution offering the best payoff. The actual analysis can be carried out using various decision aids such as decision trees, decision matrices, net present value (NPV) and so on. Since the process is essentially a mathematical probability calculation, much of the work can be computerised and it is simple to compare many possible solutions.

2.3.5.5 Issues with Rational Decision Making

Although the rational decision-making model consistently yields the best results for simple problems (Nutt 2008), it is difficult to apply in a practical sense when decisions are complex or characterised by high levels of uncertainty where, for example, all viable alternatives may not be known. In cases where the rational model assumptions can be satisfied, care must be taken to eliminate factors that contaminate the decision process. These include the conscious or sub-conscious biases and heuristics of the decision makers and the decision-making environment.

In addition to conscious and sub-conscious biases and heuristics guiding our decision-making behaviour research, a survey conducted in 2002 revealed that 45 per cent of executives stated they rely more on instinct than on facts and figures in running their businesses and this quick on-the-run decision making often results in

poor decisions (Hall 2007, pp. 100-1). Although rational decision making is considered more acceptable in business, often the decision maker does not have the necessary rational environment and must resort to other ways to make decisions.

2.3.6 Immediate Discipline: First Generation Behavioural Decision Theory

Psychologists began to study the way actual decision making unaided by rational models took place and how it compared to the rational models of prescriptive theory. This train of research gave rise to the behavioural theories of decision making that describe what decision makers actually do (Beach & Connolly 2005, p. 12). This first generation of behavioural theory essentially took the work produced by the prescriptive theorists and applied adjustments to represent the affects of people's cognitive limitations and their systematic processing errors (Beach & Connolly 2005, p. 12).

Being human defines the potential to introduce failure into a decision-making process. There is a natural tendency for managers to introduce their own biases into their decisions both consciously through agency theory-type behaviour and sub-consciously through universal biases (Lovallo & Sibony 2006, p. 20). Biases are evident when decision makers seek solutions through their own perceptive lenses such as a finance manager's predisposed natural position to define problems as finance problems and so on for marketing and engineering. Biases are a natural condition and occur in most aspects of our life including *all* stages of a decision-making process.

Another naturally occurring behavioural factor first highlighted by Amos Tversky and Daniel Kahneman (1979) called bounded rationality is the sub-conscious systematic behaviour that humans use to simplify their decision making. The bounded rationality or satisficing model for decision-making works by capturing all of the complexity of a decision into a simplified mental model and then searching for familiar solutions until one is identified. Once a solution has been identified as good enough, the search for further solutions ceases and implementation begins. The combination of biases and simplifying strategies creates a unique bounded mental

view of a situation. These simplifying strategies for making decisions are called 'heuristics', meaning standard rules that implicitly direct our behaviour (Bazerman 2002, p. 5).

The three main heuristics proposed by Tversky and Kahneman are representativeness, availability and anchoring and adjusting (Beach & Connolly 2005, pp. 82-5). *Representativeness* is the tendency to predict outcomes from small samples demonstrated by the 'gambler's fallacy', that is, believing that tossing a coin to give several head results in a row means that a tails result is more likely. The *availability* heuristic works by giving higher probability to outcomes that are easier to recall so things seen recently are believed to be more probable that things seen earlier. The *anchoring and adjustment* heuristic is the tendency for people to anchor their initial estimate of some value around an initial guess (the anchor) and then resist any significant changes to the anchor value when presented with the need to adjust. Adjustment is typically in the right direction but too small to significantly correct their error.

Loss aversion is also a part of prospect theory (Bazerman 2002, p. 47; Kahneman & Tversky 1979); it illuminates the heuristic human tendency to associate greater value to losses than gains of the same value. Thaler (2000, p. 137) claims that 'losses hurt us about twice as much as gains make us feel good'. This means that for a given strategic decision, if the initial decision framing is expressed as a potential loss rather than a potential gain, the decision outcome may vary. An example of this type of framing could be a request for a price reduction to secure a large contract as 'we need to sell for $XX to win the contract' or alternatively 'we need to sell for $XX or we will lose the contract'. Prospect theory dictates that even though these are the same requests, the resultant approval or disapproval by the management may be different depending on which way the request was anchored because of the different risk preferences associated with subconscious loss aversion biases. Prospect theory was cited as a major contribution in earning Kahneman the Nobel Prize in economics in 2003.

2.3.6.1 Issues around Biases, Heuristics and Prospect Theory

The prescriptive theory and the associated normative models for decision making are proven to be effective ways to make decisions in business. However, first generation behavioural models recognise the problems with application of prescriptive theory and changed various aspects to account for biases and heuristics and prospect theory (Beach & Connolly 2005, p. 184). Much of the research into controlling the effects of biases, heuristics and prospect theory has focused on controlling the decision-making environment.

A stressful environment affects the way individuals and teams make decisions (Kerr & Tindale 2004, pp. 630-1). As an example, a manager in a stressful situation resulting from a perceived greater risk of termination is likely to engage in greater risk taking than those managers who perceive a lower risk (Larraza-Kintana et al. 2007, p. 1015). Further, a group under stress will exhibit a greater desire for consistent opinions and preferences among members to provide uniformity, which satisfies a need for closure on issues (Kerr & Tindale 2004, p. 631). Additionally, a stressful situation will tend to amplify the influence that more powerful members have and may lead to a yielding-behaviour by others to accept majority views on issues (Kerr & Tindale 2004, p. 631). Stressful conditions lead to a ‘closing of the group mind’, resulting in dismissing unpopular options and acceptance of autocratic leadership by other team members (Kerr & Tindale 2004, p. 631). This means that not all alternative options that are viable may be considered during decision making in stressful situations.

Stress is not the only reason why alternative decision options may not be considered especially when the TMT already shares ideas on potential solutions to a problem. Research has shown that shared ideas are given much greater weight in discussions when compared to dissenting ideas. The difference in weight is thought to be approximately an exponential reduction in appeal for dissenting ideas when compared to the weighting for popular ideas (Kerr & Tindale 2004, p. 634). This means that TMT members will give more weight to ideas similar to their own and less weight to those that differ from their own. The net result is that different ideas are often ignored to varying degrees depending on their distance from the median

and the rest of the team clusters around popularly shared ideas (Kerr & Tindale 2004, p. 636). The implication for decision making is that there will be a tendency to restrict consideration of strategic alternatives to only those ideas that are most shared.

Shared information is the information that most members of a group are already aware of and research shows that groups focus on discussing shared information at the expense of unshared information reducing the discussion on strategic alternatives (Kerr & Tindale 2004, p. 637). Additionally, once groups have formed initial preferences, they are reluctant to change them and can resort to ignoring new disconfirming information that is inconsistent with their formed preferences (Greitemeyer & Schulz-Hardt 2003, p. 324). Researchers have proposed decision team heterogeneity as one way of bringing diversity to the discussion and promoting a greater range of strategic choices than a homogeneous group might (Eisenhardt, Kahwajy & Bourgeois 1997). However, much of the benefit of team heterogeneity may disappear given the tendency for team members to only share information already known to the group.

Shared mental models occur when a group has similar experiences such as previous problem solutions. Research shows that groups of decision makers who share mental models often do not even debate the merits of decision recommendations in over 60 per cent of cases but the group simply accepts the judgement of the person recommending a decision (Kerr & Tindale 2004, p. 639).

> It has been shown that group dynamics can bind group members together and bind them to their failings and excesses. Group deception can become dominant and can prevent individuals from reality testing their actions (Hall 2007, p. 102).

To combat the issues around groupthink, researchers have identified a need for conflict within management teams to ensure that more options are considered and decision making follows a rational process (Eisenhardt, Kahwajy & Bourgeois 1997, p. 43). However, the need for TMTs to work together as a cohesive and effective team to create and implement a strategy is critical to an organisation. Positive conflict focusing on the issues surrounding a decision-making situation will allow many issues to be raised and discussed to arrive at an optimal solution without

sacrificing team cohesiveness or effectiveness. However, it is interesting that conflict is often minimal in TMTs and agreement or apparent agreement is much more the norm in TMTs than one might predict (Eisenhardt, Kahwajy & Bourgeois 1997, p. 43). Evidence is overwhelming that low conflict levels in decision making are associated with poor decisions ranging from the Vietnam war to the Challenger space shuttle disaster (Eisenhardt, Kahwajy & Bourgeois 1997, p. 44). Lack of conflict can also occur where a dominant CEO crushes dissention, where time pressures make debate difficult or where team members want to be seen as 'team-players' and do not want to appear uncooperative or foolish.

Heterogeneous teams are more likely to have conflict when they include members with varying backgrounds such as gender, education, age, experience, demographic characteristics, ethnicity and socioeconomic origin. Age differences are very powerful motivators for conflict and a spread of more than 20 years is not unusual in top-performing TMTs according to research conducted by Eisenhardt et al. (1997, p. 46). TMT heterogeneity provides the basis for differing viewpoints but TMTs have to meet frequently to be able to develop a working relationship and go through the process evaluating their conflicting points of view and various alternatives to develop good decisions. However, the Balanced Scorecard Institute research indicates that 86 per cent of executive teams today spend less than one hour per month discussing strategy (Punniyamoorthy & Murali 2008, p. 423), which means that frequent meetings to openly discuss conflicting views is a rarity in modern organisations.

More recent work on the value of conflict in organisations has focused on the issues associated with the tendency for conflict to turn from positive *task-based* conflict into destructive *relationship-based* conflict. Task conflict is usually associated with effective decisions and relationship conflict is associated with poor decisions (Simons & Peterson 2000, pp. 102-3). Task conflict is generally regarded as beneficial because it creates better quality decisions and it builds support for the decisions that are taken (Simons & Peterson 2000, pp. 102-3). Better decisions result from greater cognitive understanding by team members of the issues. Research by Amason (1996, p. 128) has shown that greater task conflict in decision making builds effective acceptance of the final decisions, leading to higher satisfaction among team

members and promoting a desire to stay within the group. The positive relationship is in part derived from team members voicing their own perspectives.

Positive relationships are hampered when levels of conflict become extremely high, leading to dissatisfaction of team members, which reduces team commitment. Thus, the positive link between task conflict and decision making is not maintained. Short decision cycles and task conflict are shown to be effective but long decision cycles caused by team members using task conflict to slow down the decision-making process also creates dissatisfaction and frustration (Amason 1996; Simons & Peterson 2000).

Dissatisfaction and frustration are also the hallmarks of relationship conflict defined as the perception of personal animosities and incompatibilities within a decision-making group. Relationship conflict gives rise to negative effects on group satisfaction and commitment affecting decision quality in several ways by limiting the information processing ability, increasing stress and anxiety and encouraging antagonistic or sinister behaviour (Simons & Peterson 2000, p. 103). These factors can be combined to create a scenario where working together as a team is impossible.

Interestingly, a compilation of previous research by Simons and Petersen (2000, p. 103) shows that there is a strong correlation between task conflict and relationship conflict (mean r = .47), which is why encouraging task conflict and discouraging relationship conflict may not be a workable solution to improving decision making. They theorise that the correlation exists for potentially three reasons. First, through their own biases and filtering, members of a group discussing task conflict can misinterpret other members' questioning as a personal conflict attack and react on a personal conflict basis to create a chain reaction and a self-fulfilling prophecy. Second, during task conflict discussions, members may use emotionally harsh language that is likely to be attributed as a personal conflict. Additionally, harsh language is seen as disrespectful and people care deeply about being treated with respect. Being treated with disrespect promotes a relationship conflict. Finally, they theorise that personal conflict is sometimes disguised as task conflict when one member of a team wants to make things difficult for another team member but this

conflict can easily be detected because it is stable across issues, whereas task conflicts change form issue to issue.

Simons and Petersen (2000, pp. 103-4) were able to show that high levels of intergroup trust significantly reduced the occurrence of relationship conflict compared to average or low intergroup trust levels. They theorise that much of the misinterpretation of task conflict as relationship conflict is because of lower levels of trust in the TMTs.

The balance between task conflict and relationship conflict can be directly affected by the management style used in discussions between TMT members. Specifically, empirical research demonstrates that if a win-lose or competing style is used where members are not encouraged to collaborate but to fight for their own recommendations as solutions to issues, then task conflict quickly turns into relationship conflict (DeChurch, Hamilton & Haas 2007, pp. 72-8). The research also found that a cooperative management style during conflict resolution fosters the maintenance of task conflict orientation. The implication for decision making is that in lowering the occurrence of relationship conflict and raising the level of task conflict, TMTs are able to make better decisions.

One of the ways to lower the occurrence of relationship conflict is to establish a basis for intergroup trust and provide a cooperative management style in deliberations. Empirical research has shown that top-performing groups consistently manage conflict through resolution strategies, which include focusing on content as opposed to delivery style, assigning work based on competencies rather that arbitrary allocation and being transparent about how decisions are reached (Behfar et al. 2008, p. 170).

Even when conflict is task-based, there are less obvious other issues that can derail the decision-making process. Overoptimism and overconfidence are the heuristic tendencies to overestimate the accuracy of our answers when responding to questions of moderate or extreme difficulty or to underestimate risks (Bazerman 2002, pp. 31-3). Overoptimism leads to issues such as unrealistic forecasts, underestimating

competitive forces and overestimating internal capabilities. As an example, almost everyone believes that they are in the top 20 per cent of the population when it comes to managing a business (Lovallo & Sibony 2006, p. 21). Confidence is an important part of effective management but potential problems can arise in business when management is asked to make decisions about the future without a detailed understanding of the issues. The invisibility of overconfidence in decision making makes it very problematic to detect because it becomes part of our routine thinking processes.

The confirmation trap is also an invisible heuristic bias to instinctively search for information that confirms assumptions rather that search for disconfirming evidence. This occurs even when the disconfirming information is more powerful and important (Bazerman 2002, pp. 34-5). In a decision-making situation, this bias prevents managers from understanding the balanced true picture of the possible benefits and consequences of various alternative strategic options and so potentially choosing an ineffective strategy.

Entrapment is defined as an increasing commitment to an ineffective course of action (McElhinney & Proctor 2005, p. 189). Entrapment can occur when managers take a poor strategic decision and then subsequently realise that they are making a loss of some kind. The resultant decision-maker behaviour may be strongly influenced by a loss aversion reaction called prospect theory. Kahneman and Tversky (1979) discovered prospect theory, and they theorised that ‘Once decision takers recognise that a mistake has occurred and a loss has been incurred, there is a tendency to value any gains that can arise from persistence with the strategy more highly than further losses that might be incurred’ (McElhinney & Proctor 2005, p. 190). Bazerman (2002, pp. 138-40) describes this behaviour as the non-rational escalation of commitment where decision makers have a tendency to make subsequent decisions that continue the commitment beyond the level suggested by rationality. One serious issue with entrapment and decision making is the human tendency to use past actions for future decisions where decision makers have a natural bias tendency to escalate commitment to original decisions especially when receiving negative feedback

(Bazerman 2002, p. 79). This can be especially problematical when the decision maker is in a powerful position, such as a CEO.

CEOs have tremendous managerial control over processes such as the decision-making culture. However, their personality is subject to all of the biases and cognitive style issues associated with other TMT members. CEOs should be aware of how their own personality interacts with the members of their TMT and select TMT members to create the culture they want (Peterson et al. 2003). CEOs can choose how they wish to develop the decision-making processes for their TMTs, from intimidating through to open and tolerant approaches. Intimidating environments breed distrust and double dealing, whereas open tolerant environments promote moderate risk taking and collaboration (Peterson et al. 2003, p. 804).

In summary, first generation behavioural decision theory attempts to utilise the prescriptive theory and normative models of rational decision making by adjusting them to take into account biases, heuristics and prospect theory. However, the underlying assumptions are still based around a gambling analogy.

2.3.7 Immediate Discipline: Second-Generation Behavioural Decision Theory

The second generation of behavioural decision theory dispenses with the gambling analogy and looks for decision factors and theory construction in other areas that bear no resemblance to the rigid prescriptive constructs of rational theory such as emotion.

2.3.7.1 Emotions in Decision Making

One of the assumptions of rational theory is that emotion has no effect on a decision makers' decisions (Hermalin & Isen 2008, p. 17). However, much psychological literature shows that the current emotional state of a decision maker can have a significant effect on their decision making, problem solving and behaviour especially when they are mildly positive (Hermalin & Isen 2008, p. 17). Alice Isen from Cornell University has been studying the effects of mild positive emotion on mental

performance and has discovered that a mildly positive mood leads to decision makers being more creative, more risk averse and better able to solve complex problems; decision makers who are in a positive mood will tend to select actions that maintain their positive mood (Beach & Connolly 2005, p. 100). However, emotional anger tends to be a call to action by motivating decision makers to focus on issues and dealing with them (Peters et al. 2006, pp. 81-2).

When faced with uncertainty, research has shown that decision makers tend to avoid choices that may lead to emotionally regretful outcomes. However, bad outcomes are not always regretful ones. If a choice to do nothing would have resulted in a bad business outcome, then doing something else and still getting a bad outcome may not be regretful because it was justified (Beach & Connolly 2005, pp. 101-3).

Regret avoidance may be one of the key reasons for behaviour known as the sunk cost trap. Bad consequences of a previous decision may tend to keep decision makers supporting the original decision in the hope that things turn out alright and regret can be avoided, for example, a bad loan provided by a banker (Hammond, Keeney & Raiffa 2003, p. 5).

Decision makers display a strong bias towards alternatives that perpetuate the status quo and the more choices a decision maker is presented with, the stronger the attraction of the status quo. The source of the status quo trap lies deep within the decision maker's psyche, as a desire to protect their ego from damage by avoiding criticism or regret (Hammond, Keeney & Raiffa 2003, p. 4). Consequently, individual decision makers may sub-consciously choose status quo options to provide a less risky alternative to a decision.

Similar emotional issues to those identified in an individual's decision-making capacity exist in a group situation. Traditionally, organisational and group interactions were theorised on normative game models called game theory and normative negotiation models. These models were derived from rational decision-making theory but failed to take into account observed aspects of fairness and cooperation by assuming that individuals will always seek to maximise their share at

the expense of others (Beach & Connolly 2005, pp. 118-20). In contrast to traditionally assumed rational behaviour, the area of the brain that processes emotions has been shown to predict decision making in the Ultimatum Game (Wout et al. 2006, p. 566). Research shows that in a game where one player offers a second player a share of a prize that if accepted rewards both players with their respective shares but if rejected causes both players to lose their shares, players act irrationally. In all cases, the fair offers were accepted and unfair offers were rejected at an increasing rate depending on the degree of unfairness. This research highlights three interesting factors about the applicability of rational decision-making normative models and fairness. First, a rational decision model assumes that the person offering the share amounts would offer a split such as 99 and 1 (assuming a total reward of $100 to share), which did not happen in most cases. Second, according to rational theory, the player accepting the share of the reward should take anything offered, which also did not happen: over 60 per cent rejected an 80/20 split and 80 per cent rejected a 90/10 split, resulting in neither person getting any of the prize. Third, the area of the brain that was active during the decision to accept the unfair split offer was the part of the brain responsible for emotional responses. Interestingly, when the same unfair offers were computerised and presented as an offer from a machine to a respondent, the acceptance rates for unfair offers was 50 per cent higher than unfair offers from other participants (Wout et al. 2006, p. 566). So participants mostly behaved in fair and cooperative way and became irrational and angry when other participants did not reciprocate and participants expected a computer program to show elements of fair behaviour but only to about half the people.

2.3.7.2 Organisational Decision Making

Organisational decision making is complex and in the initial stages relies on group shared frames of events to define problems (Beach & Connolly 2005, p. 124). Shared frames are established through a common organisational culture but, as described in the framing discussion, individuals never have exactly the same framing because of their individual ways of conceiving problems. Unless special care is taken to create a clearly defined frame that explicitly describes a problem, it may be incorrectly assumed by individual group members that their frame is correct and that others also

share their reference frame. Beach and Connolly (2005, p. 124) assert that the result of different framing by individuals considering group decisions who believe that they share the same frame results in ill-defined problems and processes that look like chaos to the outside observer.

The outside observer might also see a chaotic process when power is not evenly shared in TMTs and individuals tend to guard their own interests, attempt to maintain status quo and look for confirming evidence that they have the right solutions. All of these factors lead to a very complex and disorderly decision-making situation unless order is somehow imposed on the process.

Beach and Connolly summarised several organisation models that have been developed to try and explain how various organisations make decisions including the rational model, information model, structural model, garbage can model and the participation model (2005, pp. 125 - 9). The rational model described earlier works very well but it is often not practical because not all alternatives are known and people do not behave rationally. The information or satisficing model presumes that a search for a solution stops when one is found by looking back at previous solutions to decisions until a sufficient one is found. New options are only considered when all old options are demonstrably unsuitable, which happens in about 20 per cent of cases (Beach & Connolly 2005, p. 125). The structural model assumes that problems are decomposed into the smallest parts and distributed to responsible parties in the organisation, and the resulting solutions are reassembled into a meta-decision by senior management. The garbage can model assumes that somehow the organisation just rolls along incrementally following the path defined by its obligations. Finally, the participation model assumes that more ideas and inputs contribute to better decisions especially when advantage can be taken of expertise (Beach & Connolly 2005, pp. 128-9). Although the participation model is popular, a possible downside includes the promotion of groupthink and the tendency for group members to only talk about shared information, that is, information that everyone already knows at the expense of new information known only to individuals. Additionally, a phenomenon known as ‘risky shift’ has been observed in groups where groups take

more extreme positions on risky decisions than the individuals in the group would have taken individually (Beach & Connolly 2005, p. 132).

The implicit favourite behavioural decision-making model is designed to deal with complex non-routine decisions. In this model, the decision maker implicitly selects a preferred alternative early in the decision process and biases the evaluation of all other choices (Robbins et al. 2001, p. 170). Interestingly, this model evolved from studying the way MIT graduate management students trained in rational decision making selected job offers. They students selected an implicit favourite decision although they knew how to make rational decisions and the criteria was not complex or ambiguous and ideally suited to rational decision-making models (Robbins et al. 2001, pp. 170-1). While the decision-making process outwardly appeared to be a rational process of trading-off alternatives, the decision in reality was primarily based on shaping the criteria to the implicit favourite to suit the student's intuitive feelings not rational objectivity. Once the shaping of criteria and selection of a candidate has taken place, decision makers are fully convinced that they have made the correct (rational) choice.

2.3.7.3 Non-Gambling Decision-Making Theories

As discussed earlier, not all theories rely on the gambling-based trade-off analysis to explain the behaviour during decision making. When a situation is recognised to be so similar to a situation encountered before, the same behaviour that worked before can be used again. This is called RPD, and it works at different levels depending on the match of the current situation to a working solution of a previous situation. When situations are recognised to be similar enough so a solution to a problem can be found using an educated guess, the inference decision-making model assumes the situation can be determined using cues from the past (Beach & Connolly 2005, pp. 139-41).

Narrative theories approach decision making from a viewpoint of 'thinking about' solutions to decision problems. The major narrative-based decision theories are Jungermann and Thuring's (1987) scenario theory, Pennington and Hastie's (1992)

story theory and Lipshitz's (1993) argument theory (Beach & Connolly 2005, p. 142).

Scenario and story theories are essentially about deriving decisions by building up stories based on what might happen in alternative future states (scenarios) or building up what may have happened in the past to create the present state (stories). The scenario theory is often used in business in a forecasting sense by starting with a known state and then creating alternative scenarios for future states such as a worst-case scenario versus a best-case scenario to understand, for example, the boundaries of potential sales of a new product into a particular market. The scenario model can be then used to estimate any number of alternative future results by using an if-then proposition to arrive at multiple future forecasts. A decision maker then selects the scenario that most closely resembles reality as it is or as they intend to make it and uses the resultant forecast as a basis to make a decision.

The story theory is similar to the scenario theory in that a story is built up out of information but the theory is mostly oriented around interpretation of past events in order to make a decision about the future as in a jury verdict, for example. Creating stories from reviewing historical information has been researched considerably and it was found that most people were adept at ignoring irrelevant information and adept at making inferences from their own story construction (Beach & Connolly 2005, p. 144 5). The final story built up by combining all the evidence forms the basis for the decision maker to choose the verdict that fits best with the story they created (Beach & Connolly 2005, pp. 144-5). Clearly, there are issues with decision making by story theory in that each individual applies their own cultural values and biases to frame the elements of the story and therefore a group has several different cognitive versions of what they believe actually happened.

The argument theory developed by Lipshitz (1993) views uncertainty as the motivator for decisions: a decision maker is motivated to make a decision to reduce uncertainty (Beach & Connolly 2005, p. 147). Uncertainty occurs when the decision maker does not know the action to take in a given situation. The desire to reduce uncertainty requires the decision maker to assess their actions available and think

about the most effective one by reviewing past actions and weighing the pros and cons of the situation to develop new actionable alternatives to reduce uncertainty.

Incremental theories also involve assessment of prior decisions but in a different way to the argument theory. Considering the decision making in public administration, Lindblom (1959) proposed an alternative method of decision making called the method of successive limited comparisons (increments) after observing the actual decision processes and comparing them to traditional prescriptive theory (Jennings & Wattam 1998). Lindblom (1959) first found that in complex decision-making situations, such as public policy, it is impossible to derive a single outcome that satisfies all parties when many stakeholders are involved with their differing subjective goals and values. Second, it is impossible to assess all the possible outcomes of public policy decisions beforehand. Third, many public policy decisions have to be made without full knowledge of the consequences of the decision and how it will affect stakeholders. Lastly, it is unlikely that all of the possible options will be known or available to the decision makers (Beach & Connolly 2005, p. 149). The net outcome was the realisation that traditional rational analysis and decision making could not be applied to public policy situations.

Lindblom (1959) proposed his incremental theory as a solution to public policy decisions as a way of satisfying all of the stakeholders but simultaneously taking decisions that if found to be flawed could be reversed, reanalysed and improved and then reapplied. He noted that the way the theory satisfies all stakeholders is by focusing on the agreed problems in the public domain rather than seeking consensus on what are the agreed goals. The decisions focus on the undesirable parts of status quo and take decisions through small provisional changes to remedy problems (Beach & Connolly 2005, p. 149). Only a limited range of alternatives that are small changes from the status quo are considered. Once changes are implemented, feedback from stakeholders determines if the changes should be rolled back or kept and modified in the next incremental change. In this way, public policy evolves or ‘creeps along’ over time on what amounts to a trial and error method of developing policy. Lindblom (1959) also recommends the incremental theory of decision making

to small businesses and individuals as an approach to addressing complex problems claiming that rational analysis is impractical and futile.

Since sweeping change in public policy occurs infrequently, one of the key observations made by Lindblom (1959) was the tendency for incrementalism to focus policy decisions on the agreed undesirable parts of the status quo with small cyclic adjustments (Beach & Connolly 2005, p. 149).

Later research into incrementalism by Connolly (1988) investigated the implementation aspect of Lindblom's theory and developed a modified theory that includes the implementation cycle within perpetual decision-making cycles (Beach & Connolly 2005, p. 151). The concept is that as a decision is made and implemented, the results affect the decision makers' cognitive view of the issue, which results in a small change in the locus of the decision. The resulting changes in the locus of the decision criteria provide the constant shift in policy subject to the lessons of earlier implementations.

An individual's behaviour is very strongly influenced by their ethical and moral beliefs that form the basis for what is and is not acceptable behaviour (Beach & Connolly 2005, pp. 154-5). Etzioni (1988) developed three questions to demonstrate how ethical decision making differed from rational or socially motivated decisions. First, he points out that rational or utilitarian decision making is about maximising utility, whereas socially based decision making is driven by the need to conform to social norms and ethical decision making is driven by both utility and social norms, but those norms are subsidiary to the ethical considerations (Beach & Connolly 2005, p. 155). Second, he proposes that a utilitarian will always choose the highest utility, the socially motivated decision maker will seek to satisfy the expectations of the larger community and the ethically motivated decision makers will use emotions and value judgements to guide them. Finally, Etzioni (1988) notes that the utilitarian view is that people make decisions on their own, whereas socially motivated decisions are made in effect to what is socially acceptable to the larger group and ethical decision making is governed by the individual with reference to the greater group but guided by their own principles (Beach & Connolly 2005, p. 156).

2.3.7.4 Image Theory

Image theory is an attempt to describe decision making as it actually occurs (Beach & Connolly 2005, p. 180). The theory recognises that decisions occur in steps such as screening out unacceptable options followed by choosing the best option from the survivors (Beach & Mitchell 1996, p. 160). The interesting point being that *screening* focuses on what is wrong with options and *choosing* focuses on what is right, which are two quite different activities. Once adoption choices have been made, decision makers routinely revisit the progress of the implementations of their decisions to test if they remain compatible with the achievement of their goal. Image theory has been adapted to describe both individual decision making and organisational decision making.

The concept of images is central to the theory. They represent visions held by individuals and organisations that constitute how they believe the world should exist. When considering individuals, the theory refers to these images as the value image, trajectory image and strategic image. The value image is based on an individual's ethics, morals and beliefs. The trajectory images encompass the decision maker's goals and aspirations. Finally, for each trajectory image, a decision maker may have one or more strategic images that contain their plans, tactics and forecasts for their goals (Beach & Mitchell 1996, pp. 161-3). In an organisational decision-making setting, these images are referred to as culture, vision and strategy (Beach & Connolly 2005, pp. 173-4).

Image theory assumes that framing is determined by probing the memory for similar situations and searching for contextual clues that are given meaning by the various experiences stored in the images. If the search recalls a similar situation, then recognition occurs and a prior policy can be used as a decision-making foundation (Beach & Connolly 2005, p. 163).

Screening out unacceptable options is accomplished through a compatibility test by comparing the available options to the decision makers' images and searching for violations of the decision makers' established standards. Violations are an all or nothing measure; if an option exceeds some number of violations, that option is screened out and eliminated from contention. If screening results in only one surviving option it is then adopted. Alternatively, if more than one option remains, the decision maker chooses the best option by assessing profitability of each option and choosing the most profitable (Beach & Connolly 2005, p. 164).

Once the most profitable option has been adopted, the decision maker routinely revisits the decision and reaffirms the decision or if the plans are not being met, rejects the decision and adopts an alternative option (Beach & Connolly 2005, p. 164).

In summary, second-generation behavioural theory attempts to understand the way decisions are made by individuals and groups by carefully observing the decision-making process. There are many new theories around behavioural decision making and each adds important perspectives to the overall understanding of the behavioural factors at work and their influences. Second-generation behavioural theory makes important contributions to areas that have been typically ignored in prescriptive and first generation behavioural research such as the role of emotions and the decomposition of some of the heuristics and bias tendencies into psychological drivers. Significantly, the second-generation behavioural theories recognise that *choice* is a much smaller part of decision making than earlier thought and *screening* is an important part of simplifying our decision processes.

2.3.8 Immediate Discipline: Individual and Group Cognitive Style

First identified by Jung in the 1920s, cognitive styles result in individual ways of processing and organising information. According to empirical research, individual cognitive style affects how we arrive at judgements or conclusions about information and it therefore affects strategic decision outcomes (Hough & Ogilvie 2005, p. 418). Using a simulated strategic decision-making environment, Hough and Ogilvie (2005)

used the Myers-Briggs Type Indicator (MBTI) to determine how various cognitive styles affect the selection of strategic choices and discovered that certain types of personalities are consistently better decision makers.

In theory, an individual's personality naturally adopts either an S (Sensing) or N (iNtuition) alternative and either a T (Thinking) or F (Feeling), alternative giving possible combinations of ST, SF, NT or NF cognitive styles (Myers et al. 1998). Sensing individuals utilise their five senses to gather information from the environment while intuitive individuals tend to focus on possibilities, meanings and relationships. Thinking individuals make logical connections and rely on principles of cause and effect during decision making, whereas feeling individuals weigh the relative values and merits of an issue and rely on an understanding of personal values and group values (Leonard, Beauvais & Scholl 2005, p. 424).

The simulated decision-making environment used by Hough and Ogilvie (2005, p. 440) showed that individuals with an NT (intuitive/thinking) orientation were able to analyse information more thoroughly and make more and better decisions than the other cognitive styles. Individuals displaying the SF (sensing/feeling) cognitive style made less and lower quality decisions by spending their time seeking decisions acceptable to everyone. This empirical research demonstrated that cognitive style affects how individuals make decisions and influences decision outcomes.

Cognitive style affects strategy preference, for example, ST and SF managers prefer defensive, stable and conservative strategies, whereas NT and NF managers prefer more proactive 'first-to-market' strategies (Gallen 2006, p. 119). It should, however, be noted that this research also identified all cognitive styles as being comfortable with a middle-of-the-road approach between defensive and proactive strategies and suggests further research to confirm findings.

In more recent research focusing on entrepreneurial behaviour, individuals with an intuitive cognitive style were confident in recognising opportunities but not in creating effective execution plans, whereas individuals with an analytical cognitive

style were confident in building execution plans but not in visualising new opportunities (Kickul et al. 2009, p. 448).

Organisational demographics research on the individual characteristics of decision-making team members and how they interact has been the main focus of group decision making since the 1980s. However, in recent times, there has been an increasing level of research into group cognitive style. The research into group-level cognitive style has been driven principally through problems of aggregating individual level data into meaningful group-level variables (Leonard, Beauvais & Scholl 2005).

Lawrence (1997) argues that although research into heterogeneous executive demographics and its relationship to improved decision making has been shown empirically, the relationship is a congruent assumption on the part of other scholars. She argues that assuming the causal chain of TMT cognitive heterogeneity producing greater conflict improved decision making, and ultimately better business performance is not tested but assumed to be true (Leonard, Beauvais & Scholl 2005, p. 121).

In the same way that individual cognitive styles determine how individuals approach problem solving and decision making, Leonard, Beauvais and Scholl (2005) argue that group cognitive styles affect how TMTs interact to develop strategy. This might manifest, for example, in sensing TMT's defining problems in terms of immediate operational issues, whereas an intuitive TMT might define the same problem in more strategic terms. They also argue that in the same way individuals have a stable ongoing cognitive style, it is unlikely to change the stable group cognitive style of TMTs, which is a dominant management logic that defines the way TMTs collectively understand their environment.

Leonard, Beauvais and Scholl (2005, pp. 128 - 9) postulate that the source of group cognitive style is affected by the make-up of the team and can manifest in six possible alternatives including 1) the TMT's majority individual styles, 2) the TMT's average individual style, 3) the individual style of the most senior member, 4) the

individual style of the current team/task leader, 5) the individual style of the group socio-emotional leader, or 6) the individual style of the most extravert member.

However the group cognitive style is manifested, it is assumed that differences in style will result in differences in the approach to decision making on the part of TMTs in much the same way it does for individuals (Leonard, Beauvais & Scholl 2005). This leads the researchers to postulate that intuitive groups will define problems in strategic terms while sensing groups will tend to define problems as tactical or operational. Extravert groups will seek outside information while introverts will rely more on internal information sources. Thinking groups will interact instrumentally when assessing information, whereas feeling groups will interact expressively while evaluating information. Perceiving groups will take longer to make a decision and seek more alternatives than a judging group, which will be inclined to act faster in a structured way. While all these factors can potentially show how group cognitive style can affect the way decision making takes place, the most significant factor for TMTs is a link researchers make to Hurts et al.'s study (1989) demonstrating that cognitive style affects how strategic opportunities are identified and exploited (Leonard, Beauvais & Scholl 2005, p. 130). Their final proposition based on Hurst et al. (1989) is that defining a problem as a strategic issue results in strategic long-term solutions and defining a problem as an operational issue results in tactical short-term solutions. Clearly, a TMT with an intuitive cognitive style is preferable to a TMT with a sensing group cognitive style to facilitate problem definition at a strategic long-term level.

Jung's pioneering work in the 1920s has spawned a huge amount of research into the behavioural consequences of individual cognitive styles. More recently, group cognitive style has been an area of research to help understand how groups interact and more importantly how group cognitive style might influence decision making. Leonard, Beauvais and Scholl (2005) have formed an impressive argument that group cognitive styles exist and may influence the decision process. Unfortunately, unlike individual cognitive styles, researchers have yet to determine how group cognitive style can be measured. If group cognitive style could be measured, it would potentially be a very useful tool for analysing decision making in groups.

Consequently, it is not clear if this research can include group cognitive styles as part of the considerations for poor decision making.

Narcissism was defined by Freud in the 1950s, drawing from the Greek God Narcissus who fell in love with his own reflection and eventually died from his preoccupation with himself transfixed to the mirror. Although not classified as a cognitive style, when considered outside the realm of clinical psychology, narcissism is viewed as a personality related dimension that in part determines how dominant individuals might be as they work on maintaining their inflated views of self-importance. Typical narcissistic behaviour includes a pattern of grandiosity, a need for admiration and a lack of empathy (Chatterjee & Hambrick 2007, p. 353).

Narcissistic behaviour in senior management is likely to result in those managers being more optimistic about bold or unconventional actions because they only see what they want to see and hear what they want to hear. Additionally, narcissistic managers are sub-consciously drawn to decision alternatives that service their own personal narcissistic needs. Analysis of company results shows that narcissistic CEOs tend to engage in more dynamic tactics and take bigger strategic risks. They are also associated with extreme good, bad and fluctuating performance (Chatterjee & Hambrick 2007, p. 358). The question asked by Brunell et al. (2008) is extremely valid in the context of decision making: ‘If the behaviors associated with narcissism are also associated with ineffective leadership, why then do narcissists so often rise to positions of leadership and power?’ (2008, p. 1663).

2.4 Conclusions

Balancing the needs of the organisation is an important role for TMTs, possibly the most important role (Harrison & Pelletier 2000, p. 463). Decision making is the way TMTs use vertical and horizontal alignment to impose their strategic vision on an organisation. Without a strategic vision there can be no agreement on the major issues facing the organisation. Therefore, an overarching business strategy is a fundamental prerequisite for effective decision making.

Consciously or sub-consciously, individual biases affect decision making at every level and influence decision outcomes. Organisational alignment provides a framework for guiding the appropriate expenditure of human, informational and organisational resources (Kaplan & Norton 2004, p. 13). To ensure alignment between resource allocation and desirable strategic outcomes and shareholders, management must monitor this framework to minimise the effects of biases (Guttman & Hawkes 2004).

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Although prescriptive decision-making methods consistently provide good results (Miller 2008; Nutt 2007, 2008), they are limited in their application to all but the simplest business problems (Beach & Connolly 2005). Recent research highlights many alternative decision-making models suitable for varying situations, but they are all subject to similar human bias issues. Therefore, understanding and management of psychological issues is a fundamental prerequisite for effective decision making (Amason 1996; Bazerman 2002; Beach & Connolly 2005; Eisenhardt 1989; Eisenhardt, Kahwajy & Bourgeois 1997; Myers et al. 1998; Peters et al. 2006; Robbins et al. 2001).

Cognitive style affects the way individuals view situations and their decision-making approach (Leonard, Beauvais & Scholl 2005). Introverts are less likely to seek outside opinions and may not consider a range of decision options; intuitive individuals are likely to see issues as strategic while sensing individuals will see the same issues as tactical. In many management teams, the variations may balance out to give a group cognitive style that is not dominated by one type and therefore not subject to the pitfalls of any particular type. However, a management team that is predominantly one type or managed by a CEO with narcissistic tendencies or who imposes a specific cognitive style on them will likely fail to consider all options when making decisions (Chatterjee & Hambrick 2007). Therefore, as suggested earlier (Leonard, Beauvais & Scholl 2005), it is likely that avoiding a specific group cognitive style through heterogeneity or some other method is also a prerequisite for effective decision making.

Finally, some situations requiring decisions such as public policy are too political for agreement on the best overall solutions or too complicated to predict all the possible outcomes. In these situations, Lindblom (1959) observed trial and error decision making by organisations, that is, taking decisions in the smallest possible reversible steps (increments) to avoid undesirable outcomes (Beach & Connolly 2005, pp. 148-54). He also observed that because reaching agreement on the right directions to take was difficult, agreement tended to be on what was undesirable and needed fixing. Therefore, in complex political environments, decisions are more shaped by *what is wrong* than by *desirable outcomes*. This may also be the case in non-public organisations that have grown and evolved to become complex or political like large corporations where decision making is similar to Lindblom's incrementalism: less shaped by desirable outcomes for the organisation and more by the internal issues that need fixing.

This chapter identified conceptual and theoretical aspects of the current literature and highlighted current thinking on the research issues. In the next chapter, we will discuss the considerations and choices for the research methodology and the rationale for selecting the best method for the research.

Chapter 3: Research Design

3.1 Introduction

The previous chapter identified the current literature and its implications for the research topic. This chapter discusses the creation of the framework for the research design from the three basic perspectives of philosophical worldview, strategy of enquiry and research method. This discussion underlies the rationale for choosing a particular research design and defends that choice.

3.2 Influences on the Research Design

Research designs are plans and procedures for research encompassing all aspects, from broad assumptions to details on data collection and analysis (Creswell 2009, p. 3). A research design is affected by and is a product of 1) the philosophical worldviews held by the researcher, 2) his or her strategies of enquiry and 3) specific methods used (Creswell 2009, p. 5). The implication is that a researcher's worldview will influence the selection of the strategy of enquiry, which will in turn influence the choice of methods (Creswell 2009, p. 5). Additional influences on the final research design also include specific approaches required to address the research problem itself, the personal experiences of the researcher and the needs of the intended audience.

3.2.1 Philosophical Worldview Assumptions

The term **worldview** describes the basic considerations that shape the approach to this research. Worldviews form the first element in research design and mean '*a basic set of beliefs that guide action*' (Creswell 2009, p. 6). Others have described the same guiding philosophies as epistemologies and ontologies, paradigms or broadly conceived research methodologies (Creswell 2009, p. 6).

Based on both the researcher's experience and the nature of the research being undertaken, worldviews represent the researcher's general beliefs about the world. Worldviews generally fit into one of four approaches: *positivist/post-positivist, social constructivism, pragmatism or advocacy/participatory* (Creswell 2009, pp. 6-11) Social science is known as a multi-worldview science because each approach coexists and competes with the others; no single worldview dominates (Nueman 2006, p. 81).

Positivism arose from a school of thought led by Frenchman Auguste Comte (1798–1857) who founded sociology and outlined the principles in his six-volume *Cours de Philosophie Positivistic* (1830–1842) (Nueman 2006, p. 81). Since then, positivism has evolved to be associated with the discovery of causal laws, careful empirical observations and value-free research (Nueman 2006, p. 81). More recent thinking in the nineteenth century challenged the notion that research around human behaviour and actions could ever represent absolute truth or positive results, and a modern term now widely accepted is post-positivism, which acknowledges that the research is a measure of objective reality and absolute truth can never be found (Creswell 2009, p. 7). Post-positivists do not prove hypotheses because of these reasons; they indicate failure to reject a hypothesis as a way to establish research findings (Creswell 2009, p. 7).

Post-positivism is consistent with traditional positivist thinking, in that research starts with a hypothesis and seeks to collect information that can serve to explain a situation or describe a causal relationship (Creswell 2009, p. 7). Explanations are typically developed using numeric measures of observations, and this type of empirical research is therefore typically quantitative in nature, where the data are in the form of numbers (Punch 2007, p. 3). Unlike other worldviews, post-positivism places a heavy emphasis on repeatability of research for validation, whereby any researcher can repeat post-positivist research and expect to get the same results (Punch 2007).

A **social constructivist** worldview represents a type of interpretive social science that assumes that abstract explanations can be derived through an empathetic

understanding of meaningful social action, socially constructed meanings and value relativism (Nueman 2006, p. 89). It was originally developed by German sociologist Max Weber (1864–1920) and German philosopher Wilhem Dilthey (1833–1911), who believed that social science should be rooted in *Verstehen* or the everyday lived experiences of people in specific settings and *Erklärung* or abstract explanation (Nueman 2006, p. 87).

Social constructivists believe that meanings are constructed by human beings as they engage with the world they are interpreting and that our world makes sense in the context of our experiences, culture and social perspectives (Creswell 2009, p. 8). It follows inevitably, therefore, that researchers bring their own interpretation to the research, which is also shaped by their individual background and perspectives (Creswell 2009, pp. 8-9). The process of generating meaning from data collected in the field is largely inductive because the data is always shaped by the participants' worldviews (Creswell 2009, p. 9).

A **pragmatic** worldview focuses on the context of the research problem, including things such as actions, situations and consequences, and adopts the best methods to research the problem rather than antecedents (Creswell 2009, pp. 10-1). In a nutshell, pragmatists believe in using the methods that best equip the researcher to understand the research issues. Pragmatists use either or both positivistic and constructivism worldviews and use either or both qualitative and quantitative data (Creswell 2009, pp. 10-1). Pragmatists also believe pluralistically in both an external world independent of the mind and a constructed view of the world created within the mind.

In using pluralistic and pragmatic approaches to understanding research issues, the pragmatist feels free to apply several different approaches to a research problem for collecting and analysis data, which yields a mixed-methods research strategy (Creswell 2009, p. 11). The pragmatist's worldview does not place value on a theoretical discussion about reality being in the 'real world' or the mind.

The **advocacy/participatory** worldview gained a following during the 1980s and 1990s among those who felt that traditional worldviews disadvantaged minority individuals and groups who were not served adequately by a positivistic worldview (Creswell 2009). Advocacy is achieved by using theoretical lenses to view problems, providing an overall orientation. One type of advocacy, feminist research, adopts the position that researchers should take into account the issues surrounding gender, emotions, connection with participants and interdependence when gathering data and drawing conclusions. Feminist researchers believe that gender-structured power relations keep people oppressed (Nueman 2006, p. 102). Other theoretical lenses that provide orientation include (Creswell 2009, p. 62):

- racialised discourses, to understand the role of knowledge in coloured communities;
- critical theory, which addresses empowerment of humans to transcend their constrains of race, class or gender;
- queer theory, which focuses on lesbians, gays and bisexual or transgendered people and their suppression; and
- disability enquiry, which addresses issues surrounding the inclusion of disabled children in the community.

The fundamental concept underlying the advocacy/participatory worldview is active engagement by participants with researchers in developing research, collecting the data and analysing information. In this way, the research gives a voice to the participants, which they may not otherwise get (Creswell 2009, pp. 9-10). This process of collaborative engagement raises awareness and drives change and reform.

Having determined which worldview he or she prefers—positivism/post-positivism, social constructivism, pragmatism or advocacy/participatory, the researcher can then decide on a strategy of enquiry within the chosen worldview.

3.3 Strategy of Enquiry

Sometimes known as the research methodology, the strategy of enquiry is the second element in the formulation of a research design, and it provides specific directions

for procedures in the research design (Creswell 2009, p. 11). Each potential worldview has several strategies of enquiry available in order to address different kinds of research issues.

Worldviews held by researchers lead towards their embracing a quantitative, qualitative or mixed strategies of enquiry for their research (Creswell 2009, p. 16). Post-positivists naturally gravitate towards quantitative strategies of enquiry because they are principally concerned with determination, reductionism, empirical observation and measurement and theory verification. In contrast, constructivists intuitively lean towards qualitative strategies of enquiry because they are most concerned with understanding, multiple meanings, social construction and theory generation. The advocacy/participatory worldview emphasises political, collaborative, empowerment-oriented and change-oriented issues and therefore also gravitates towards qualitative strategies of enquiry. Contrastingly, pragmatists do not naturally gravitate to either quantitative or qualitative strategies of enquiry. They are problem centred and pluralistic and use quantitative, qualitative or mixed strategies of enquiry depending on the needs and context of their research (Creswell 2009, p. 18).

Quantitative strategies of enquiry generally incorporate experiments, surveys or non-reactive methods (Creswell 2009; Nueman 2006). Experiments seek to understand what happens when one group receives a specific treatment that is withheld from another group by scoring the results of each group and comparing them. Surveys provide numeric descriptions of trends, attitudes or opinions by asking several people the same questions and recording their answers. In non-reactive research, participants or units are unaware that information about them is being used in a study. Examples of non-reactive research might include analysis of content or further analysis of previously collected statistical data (Creswell 2009; Nueman 2006).

Quantitative strategies of enquiry aim to determine the best way to measure variables for later analysis. To test if a quantitative strategy of enquiry will serve the researcher's purpose, Punch (2007) suggests asking two questions: '*Will*

measurement yield data that provides a useful comparison?' and '*Is it possible to measure a particular situation?'*.

In contrast to quantitative approaches, qualitative research supports a wide variety of approaches to develop a strategy of enquiry, including ethnography, narrative research, case studies, phenomenological research and grounded theory (Creswell 2009; Nueman 2006).

- Ethnography is a qualitative strategy of enquiry where a researcher studies a cultural group in its natural setting over a prolonged period.
- A narrative qualitative research strategy of enquiry involves a researcher asking individuals about their life stories and then retelling those stories incorporating the researcher's view, to form a collaborative narrative.
- Case studies use the qualitative strategy of enquiry, where researchers study a case that is bound by time and activity by using various data-collection procedures.
- Phenomenological qualitative research strategies of enquiry involve the researcher setting aside his or her own experiences in order to understand the lived experiences of participants through extensive, prolonged engagement.

Grounded theory is not actually a theory: it is a strategy of enquiry used to develop a general, abstract theory that is grounded in the views of participants (Creswell 2009; Nueman 2006; Punch 2007). Developed by Glaser and Strauss in the mid-1960s, grounded theory was aimed at generating theory predominantly from qualitative data but also from quantitative data that helped researchers overcome the legitimate problems of theory generation strategies of enquiry that were either not theoretical enough or too impressionistic (Glaser, B & Strauss 1967). According to Denzin and Lincoln (1994), grounded theory was credited as becoming the most widely employed interpretive strategy of enquiry in the social sciences during the 1990s (Punch 2007, p. 154).

Mixed-methods strategies of enquiry were developed mostly because of the same issues that drove the development of grounded theory. During the late 1950s, some

researchers experimented by using multiple strategies of enquiry on the same research problem to provide alternative views. The basic principle was that all strategies of enquiry have inherent limitations and using multiple strategies of enquiry tended to cancel out the biases in each type to yield a more complete picture (Creswell 2009, p. 14). Additionally, multiple mixed strategies of enquiry provide a triangulation mechanism wherein quantitative and qualitative strategies of enquiry supported each other's findings (Creswell 2009, p. 14). Although there are many mixed-method strategies of enquiry, the main are sequential, concurrent and transformative (Creswell 2009, pp. 14-5).

- Sequential mixed-method strategies of enquiry involve both a quantitative and qualitative method. Using this technique, the results of the first method are verified by a subsequent study using the alternative method.
- Concurrent mixed strategies of enquiry involve the concurrent analysis and merging of qualitative and quantitative data to form one view of the overall results.
- The transformative mixed-method strategy of enquiry employs either sequential or concurrent approaches but views the data and research problem through a theoretical lens to frame the topic of interest.

Once the researcher has chosen the strategy of enquiry, he or she must decide on the method of analysis.

3.4 Research Method

The third major element in the formulation of the research design is the specific research method, which details the processes for collecting, analysing and interpreting data (Creswell 2009, p. 15). A research method can be quantitative, qualitative or a combination of the two.

A **quantitative research method** is essentially concerned with conducting a survey or an experiment. In a survey, numeric data about the trends, attitudes or opinions of

a population are gathered by studying an adequately large sample of the population to allow the researcher to make generalisations about the entire population (Creswell 2009, p. 12). Representative samples are also used in experiments but the purpose in that case is to determine the effect of a treatment or intervention on an outcome when all other factors that might influence the outcome are controlled (Creswell 2009, p. 12). Quantitative research methods rely on a closed approach, where tight control yields results that are both generalisable and repeatable to provide validity. The tight control is achieved through the use of closed questions and predetermined approaches to generate numeric data for detailed statistical analysis and interpretation (Creswell 2009, p. 17).

The basic elements of a quantitative survey research method include survey design, population and sample selection, instrumentation, variable identification and data analysis and interpretation (Creswell 2009, pp. 12-6).

Quantitative data is usually examined by statistical analysis, which is usually carried out using a computer. The researcher then draws conclusions based on the results. Typical analysis of quantitative data involves calculation of the summary data and inspection for factors that might skew the data away from normal distribution. A description of the variables, values for mean and standard deviation, variance and frequency distributions provide a good summary overview of the data. Basic cross-tabulations provide a way to view relationships between variables, including chi-square analysis to understand the importance of any perceived relationships between variables. Groups are compared through analysis of variance. A one-way analysis compares groups with a dependent variable, while a two-way analysis compares groups that can simultaneously be classified in two ways to form comparison groups (Punch 2007, pp. 108-31). These and other descriptive statistics form the basis of the analysis for statistical inference.

Statistical inference is concerned with determining the level of confidence that the result for the sample are representative of the true population (Punch 2007, pp. 127-9). Calculations can be performed to determine confidence levels by referring to statistical inference tables. Statistical inference is greatly affected by the sample size;

the greater the sample size, the smaller is the numeric value of the statistics required to reach statistical significance (Punch 2007, pp. 127-9).

The final step in quantitative analysis is to interpret the findings with respect to the research questions of the hypotheses being tested. The interpretation should address whether the hypotheses are supported or refuted, if the implemented treatment is adequate to actually make a difference to those participants who experienced them, if the results are significant and if the results are valid and generalisable. The implications of the results should also be conveyed (Creswell 2009, p. 167).

Reliability and generalisability are demonstrated by statistical significance tests, which are principally related to the sample size and selection (Punch 2007, pp. 128-9). Validity depends on a researcher being able to demonstrate that an intervention affects an outcome and not some other factor (Creswell 2009, p. 162). Researchers need to design their data collection with internal and external validity threats in mind. Minimising the chance of internal validity threats involves developing strategies to control the environment around the participants and tight control over procedures. External threats to validity can arise from a researcher drawing invalid inferences from sample data or other situations that might occur because the results of a small sample size are extrapolated for large populations or when conclusions are projected into the future or past when time is an important factor in the research (Creswell 2009, pp. 162-5). Researchers should develop a specific approach to manage validity, including identification of potential threats and a plan to manage them (Creswell 2009, p. 164).

A **qualitative research method** is designed to support fundamentally different worldview assumptions and strategies of enquiry from those used for quantitative research methods. Whereas quantitative research methods are closed and controlled, qualitative research methods are open and tend to rely on text and image data rather than numeric data. Although many different qualitative research methods are available, they do have some typical characteristics such as natural settings, researchers gathering their own data, multiple kinds of data, open-ended questions, inductive analysis, emphasis on understanding the participants' meaning and an

emergent design approach (Creswell 2009, pp. 175-6). Additionally, researchers can use theoretical lenses to view their research problem in specific ways. Qualitative research methods typically expect researchers to provide their own interpretations and to view problems or issues holistically (Creswell 2009, pp. 176-7).

Using qualitative research methods involves the researcher becoming effectively embedded within their own research. Being embedded means that they will probably form opinions, relationships and value or ethical judgements affecting the way they collect, analyse and conclude their data. Due to the effect of viewing the data through their own personal lens an important element in any qualitative research method is for a researcher to highlight those areas where their own background or value systems may bias the research results (Creswell 2009, pp. 177-8).

Unlike quantitative research methods, qualitative research methods purposefully select participants or data that specifically assist in understanding the research problem. Miles and Huberman (1994) identified four aspects for determining the ideal data: setting, actors (participants), events (what the participants will be doing) and process (the nature of the events being undertaken by the actors in the setting) (Creswell 2009, p. 178). Once the participants are identified, data collection in a qualitative research method is typically conducted through interviews, observations, documents or audiovisual materials.

Data-recording procedures for qualitative research methods are driven by adherence to collection protocols such as taking observational field notes that include accurate descriptive accounts as well as reflective notes that indicate the researcher's personal thoughts. Interviews are typically unstructured or semi-structured and recorded as interview notes and/or recorded as audio files and later transcribed. Document data range widely from newspapers to journals and personal letters to medical records (Creswell 2009, pp. 178-81). Researchers should always reveal whether their data is primary or secondary, that is, first-hand or second-hand data, respectively.

Analysis of qualitative data has traditionally been a controversial and difficult area. The richness and variation of data has led to the development of many different

methods of analysis over time (Punch 2007, pp. 194-6). The variation in the types of data, settings and research questions drove the need for multiple approaches to analysis. Further, viewing the same data from different vantage points allowed different perspectives (Punch 2007, pp. 194-5). In the past, one of the key criticisms of qualitative data analysis has been around the failure to make data analysis techniques explicit or open to inspection (Nueman 2006, p. 457). Further, in 1971, Miles noted that in the past, qualitative researchers were accused of often becoming self-deluded and overwhelmed by their data to the point where they presented invalid or unreliable conclusions (Punch 2007, p. 195).

Concerns over the controversy and issues with qualitative data analysis drove many initiatives to develop systematic and disciplined methods. Three of these key developments are relevant to this research and are discussed here. First is the development of systematic, disciplined and transparent methods of analysis of qualitative data to aid scrutinisation and subsequently build confidence in the conclusions (Nueman 2006; Punch 2007). Second is the development of grounded theory to closely link conclusions with the data (Creswell 2009; Glaser, B & Strauss 1967; Nueman 2006; Punch 2007). Third is the development of mixed-method research designs to provide built-in triangulation and verification (Creswell 2009).

As recently as 1979, Miles cited the issue of qualitative methods of analysis being poorly formulated as the most serious problem surrounding the use of qualitative data (Punch 2007, p. 195). However, many do not agree with Miles, and some qualitative researchers believe that issues around reproducibility and audit trails are an irrelevant attempt to move away from traditional constructivist roots towards a more quantitative style of research (Punch 2007, p. 195). While many variations in qualitative methods for research analysis exist, they all typically include an element of analytic induction, where concepts are developed inductively from data and raised to a higher level of abstraction (Punch 2007, pp. 196-7). These higher-level concepts are then examined using analytical deduction to verify their purpose (Punch 2007, pp. 196-7).

In an attempt to overcome the shortcomings of qualitative analysis, Miles and Huberman developed their framework for qualitative data analysis in 1994 (Punch 2007, pp. 197-202). The framework details how a researcher can trace out lawful and stable relationships among social phenomena, based on the way the relationships are linked (Punch 2007, p. 197). They labelled their approach as 'transcendental realism', and their analysis has three main components:

- data reduction
- data display
- drawing and verifying conclusions.

Miles and Huberman see these as concurrent streams that continuously interact during the analysis (Punch 2007, pp. 198-9).

In contrast to the framework for qualitative data analysis, Creswell argues that although there are differences in the way qualitative data is analysed, a general procedure can be used with adjustments as necessary to cater to specific issues (Creswell 2009, p. 185). His suggested general data analysis process is detailed in Figure 3.1.

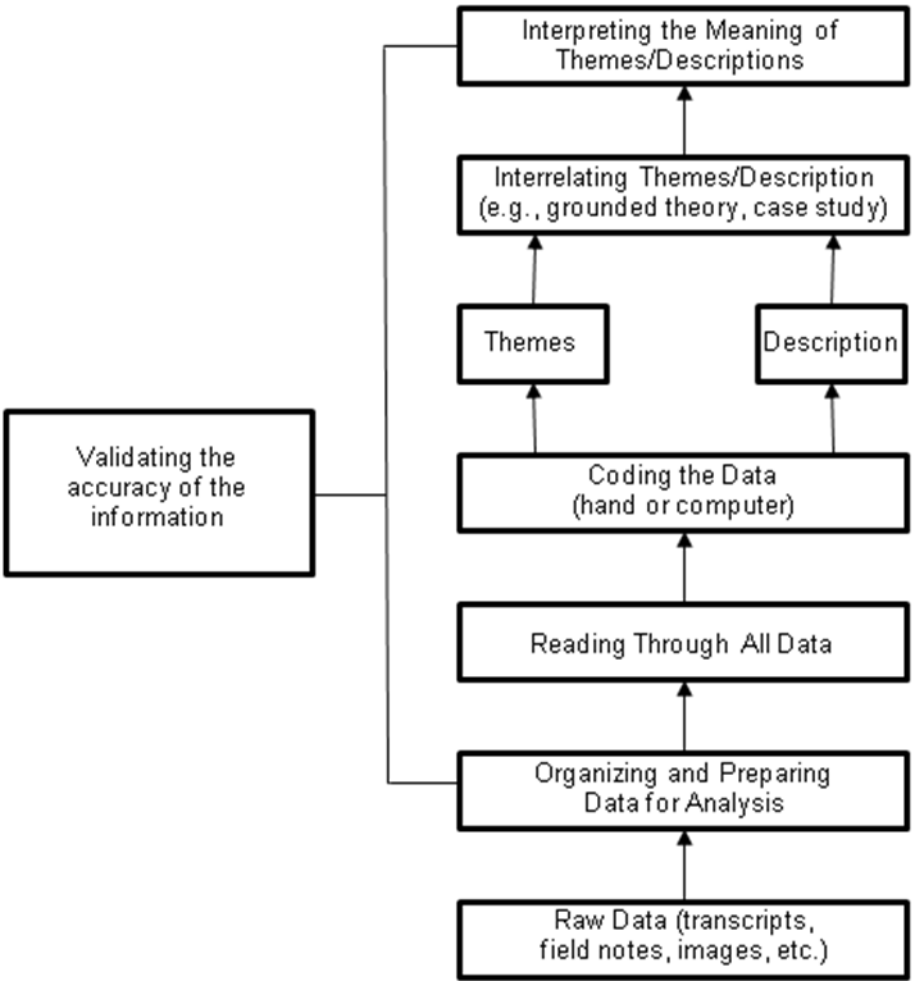


Figure 3.1: Data analysis in qualitative research (extracted from Creswell 2009, p. 185)

Although this is a diagrammatically linear process, the process is more interactive in practice and does not always follow the scheme presented here (Creswell 2009, p. 185).

The **coding** process is the first part of data analysis aimed at organising the data into useful chunks or segments before bringing meaning to the information (Creswell 2009, p. 186). In the first instance, chunks or segments of data are grouped together using a technique called **open coding** to form preliminary analytic categories or codes. Subsequent or second-stage **axial coding** is used to link preliminary codes and identify key analytic categories. The last stage of coding, called **selective coding**, is used to select data that will support the conceptual coding categories that were developed (Nueman 2006, pp. 460-4).

During the coding stages, researchers create **memos** that represent ideas about the codes and their relationships. These memos can be substantive, theoretical, methodological or even personal, and they capture important concepts as and when they occur to the researcher (Punch 2007, p. 201). Memos form a link between the data and the more abstract thinking of the researcher and are modified throughout the analytical process as thinking becomes clearer, eventually aiding in the development of potential hypotheses (Nueman 2006, pp. 464-5).

The process of coding and writing memos leads to the development of descriptions and themes, where description is the detailed rendering of people, places or events in settings, and themes are based on the major categories discovered during coding (Creswell 2009, pp. 201-2). The core techniques used to create themes and descriptions are abstracting and comparing, where abstracting is the continual examination at all levels across all codes and categories for ways to describe what is happening at a higher levels, and comparing is used at all levels across all data to determine sources of difference or commonality (Punch 2007, pp. 202-4). Tesch (1990) described comparison as the central intellectual activity in qualitative research analysis (Punch 2007, p. 204).

The final step in data analysis involves making interpretations based on the data using the descriptions, themes and data as inputs by using abstraction and comparisons (Punch 2007, p. 202). Essentially, the researcher is looking for ‘what were the lessons learnt’ to capture the essence of this idea (Creswell 2009, p. 189). Interpretation can take many forms such as personal interpretation, meanings derived from comparison of themes, descriptions and literature or other theories and a range of new questions that need to be asked (Creswell 2009, pp. 189-90).

Ensuring that qualitative research methods are reliable, valid and generalisable requires a fundamentally different approach from quantitative research methods. Reliability is not measured statistically in terms of consistency of responses, and generalisability is not measured as the ability to repeat the research in different

settings with different people and expect the same or very similar results (Creswell 2009, p. 190).

According to Yin (2003), qualitative reliability is achieved when a researcher's approach is consistent and processes are documented to the extent possible (Creswell 2009, p. 190). Gibbs (2007) suggests that reliability procedures should include checking transcripts for accuracy and tight control over codes during analysis to avoid code-drift by using a control mechanism such as a codebook (Creswell 2009, p. 190).

In qualitative research, validity means that the researcher has employed procedures to ensure that the findings are accurate, including triangulation with other data sources to justify themes and member checking to allow participants to validate late-stage findings. Validity is enhanced through transparency, that is, researchers describing findings using rich, elaborate descriptions, being declarative about their own personal biases and revealing negative information (Creswell 2009, pp. 191-2). Validity is seen as a strength of qualitative research, when the findings prove accurate from the various viewpoints of the researcher, participants and readers (Creswell 2009, pp. 190-2).

Generalisation is a term used in a limited way for qualitative research because it is not typically the intent of the research to identify a generalisable theory outside the area of study (Creswell 2009, pp. 192-3). However, generalisability in the form of transferability is often considered for qualitative research, typically focusing on three aspects. First, is the sample adequately representative to transfer finding to other situations? Second, is the context detailed and elaborate enough to allow transferability to other situations? Third, is the abstraction of concepts on a level that allows application to other settings? The extent to which these requirements can be satisfied is a measure of generalisation and an important measure of external validity for qualitative research (Punch 2007, p. 256).

While **quantitative and qualitative research analysis** may appear to be fundamentally different at first glance, there are several macro-level similarities that

need to be appreciated. In both styles, researchers are concerned with drawing conclusions from empirical details of social life; using research processes that are always public and available for scrutiny; employing comparison as the central process to identify patterns; and ensuring that the research is valid and reliable to the maximum extent possible (Nueman 2006).

Nonetheless, differences between quantitative and qualitative research at the macro level are more obvious. They include the standardised analysis techniques of quantitative analysis and the many and varied approaches of qualitative research analysis. Qualitative researchers begin analysis as soon as they have some data, while quantitative researchers wait until they have all data. Theory creation is the principle goal of qualitative researchers, while theory testing and verification is the main goal of quantitative researchers. Finally, qualitative research analysis is directly connected to the social issues being researched through personal accounts and context, whereas quantitative research analysis is principally a mathematical view of the research issue (Nueman 2006).

As mentioned earlier, **grounded theory** is not a theory at all. It is a strategy of enquiry and method of data collection and analysis aimed at generating theory from data (Punch 2007, p. 155). Developed during the 1960s by Glaser and Strauss during their research in medical sociology, wherein they studied dying in hospitals, grounded theory specifically addresses the issue of generating a theory directly connected to the data. It has become the most widely used interpretive research strategy used today (Punch 2007, p. 154).

‘Grounded’ means that the resultant theory is grounded in data; ‘theory’ means that the objective of collecting and analysing data is to generate theory. Thus, the concept is development of a theory derived inductively from data (Punch 2007, p. 155). The initial development of grounded theory was presented as a method of studying complex social behaviour in organisations, and it was applicable to both quantitative and qualitative research (Glaser, B & Strauss 1967; Punch 2007).

With the grounded theory approach, data collection and analysis are conducted simultaneously, so analysis of one set of data guides the selection of the next set and so on (see Figure 3.2). This process of sampling and analysis goes on **until theoretical saturation occurs**, where no new codes emerge and new data serves to confirm what has already been discovered (Punch 2007, p. 158). Since grounded theory closely models what humans do naturally when they encounter puzzling situations, it is instinctively appealing to many researchers (Punch 2007, p. 158).

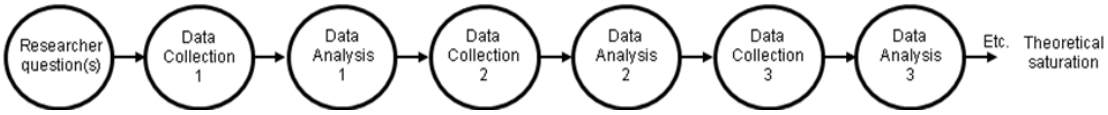


Figure 3.2: Theoretical sampling: Data collection/data analysis relationship (extracted from Punch 2007, p. 159)

In grounded theory, literature becomes part of the data, but unlike other research approaches, it is introduced late in the process after key concepts and theoretical directions have emerged. This approach avoids overly influencing the researcher's views of key concepts at the beginning of the research and supports the supposition that the concepts and theory will emerge naturally (Punch 2007, p. 159). It is important to emphasise that unlike quantitative methods that seek to verify a theory or other qualitative methods that might build on an existing theory, grounded theory begins with no assumptions or connection to prior theory and is clean and unencumbered by prior assumptions.

Grounded theory has overcome many issues traditionally faced in qualitative research such as *ad hoc* approaches and lack of structure or process. It provides a clear framework for explicitly addressing the issues of theory generation. The social sciences are encountering new issues that have not been understood before, where theory verification is impossible due to the lack of credible theories, and in these cases, grounded theory offers a way of understanding the present situation and subsequent theory development (Punch 2007, pp. 159-60).

Mixed-methods research, as the name implies, involves both quantitative and qualitative research methods. The essential value of mixed-methods research is

gained through careful research design to ensure that the procedures support the ultimate aim of the researcher. As discussed earlier, multiple mixed strategies of enquiry provide a triangulation mechanism where the findings of quantitative and qualitative research strategies support each other (Creswell 2009, pp. 213-4). The main variations of mixed-method strategies of enquiry are sequential, concurrent and transformative (Creswell 2009, pp. 14-5).

The following chart (Table 3.1) illustrates how various methods available are used across the quantitative, mixed and qualitative research strategy method spectrum.

Table 3.1: Quantitative, mixed and qualitative research methods (extracted from Creswell 2009, p. 15)

Quantitative, Mixed and Qualitative Research Methods		
Quantitative Methods→	Mixed Methods	←Qualitative Methods
• Predetermined	• Both predetermined and emerging methods	• Emerging methods
• Instrument based questions	• Both open and closed questions	• Open-ended questions
• Performance data, attitude data, observational data and census data	• Multiple forms of data drawing on all possibilities	• Interview data, observation data, document data and audiovisual data
• Statistical analysis	• Statistical and text analysis	• Text and image analysis
• Statistical interpretation	• Across databases interpretation	• Themes, Patterns interpretation

3.5 Selection and Justification of the Research Design

Research designs are plans and procedures for research encompassing all aspects, from broad assumptions to details on data collection and analysis (Creswell 2009, p. 3). Research design is affected by and is a product of 1) philosophical **worldviews**

held by the researcher, 2) the **strategies of enquiry** used and 3) the specific **methods** employed (Creswell 2009, p. 5). The implication is that a researcher's worldview will influence the selection of the strategy of enquiry, which will in turn influence the choice of methods (Creswell 2009, p. 5). Additional influences on the final research design also may include specific approaches required to address the research problem itself, the personal experiences of the researcher and the needs of the intended audience.

With respect to this body of research, the worldview was *pragmatic*, that is, the researcher believed that the research design selected should be one that serves the research purpose. This meant that the researcher believed that a quantitative, qualitative or combined research paradigm could be used to address the research question. The choice depended on which provided the best approach to understand the issues being researched (Creswell 2009, pp. 10-1).

This body of research was principally concerned with theory generation rather than theory verification, and either quantitative or qualitative strategies of enquiry can be used for theory generation or theory verification. Generally, however, quantitative strategies of enquiry are typically used for theory verification, whereas qualitative strategies of enquiry are used for theory generation (Glaser, B & Strauss 1967; Punch 2007). While intuitively a qualitative approach appeared most suitable, it was worth knowing if a quantitative approach could have been used either as an alternative or in addition as a mixed methods strategy of enquiry for triangulation and verification.

The research question was concerned with theory generation for understanding decision making by TMTs. The requirement to generate a theory in the first stage makes a concurrent mixed-method research design impractical, since there would be no theory to test concurrently. However, although it would lengthen the research considerably, a mixed-method *sequential* research design could potentially include a quantitative analysis to validate the findings of a qualitative analysis aimed at theory generation. However, the question of whether a quantitative research strategy element can be conducted leads to important questions of practicality, scale and validity.

According to a recent meta-analysis of over 230 surveys aimed specifically at executives conducted between 1992 and 2003, the response rates for executives was 32 per cent on average and trending lower (Cycyota & Harrison 2006, p. 133). Further, based on statistical projection, the authors believed that response level would fall to around 27 per cent on average by 2010. It was also noted that methods to increase response rate in other populations were not effective with executives, but topical salience and social connections could increase the rates to a certain extent (Cycyota & Harrison 2006).

Rule-of-thumb sample size estimates according to Neuman (2006, p. 241) indicate that the researcher would have to survey between 900 and 3000 executives (assuming a 30 per cent response rate) to obtain a representative sample. Given the low response rates for executives to survey questionnaires, to yield a sample response large enough to represent statistically significant results, the researcher would need to approach many executives or run the risk of threats to internal and external validity posed by a relatively small sample size. Additionally, it could take considerable time to find and contact the executives, and results can be affected by changes occurring during the time taken to survey a large enough number of responses (Creswell 2009). Assuming that risks to validity could be overcome, it was unlikely that the researcher could locate, contact, follow up and survey the number of executives required, within either the available timeframe available or budget available.

Given the issues regarding time, expense and access to a representative sample, the researcher decided that it was not practical to include a quantitative strategy of enquiry survey element in the research design strategy for this research. Additionally, for similar reasons mostly concerning access to participants, the researcher decided not to opt for a quantitative controlled experiment as part of the quantitative analysis. Quantitative triangulation of generated theory may become a practicable in the future. The **elimination of a quantitative strategy of enquiry** element for this research also effectively **ruled out a mixed-method strategy of enquiry** and directed the researcher towards a qualitative strategy of enquiry. It followed that the

issues of reliability, validity and generalisability, which would have otherwise been addressed by a quantitative strategy of enquiry, now had to be considered in any choice of qualitative strategy of enquiry.

The selection of the qualitative strategy of enquiry was generally consistent with the desire to generate theory (Creswell 2009; Glaser, B & Strauss 1967; Nueman 2006; Punch 2007). The methods considered were ethnography, narrative research, case studies, phenomenological research, framework for qualitative data analysis and grounded theory.

Ethnography comes from cultural anthropology where *ethno* means people and *graphy* refers to describing something (Nueman 2006, p. 381). This qualitative research method essentially comprises very detailed field-based research, where the researcher becomes an insider in a culture to understand the situation intimately (Nueman 2006, pp. 381-3). As the basis of this research, an ethnographic approach would offer a deep understanding of issues but poses two main problems around access and generalisability. With respect to access, it would be difficult to convince a working TMT to allow an outsider to become immersed in their decision making over a period to understand their situation in depth. On another level, the research question addresses the issues of the greater majority of TMTs failing to make and implement decisions effectively. Consequently, the research question necessitates understanding the issues across a wider spectrum of management teams than would be possible by close observation of just one team. Immersion in many teams to build a cross-sectional view that would offer deep insights was seen as an attractive but impractical strategy, and therefore **ethnography was eliminated** as a qualitative research method.

Narrative research is a type of qualitative research strategy of enquiry that focuses on understanding a chronologically linked chain of events in which individuals or groups play an important role (Nueman 2006, p. 474). Key elements of narrative analysis include a story, a sense of before and after, interdependencies, individuals or groups interacting, coherence and a chain of events (Nueman 2006, p. 474). Essentially, narrative analysis is about understanding stories of how people organise

their everyday lives (Nueman 2006, p. 474 5). These stories are retold as a chronological narrative combining both the researcher's and participants' inputs to form a collaborative narrative (Creswell 2009, p. 13). Since a decision-making and execution process appears to include all the elements necessary to conduct narrative analysis and data collection is relatively straight forward, the strategy was considered a candidate strategy of enquiry. Additionally, a key benefit of this strategy is the overarching end-to-end view of stories, which adds context that might otherwise be lost when data is sliced into small parts prior to analysis, resulting in loss of the true sense of the story through fragmentation (Punch 2007, p. 217). However, the ability to obtain a full and accurate story of how decision making was achieved was seen as problematic due to issues related to human behaviour when sub-conscious psychological biases cause participants to cognitively rationalise or reverse-engineer stories to fit favourable outcomes (Bazerman 2002, p. 67). Further, the research design is centred on understanding the journey of an individual who is not driven towards achieving the research goal. Therefore, **narrative research was eliminated as** a possible qualitative research method.

Case studies are widely used for qualitative research methods and are aimed at examining a particular case in detail to develop a greater understanding of that case (Punch 2007, p. 144). Since this type of research is aimed at a more general level and a detailed study of a decision-making case will not necessarily serve to answer the research question, **case study** was **eliminated** as a qualitative research method.

As a qualitative research method, phenomenological research is orientated towards understanding the human experiences of phenomena at the deepest levels (Creswell 2009, p. 13). These experiences are studied through prolonged direct engagement between the researcher and the participant. While this approach would no doubt provide fascinating insights into the way individual TMT members make decisions *('understanding the lived experiences')* (Creswell 2009, p. 13), the focus of this qualitative research method is aimed more at discovering how things happen rather than answering the key research question, which is discovering why things happen. Additionally, the scope of the research problem extends well outside the study of participants or groups of participants to encompass the effects of environment,

competition and process. Since it does not suit the scope of the research problem, **phenomenological research** was **eliminated** as an unsuitable qualitative research method.

Miles and Huberman's framework for qualitative data analysis is a comprehensive qualitative research method encompassing three key interwoven elements: data reduction, data display and drawing and verifying conclusions (Punch 2007, p. 198). The process involves coding, memoing and developing propositions. This general **framework appears suitable** for the qualitative research method and encompasses all the necessary checks and balances.

In contrast to Miles and Huberman's framework for qualitative data analysis, where coding is encouraged before commencing analysis, grounded theory states that the codes should emerge from the data during the analysis. The concept of not forcing data into codes is a core concept in grounded research, and it provides assurance that researchers have not adopted pet codes (Charmaz & Mitchell 2007, pp. 160-74). However, Miles and Huberman's framework and grounded theory have much in common, such as abstracting and comparing as core activities. Both designs reasonably comply with Creswell's (2009, p. 185) data analysis in qualitative research process flow, as illustrated in Figure 3.1.

Grounded theory as a basis for a qualitative research method has become one of the most used research strategies in social science (Punch 2007, p. 154). Punch sees five main reasons why grounded theory has become so widely used: grounded theory explicitly addresses how to generate theory, it is systematic and flexible, it brings disciplined and organised approaches to analysis, it has yielded impressive results and it is suited to developing theory in new areas where no prior research exists (Punch 2007, p. 160). Therefore, **grounded theory** as a qualitative research method and analysis tool generally seems to be **suited to the research problem**.

In making a final decision on the choice of the qualitative research method, the researcher revisited the issues of personal experience and their effect. The researcher has extensive personal experience in senior management positions such as those held

by the target research participants. The experience brings obvious benefits such as being able to connect better with participants than what might have otherwise occurred, but it biases the researcher's view of the main issues. This potential for bias in interpretation was a concern for the validity of the research analysis and eventual theory development and had to be minimised as much as possible.

Given the opportunity for personal experience to bias the researcher, the decision to use a grounded theory qualitative research method was taken primarily because of the extra rigour in grounded theory processes around the emergence of key concepts when compared to the alternative; this rigour should help avoid bias through pet codes. The researcher also agreed with grounded theory's heavy emphasis on explicitly addressing theory generation. Finally, like quantitative research methods, grounded theory seeks to build theory that is consistent with the data, is precise and rigorous, capable of replication and generalisable (Nueman 2006, p. 60).

The researcher noted a potential in-built weakness of grounded theory and other research methods: it may fragment data and reduce stories into chunks of data, thereby losing some contextual elements in the data. This weakness can be addressed at least partially by choosing a constructivist approach rather than a positivistic approach to grounded theory generation. Objectivist grounded theorists focus on the data and typically strive to achieve generality and decontextualisation in results. In contrast, constructivist grounded theorists are more likely to be concerned with the phenomena of study and see the data and analysis as shared experiences and relationships, which gives them a more end-to-end perspective (Charmaz 2006, pp. 129-32).

3.6 The Research Design

3.6.1 The Evolution of Grounded Theory

In the early 1960s, Glaser and Strauss were working collaboratively on a project funded by the US Public Health Service, and they wrote and published a book called *Awareness of Dying* as an outcome of that research in 1965. The book received

critical acclaim and in response to questions about their research methods, they published *The Discovery of Grounded Theory: Strategies for Qualitative Research* in 1967. The purpose of this book was to propose the concept of generation of theory grounded in data, to offer a robust process to create grounded theories and to promote and legitimise careful qualitative research (Punch 2007, p. 156).

Subsequently, Glaser published *Theoretical Sensitivity* in 1978, which aimed to update methodological developments in grounded theory. Later, Strauss published *Qualitative Analysis for Social Scientists* in 1987, which broadened grounded theory concepts to more general qualitative social research issues related to generation and testing theory.

Between the early 1960s and 1990, Glaser and Strauss had been reasonably synchronised and consistent in their shared views and interpretation of grounded theory concepts. In 1990, Strauss and Corbin published *Basics of Qualitative Research*, subtitled *Grounded Theory Procedures and Techniques.* This fourth key publication became the source of a major disagreement between Glaser and Strauss because of a key concept introduced by Strauss and Corbin that Glaser felt compromised the fundamental core of grounded theory. The key concept Strauss and Corbin introduced was using preconceived codes and paradigms to test data against rather than allowing codes to emerge through the analytical process (Glaser, B. 1992; Punch 2007). Glaser fiercely opposed this view and published the following extract in his book *Basics of Grounded Theory Analysis: Emergence vs. Forcing*:

> In grounded theory we do not link properties and categories in a set of relationships denoting causal conditions, phenomena, context, intervening condition, action/interaction strategies and consequences. This would be preconception and forcing theoretical coding concepts on the data to the max. The grounded theorist simply codes for categories and properties and lets whatever theoretical codes emerge where they may. To use this model out of hand will merely give the appearance of making the analyst think systematically about data and relate them in complex ways. In actuality it teaches the analyst to force a full conceptual description on data with no questions about whether the links are relevant to any emerging theory that really explains how the participants process their main concerns (Glaser, B. 1992, p. 63).

Glaser went on to exclaim that Strauss and Corbin developed a new method in its own right but that they had surely not enhanced grounded theory (Glaser, B. 1992).

Despite Glaser's numerous objections to Strauss and Corbin's new version of grounded theory, their book and ideas are popular. Since those modifications to grounded theory were proposed by Strauss and Corbin, many other researchers have suggested modifications to both theirs and Glaser's guidelines to further enhance grounded theory (Charmaz 2006, p. 8).

Charmaz sees the various grounded theory methods as a set of principles and practices that may be adjusted to suit different situations (2006, p. 9). In this research, a choice was made to understand as many variations as possible for grounded theory analysis to be cognisant of the potential benefits but to stay close to the original traditional grounded theory to avoid the pitfalls associated with emerging versus forcing.

3.6.2 Core Concepts of Grounded Theory

In developing a grounded theory approach for this research, the researcher decided to use the book *Constructing Grounded Theory – A Practical Guide Through Qualitative Analysis* by Kathy Charmaz (2006) as a foundational text and practical guide. Other inputs were obtained from the key publications of Glaser and Strauss mentioned earlier where appropriate.

While the process of grounded theory is not linear, it does start with gathering data and end with writing an analysis and reflecting on the entire process (Charmaz 2006, p. 10). The basic flow of the grounded theory process can be diagrammatically given as shown in Figure 3.3 below:

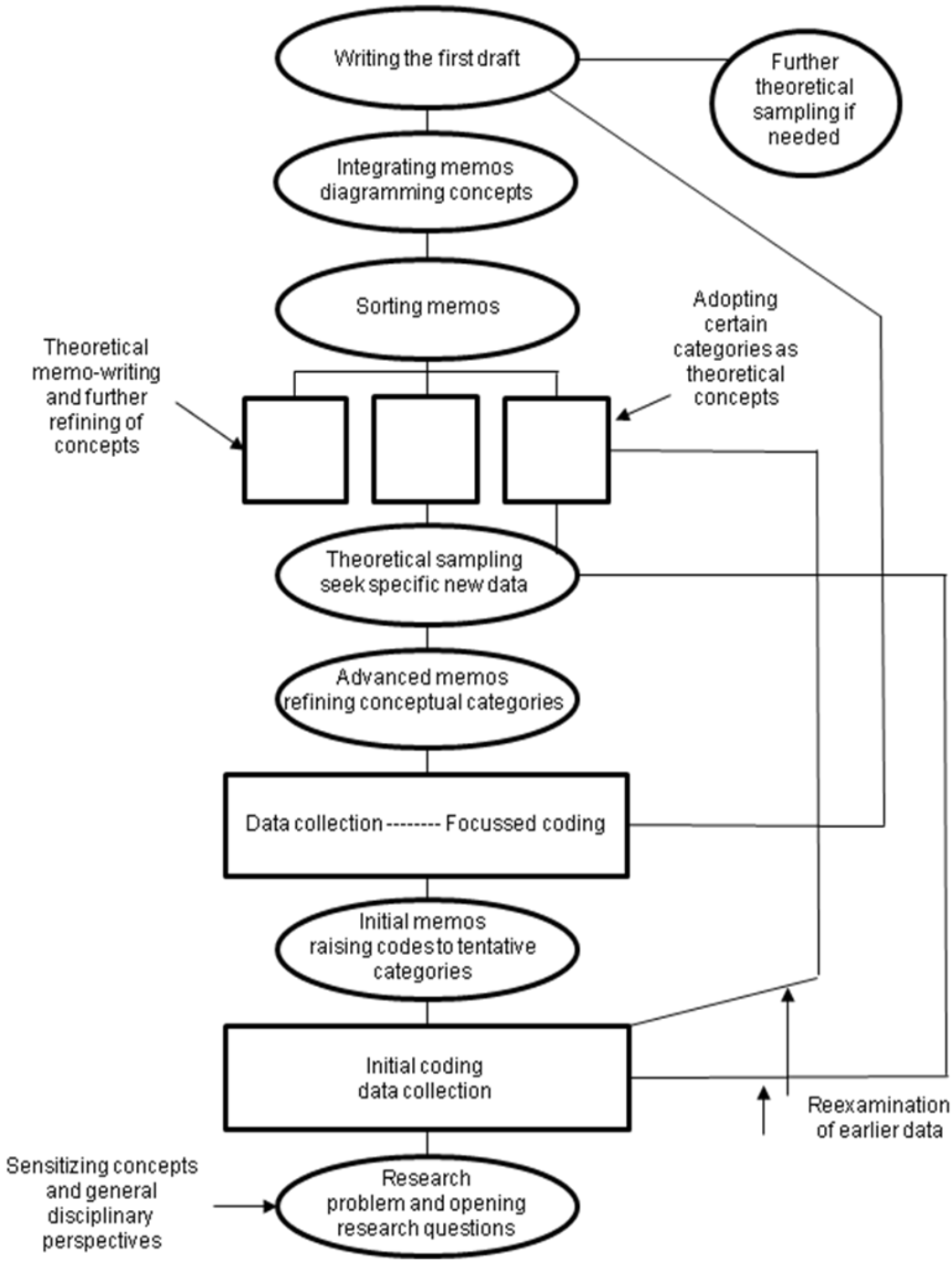


Figure 3.3: The grounded theory process (Charmaz 2006, p. 11)

These steps and their use for the research project represent the fundamental research design employed.

3.6.2.1 Gathering Rich Data

According to Charmaz (2006, p. 14), rich data are detailed, focused and complete. They reveal participant's views, feelings, intentions and actions as well as the context and structure of their lives. Rich data provide a solid basis for building a strong analysis.

Rich data can be collected from several types of data including texts, interviews and observation or combinations of these. It is important to always remember that both the participant and the researcher are sensitised to the way they view and understand data because of their background and experience (Charmaz 2006, pp. 16-7). These sensitivities often provide a platform for starting the investigation, but Charmaz (2006, p. 17) points out that they should not provide an end and the researcher should be open to dispensing with his or her initial ideas if data that take the researcher in another direction emerge. Grounded theorists do not force preconceived ideas and theories directly upon the data (Charmaz 2006; Glaser, B. 1992).

For the various grounded theory approaches, there is some debate about the amount and type of data required to generate theory that is regarded as having quality and being credible. Glaser (1998) and Stern (1994) argued that small amounts of data are fine for small studies, while others such as Dey (1999) have labelled this as 'smash and grab' data collection leading to superficial analysis (Charmaz 2006, p. 18). Charmaz (2006, p. 19) recommends that researchers develop a rapport with participants to try viewing the world from the latter's perspective to understand underlying assumptions and values they may have and develop an interpretive understanding of data.

The grounded theory approach is a continual process of simultaneous data collection and analysis that is shaped in each iteration by the emerging analysis of the previous data. According to Glaser (1978), the first question a grounded theorist asks is *'What's happening here?'*. This question further decomposes into '*What are the basic social processes?'* and *'What are the basic psychological processes'*, and these

kinds of questions get the researcher started on data collection (Charmaz 2006, p. 28).

In this research, a decision was taken to use intensive interviews as the primary data-collection technique. Textual analysis was used as a secondary source of data if necessary and as a way to link this research to the existing research available. Intensive interviewing allows the researcher to explore a topic in depth by allowing the conversations to go beyond ordinary conversations to understand situations, feelings and events (Charmaz 2006, pp. 35-40). An intensive interview is both open ended and directed; it is shaped yet emergent and paced but flexible. This approach gives the researcher considerable control to direct the flow of the conversation but also allows the participants freedom to express views and deviate to new and interesting areas (Charmaz 2006, pp. 28-9). Chapter 4 details the framework of the planned format for the initial intensive interviews and later deviations to aid theoretical sampling as the research progressed.

3.6.3 Coding in Grounded Theory

Coding requires researchers to commence data analysis to understand what is happening and to direct their search for further data towards the issues that are emerging. Coding in grounded theory has at least two phases: initial and then focused coding (Charmaz 2006, p. 42). Initial coding is essentially the study of data fragments to try to glean some initial codes by examining data—words, sentences, segments and incidents. When participants offer telling terms to describe their views, those terms are sometimes adopted as *in vivo* codes (Charmaz 2006, p. 42). Focused coding is accomplished by testing the most useful initial codes against extensive data. Throughout the process, data is constantly compared with other data and codes.

Coding is a key part of grounded theory, where the researcher creates linkages from the data to an emergent theory explaining the data. Coding attempts to define what is happening in the data and what it means (Charmaz 2006, p. 46).

Theoretical coding is a sophisticated level of coding following focused coding, where a researcher *may use* pre-defined integrative coding families to aid analysis and integration of substantive codes. Theoretical codes may drive the analytical story in a theoretical direction and provide a sharp analytical edge where the codes fit the data and substantive analysis (Charmaz 2006, pp. 63-6). Glaser (1978, p. 72) presents a series of eighteen theoretical coding families that cover a range of situations, social worlds and social contexts including 'six C's': causes, contexts, contingencies, consequences, covariances and conditions.

3.6.3.1 Memo Writing

Memos are a key element of grounded theory and form the intermediate step between data collection and writing drafts. Memo writing is a way of capturing, organising and analysing data around key analytical milestones (Charmaz 2006, p. 72). Grounded theory uses memo writing as a way of examining codes and data early in the research process to expedite analysis and accelerate productivity. Memo writing can be a vehicle to enhance focused codes to conceptual categories (Charmaz 2006, p. 72).

3.6.3.2 Theoretical Sampling, Saturation and Sorting

Theoretical sampling is a process of returning to gather rich *pertinent* data to fill in gaps in the development of an emerging theory. The aim is to saturate the properties of the core theoretical categories under question and write more memos to develop greater analytic abstraction. Theoretical sampling continues until no new properties or new theoretical insights for categories emerge (Charmaz 2006, p. 96).

Once theoretical sampling is completed and the researcher can successively construct more abstract memos, much of the basis of a draft research-finding document is available. By sorting and integrating these abstract memos and diagramming their relationships, the researcher can create an initial analytical framework (Charmaz 2006, p. 121).

3.7 Ethical Considerations

Ethical issues in research tend to be of two main types. First are issues arising around ethical and professional conduct during research. Second are ethical issues discovered as the research develops (Punch 2007, pp. 276-8). Punch (2007, pp. 276-8) summarises the main ethical issues as harm, consent, deception, privacy and confidentiality of data.

All research conducted for this project was in accordance with The Australian Health Ethics Committee National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council 2000) and is approved by the University of Southern Cross Ethics Committee. The ethics approval numbers are **ECN-09-080** (23 June 2009) and **ECN-10-142** (18 August 2010).

The participants incurred no **harm** or risks as a result of this research. They were interviewed at a location and time of their choice. Data collected in the form of recorded interview transcripts were reviewed by any participants that wished to check them before they were de-indentified and stored securely for the exclusive use of the researcher. These steps preserved the participant's anonymity, **confidentiality** and **privacy**.

Participants freely cooperated with the researcher for the purposes of the study and confirmed their informed **consent**; participation was voluntary, and freedom to withdraw at any stage was indicated in the information sheet and consent form.

The research design did not require any **deceptive** elements that might have otherwise been used to ensure that the participants would not alter their behaviour after knowing the truth. Each participant was offered all, part or a summary of the research results upon completion to demonstrate transparency and reciprocation.

The participants were informed that the research would result in a thesis document that would be published and become publicly available through the University of Southern Cross and online *via* the internet.

3.8 Conclusions

This chapter began with identifying the three main considerations for framing a research design, namely, the researcher's philosophical worldview, strategy of enquiry and research method. Other important factors in deciding the best research design were the researcher's personal experiences, the nature of the research problem and the intended audience.

The researcher stated that he held a pragmatic philosophical worldview that supported the notion of selection of a strategy of enquiry that best suited the research problem, and he was able to move to analysing the strategy of enquiry options available.

Sometimes known as the research methodology, the strategy of enquiry is the second consideration for the research design. Detailed discussion of the various options open to the researcher revealed that from both a top-down perspective and a bottom-up perspective, a qualitative strategy of enquiry suited the research problem best. The top-down perspective prescribed qualitative strategies of enquiry as typical, where theory generation is the main aim of the research. A bottom-up analysis of the various quantitative and qualitative options demonstrated that because of problems around identifying and sampling over three hundred CXO level participants suitable for a quantitative analysis combined with a research emphasis on theory generation a quantitative strategy of enquiry was shown to be unworkable within the research framework. However, a qualitative strategy of enquiry fulfilled all the necessary requirements and was therefore selected. Elimination of a quantitative strategy of enquiry effectively eliminated a mixed methods strategy of enquiry.

Although it was determined that multiple strategies of enquiry were potentially suitable for the research, the researcher chose grounded theory for several reasons, including the rigour associated with grounded theory processes with regard to the emergence of key concepts, the appeal of theoretical sampling to provide flexibility during data collection and resonance with the aim of theory generation. Grounded

theory also appealed to the researcher because its core aims are to build theory that is consistent with the data, and it is precise and rigorous, capable of replication and generalisable (Nueman 2006, p. 60). Consequentially, the researcher selected grounded theory as the most appropriate strategy of enquiry for this research.

The issues surrounding methods that break data into small splinters prior to analysis and thereby could lose contextual sensitivity were addressed as the researcher adopted a constructivist and holistic approach to analysis rather than a more positivistic objectivist approach (Charmaz 2006, p. 132).

Data collection was by intensive interviews that were de-identified prior to analysis, and textual analysis was used both to fill in the gaps in theory generation where required and to link the research to existing theories.

Finally, the main ethical issues of harm, consent, deception, privacy and confidentiality of data were all addressed in the research design. This research had a low impact on the participants, and reciprocity was ensured by giving participants access to the research results. This chapter discussed the rationale for the research design and detailed the research method. The next chapter discusses the research findings in detail.

Chapter 4: Research Findings: Data Collection, Interpretation, Analysis and Theory Development

4.1 Introduction

The previous chapter detailed an analysis of the available research methods and the rationale for selecting grounded theory research as the most appropriate methodology for data collection, interpretation and analysis in this research project.

This chapter details how the research was conducted and explains the analysis used in the development of theory and the theory itself.

4.1.1 Research Sample

Participants were selected from among a range of business people, and each participant had in-depth experience working with executives as a CXO, CEO, board member or management consultant. Most participants had experienced several roles and transitioned, for example, from CFO to CEO to board member then board chairperson. The participants were employed in Australian and international organisations predominantly associated with the high-technology sector, where the annual turnover typically ranges from hundreds of millions of dollars to several billions of dollars. The table 4.1 highlights the experience of the participants used in the formal analysis part of this research.

Table 4.1: Research Participant Experience Profiles

	Chair Person	CEO	CXO	Board Member	TMT Level Management Consultant	Gender & Age
Participant 1	X	X	X	X	X	M (50-60)
Participant 2		X	X	X	X	M(60-70)
Participant 3		X	X	X	X	M(50-60)
Participant 4	X	X	X	X	X	M(50-60)
Participant 5		X	X	X	X	F(50-60)
Participant 6			X		X	M(60-70)
Participant 7		X	X	X		F(40-50)
Participant 8		X	X	X	X	M(50-60)
Participant 9			X	X		M(50-60)
Participant 10	X	X	X	X	X	F(50-60)
Participant 11		X	X	X	X	M(50-60)
Participant 12		X	X	X	X	M(60-70)
Participant 13	X	X	X	X		M(50-60)
Participant 14			X	X	X	M(50-60)

Participant primary role at interview time	X
Other participant roles performed	X

The participants were enthusiastic to take part in the research project. They expressed an eagerness to provide their thoughts in candid interviews covering expansive and detailed accounts of their experiences and opinions.

4.1.2 Basic Approach

As detailed in Chapter 3 (3.6.2.1) , a decision was taken to use intensive interviews as the primary data-collection technique. Intensive interviewing allowed the researcher to explore a topic in depth by allowing the conversations to go beyond ordinary conversations to understand situations, feelings and events (Charmaz 2006, pp. 35-40). An intensive interview is both open ended and directed; it is shaped yet emergent and paced but flexible. This approach gives the researcher considerable

control to direct the flow of the conversation but also allows the participants freedom to express views and deviate to new and interesting areas (Charmaz 2006, pp. 28-9). In order to probe the participant's decision-making experience, interview questions aimed to reveal their perspectives on good versus bad decision-making and to tease out what they felt were the core issues influencing decision quality.

The researcher used a standard set of open questions based on the initial concept model developed in Section 2.3 to commence all interviews and resorted to closed questions if conversations stalled for any reason (refer to Table 4.2). Using the same basic approach and questions allowed consistent coverage with each participant as a starting approach. As unique issues emerged during conversations, the researcher moved away from the standard questions and probed deeper into the issue with open and closed ad hoc questions as appropriate.

Key standard questions included:

Table 4.2: Initial Participant Interview Questions

Area	Open questions	Closed questions
Strategy related	Have you observed good strategic decision-making by a management team?	What do you believe were the key elements that made that decision process successful?
		How would you describe a good decision making environment?
		What influenced the way decisions were made?
		What was the environment like in the organisation at that time?
		In what ways did the management team interact?
		How did the team go about choosing options?
		What factors determined the ultimate choice?
		Was the team in agreement with the choice?

		What kind of decision-making skills were evident?
	Can you think of instances where you have observed poor strategic decision making by management teams?	What do you believe were the key elements that made that decision process unsuccessful?
		How would you describe a poor decision making environment?
		What influenced the way decisions were made?
		What was the environment like in the organisation at that time?
		In what ways did the management team interact?
		How did the team go about choosing options?
		What factors determined the ultimate choice
		To what extent did the team agree on the choice?
		What kind of decision-making skills were evident?
Psychological or cognitive factor	Do you believe that a different set of people would have reached the same decision conclusions? Why?	
	How were new options considered and evaluated?	Did everyone have chance to give his or her views? Did all views count for the same value?
		How often did people disagree? What happened when people disagreed?
		What motivated people to suggest various options?
		In the event of a disagreement, how were issues resolved?
		How were opinions weighed against each other?
		What is the role of the CEO in management team decision-making?

Participant's opinion on the root of the problem	What do you think are the most important things to consider when making strategic decisions?	
	How have you evolved in your decision-making as a result of your interactions?	
	Are there other factors that we haven't talked about which you believe have significant influence on the decision-making?	
General closing off	Is there anything else you think I should know or understand better?	
	Is there anything you would like to ask me?	

The researcher used textual analysis only as a secondary source of data in order to triangulate this research to other existing scholarly research where appropriate.

The data collection typically began with open interview questions shaped by the concepts developed in the research issues review. During the initial interviews, all participants were asked to provide their views on aspects covering the parent topics of strategic alignment and the decision-making process. After a number of interviews, it became clear that saturation had been achieved in several areas, and the subsequent interviews were shaped to de-emphasise those areas and focus on the core open areas.

After an initial looping process of collection and analysis, the researcher used theoretical sampling to target open issues not yet saturated. Until saturation occurred, theoretical sampling continued by a combination of re-interviewing participants who had raised the issues and interviews with new participants.

Although presented sequentially in this chapter, grounded theory research is not a linear process. Once commenced, data collection, analysis and interpretation occurred concurrently throughout the *entire research project*. Additionally, the researcher opted to take breaks of several weeks at a time between groups of

interviews. This gave the researcher time to reflect and develop more pragmatic perspectives on data collected from the often emotional and insightful personal accounts of participants, which had the potential to influence the researcher's objectivity.

The researcher used the NVivo 8 software to collect and manipulate the data. This software provides an audit trail of data development from codes to theoretical concepts as well as details around the frequency and volume of topics. Frequency and volume metrics were used only to identify the main issues discussed by participants, but the researcher acknowledges that the data is fundamentally qualitative in nature albeit grounded in data. Statistics were not represented in this research as reliable quantitative indicators. The data collected and analysed throughout this research project were first-hand *primary data*.

Originally developed in Australia, the NVivo 8 software supports qualitative research by providing a single database for almost all kinds of data including textual, pdf, spreadsheets, audio, video, surveys and images. Once input into NVivo 8, data can be analysed, queried, and visualised by the researcher. Therefore, NVivo 8 provides a computer assisted tool to accelerate the normal research processes of connecting data and concepts as well enabling the researcher to visualise their data in a holistic way. As with any research project, at all times the researcher using NVivo 8 controls the research process and quality. They remain completely responsible for filtering, prioritising and clustering data and thereby developing concepts based on patterns or trends revealed by using NVivo 8.

Interviews were captured in audio format on an Apple iPhone and then input into the NVivo 8 system for manipulation. The researcher began by listening to the recordings of the interviews and coding parts into *in vivo* codes directly from the audio format by using participant language as code names where possible. Parts of interviews were allocated multiple codes where detailed conversations covering several areas took place, yielding a higher coding density, and some parts of the

interviews were not coded, for example, when the interviews went off topic or when the researcher was speaking.

Over time, initial codes were consolidated where it became obvious that they significantly overlapped in meaning and they eventually became tentative categories. These were developed further and grouped into natural abstract trees to form initial concepts, which eventually formed the basis of theoretical concepts. In parallel, the researcher developed more refined memos to aid in clarifying and explaining the concepts.

High-level concept diagrams detailing the build-up to key theoretical concepts are provided as background information in Appendix A.

To triangulate results, once a grounded theory was developed, the researcher tested the theory by both validating the core concepts against existing scholarly literature for supporting the theory and testing the developed theory via participant feedback.

4.1.3 Chapter Structure

This chapter is divided into five main parts:

1. Introduction
2. Data collection—What did the data say?
3. Data interpretation—What does the data mean?
4. Data analysis—Analysis and theory development
5. Conclusions

4.1.4 Results

The research is principally concerned with factors that cause TMTs to make poor strategic choices. Although not within the scope of this research, it is useful contextually to first consider why strategic decisions need to be taken at all.

According to the participant's views, strategic decisions are taken in response to internal or external business pressures that upset or threaten to upset an organisation's operational equilibrium. These pressures can be real, anticipated or imagined.

Initial interviews were framed around the preliminary conceptual model developed as part of the research issues review (see Section 2.3) with the parent topics **strategic alignment** and the **decision-making process**. Strategic alignment has child topics of **organisational alignment** and **motivational alignment**. The decision-making process has child topics of **psychological factors**, **cognitive factors** and **decision-making method**.

Discussions of cognitive factors—*negative or positive effects of different cognitive styles*—as causes of poor decision making quickly reached saturation. Participants did not consider these significant causes of problems, and therefore they are not covered as part of the detailed analysis. The issues were monitored in all interviews, but no participants raised them as major causes of problems or identified them as a problem when prompted.

The final analysis shows several important driving factors that are heavily supported by data:

- The CEO (leader) is an extremely important focal point.
- Executives have a good grasp of decision-making issues.
- Decision-making processes provide important frameworks to guide decision making.
- Executive self-interest manifesting as playing politics has major effects on decision making.
- Decision quality is closely related to these factors.

These driving factors exist against a complicated environmental backdrop of:

- increasingly complex decisions
- information overload

- reduced lead-times
- personal motives
- survival and self-serving instincts
- pressure associated with meeting market and stakeholder expectations.

The interaction of these driving factors and the environmental issues determines how effectively organisations make strategic business decisions.

4.2 Data Collection: What Did the Data Say?

This data collection discussion represents a collated view of participants' concerns and views that were clustered and initially coded but not interpreted. These are effectively clustered and scrubbed raw data.

4.2.1 Individual Concerns

Executives seem to position themselves on a career continuum that ranges from survival at one extreme and ambition at the other extreme with equilibrium somewhere near the centre. It is a slow and difficult task to climb to the top of the corporate ladder. There is always an immediate and personal concern that one wrong step can result in a rapid fall from grace with devastating consequences.

In this research, the executives were typically over 50 years old and had invested 20 to 30 years in building their personal image, network and reputation to a point where they could compete for and win a senior appointment. A fall from grace could result in a serious career set-back, ranging from a damaged reputation to termination and public humiliation. Unemployed 'over-50' executives with a tarnished reputation can easily find themselves unemployed for lengthy periods or forced into early retirement. These consequences meant that the participants had a very acute sense of their place in the corporate career ladder, and they constantly monitored their career

status and acted in their own self-interest to maximise the safety of their position. Maintaining, protecting and improving their image and therefore their future value were *paramount* issues to executives.

Executives in equilibrium typically focused on their job and contributing to the organisation effectively. Executives in either the survival or ambition position on the career continuum were mostly preoccupied with personal issues. The further executives were from equilibrium, the less focused they were on organisational effectiveness.

Executives that existed outside of the equilibrium position on the career continuum engaged in either offensive tactics to strengthen their individual position or defensive tactics to guard against any threat to their survival. These tactics and the motivations to use them have been collectively detailed later in Section 4.2.3. Executives expressed the view that they could move very quickly from equilibrium into survival or ambition as a result of both their own actions and other uncontrollable factors.

Participants expressed the view that the lifespan of an executive in any organisation seems to be around three to four years. The reasoning is twofold: first, this timeframe is about the tenure required to qualify for the next job and second, in high-technology organisations, product cycles are roughly about the same period and leaving before a business transformation became obviously necessary improved the executives chances of securing their next job. Another more cynical view offered by several participants was that it would take one year to build a new plan, one year to execute the plan and one year to determine what the next job should be after the plan did not work.

If executive lifespan concerns contribute to their focusing on a three to four year horizon, executive incentives encourage even shorter-term concentration. One executive asserted:

> Are the management team incentivised for strategic thinking? I think not. They're incentivised as everyone's told you by short-term goals. Also, we don't expect to last more than 3 or 4 years in the job so what's our

> incentive? It's not LTI (long-term investment) it's short-term bonuses; short-term survival.

Executives are motivated differently depending on their situation and worldview. Most executives avoided any activities that might move them from a place of equilibrium or ambition on the career continuum to a place of survival. However, some were willing to move into an apparent survival state to prove a point, the underlying motivation being taking a position on a moral or ethical high ground would enhance their image even though they might personally suffer if they took that risk. One example described by a participant involved the CEO of a multi-billion dollar organisation deciding to voluntarily revalue the organisations assets in a way that better represented true value than using the conventional method, which was sometimes misleading.

The research consistently discovered that executives are almost always motivated to act in their own best interests to the maximum extent possible even when it may appear that they have taken a risk. Compensation plans typically enhance and amplify this self-serving behaviour, as employers attempt to use them to drive performance.

If executives become aware that they may be under threat and consequently may be forced to move towards the survival end of their career continuum, they actively engage in defensive behaviour by applying survival tactics. One participant observed:

> Sometimes, you get seriously under pressure and when you are under pressure you get seriously into defence mode and you’re making sure that you defend number 1 at the detriment of anything else.

Behavioural tactics and motivations have been collectively detailed later in Section 4.2.3. The extent to which executives employ defensive or offensive behavioural tactics is often determined by the level of control exercised over them both by the leader’s application of rules and policies and by the processes that make up the decision ecosystem.

4.2.2 The Decision Ecosystem

Participants understood that organisations need a robust decision-making ecosystem in order to make effective business decisions. They believed that the decision ecosystem encompasses three main elements: factors that together form a basis for organisational alignment, factors that shape the decision-making process and the framework of order imposed on the organisation to ensure that processes are followed, such as enforcing organisational policies, effective delegation, setting boundaries and setting company culture.

4.2.2.1 Making Strategic Decisions

Interestingly, most interviews began with the participant taking about ten minutes to explain his or her personal views on good decision making as if to preface the interviews for the researcher and make it clear that they were happy to discuss the issue but did not see themselves as part of the problem. Through this process, most participants demonstrated a good grasp of the issues that form the essential elements of good business decisions.

No participants claimed to have any in-depth formal training in decision making, except some who recalled rational decision-making theory as part of their tertiary education. However, participants consistently spoke about what they regard as the key factors to create an effective decision-making ecosystem:

- knowing who is making the decision and their accountability for it
- understanding the timeframe
- a robust process
- transparency
- inclusiveness
- appreciating diversity
- a sense of order
- accurate data
- mutual respect

- active debate on issues with everyone *involved* having a say.

Participants expressed the view that when any of these factors were not present in a strategic decision-making situation, sub-optimal decisions were more likely be reached. Further, when asked if it was usual to find all of the decision-making factors present when making strategic decisions, most participants claimed that it was *rare*. Additionally, the participants all expressed the view that as leaders, chairpersons or CEOs were responsible for ensuring that a comprehensive decision-making ecosystem was in place.

In addition to sub-optimal decisions, failure to provide an effective decision-making ecosystem also resulted in several other undesirable side effects such as promoting internal politics and diluting commitment to decisions.

> He got everyone in the room and said ‘this is what we're going to make a decision on and we're all going to be in the room and debating it so everyone gets to have their say’. That had a big impact on the degree of politics that got played because everyone knew that it was an open and transparent forum for people to express their views and that it would be a fair process for everyone to bring the right data into the process and so forth.

> If the CEO makes a decision and I should have been there because I had all the data but I wasn't ... it was made in some back-room, then I'm not bought-in... I wasn't listened to, I didn't agree, I'm concerned about politics going on.

Most CXO participants remarked that even when a CEO made decisions in isolation that favoured them, they were not fully supportive of the decision because they felt that their views were not taken into account. As a result, executive buy-in was low, especially for those who opposed the decision in the first place, but also for those who supported the decision but were not asked for their inputs.

Collectively, the omission of key components required to make an effective decision-making ecosystem was viewed by CXO participants as an internally orientated unforced error that was attributed largely to a failure of the chairperson or CEO to use or enforce the use of a formal process. However, participants also cited forced

errors in strategic decision making, where executives were under pressure from externally orientated forces that demanded sub-optimal decisions and believed that they had no choice. The most commonly cited example of a forced error was the need to meet market expectations in the current period by cost cutting on long-term initiatives that might yield benefits in the future.

> Quite often we [CEOs] know that it's the wrong decision... [but] we have a set of instructions, we have a set of deliverables and we know it can't be done... but it still has to be done—you're told 'just do it!'. I'm told to cut my costs by 20 per cent and I know I can't do it because I'm already lean—the only way to do it is to cut into muscle and that means I won't be able to close deals in 6 months time. The board knows the impact but the financial release to the market is coming up in a few weeks and that means I have to cut [to meet market expectations]. As a CEO, you're between a rock and a hard place.

Participants believed that being driven by external expectations to meet what is deemed to be the industry-benchmark performance level on a periodic basis is fine, while the benchmark performance levels are attainable by productivity gains, what is known as 'cutting the fat'. If organisations are forced to cut key long-term programs to meet market expectations, forced errors in strategic decision-making occur, and this is known as 'cutting muscle'.

In summary, the participants had a good grasp of the factors that collectively form an effective decision-making ecosystem and yield superior business decisions. However, they asserted that good decision-making ecosystems are rarely in place in business today. This was both a major cause for sub-optimal decisions and a driver for internal politics and poor decision commitment. Participants believed that chairpersons and CEOs were responsible for creating and maintaining the decision-making ecosystem.

Participants believed that poor decision making as a result of an internal failure to use an effective decision-making ecosystem was an unforced error and completely within the capacity of the chairperson or CEO to control. Forced errors in decision making occurred when uncontrollable external factors affected the business and drove the need to cut key future initiatives in order to meet shorter-term market expectations.

4.2.2.2 Strategic Alignment

Strategic alignment refers to the ability of an organisation to bring its strategies and resources into alignment. Participants believed that the nature of strategy development and execution has evolved from periodic planning sessions with business milestones, which were periodically monitored, to a continuous process, which is flexible and constantly changing. In a global competitive environment, an agile approach to strategy suits their rapidly evolving business requirements and provides adaptability.

Strategies: When participants were asked if either a lack of strategy or a poor strategy were root causes for poor decision making, they consistently asserted that it was not. They believed that poor strategy becomes self-evident quite quickly, and in an agile environment, it can be modified as necessary. Further, the choice of preferred strategies was not critical as long as progress was monitored and the end-point remained the focus. Most believed that that several strategies could deliver the desired result.

Resources and motivational alignment: Participants believed very strongly that resource misalignment was a major contributor to poor decision making. The kind of misalignment that attracted the most participant feedback was incentive misalignment, especially when combined with timing misalignment, and its effect on the long-term/short-term decision-making balance.

Incentives such as bonuses, shares and commissions are widely used as tools to drive executive behaviour in ways that supposedly benefit the organisation. Generally, participants believed that incentives are over used to provide motivation to meet short-term performance targets such as quarterly market expectations, resulting in organisational erosion of commitment to long-term strategic initiatives.

> I've also seen a lot of poorly structured arguments from CEOs and management teams which are driven not by the good ... they’re not designed for the long-term sustainability of the company ... they're very short term sometimes tied to the incentives and remuneration structure.

Participants also cited many instances of poorly designed incentives that were misaligned with both the short- and long-term interests of the organisation and acted to drive executive behaviour in ways that suited individuals and worked against the best interests of the organisation.

Motivational misalignment was a consequence of poorly designed compensation schemes that either rewarded short-term performance at the expense of long-term strategy or occasionally schemes that served neither the short- nor long-term goals and only served the executive. Participants believed that the chairperson was responsible for ensuring strategic and motivational alignment of the board and the CEO, whereas the CEO was responsible for strategic and motivational alignment of the TMT.

4.2.2.3 Decision-Making Process

The decision-making process is an essential part of the decision-making ecosystem. Problems caused by not having a formal decision-making process were raised as a main cause for poor decision by participants more than any other topic in the entire interview process. Participants believed that a clear process consistently yielded superior decision outcomes, but they acknowledged that examples of good decision-making processes were extremely *rare*. Further, where robust decision-making processes did exist, they were often ignored.

As noted earlier, CXO or board member participants believed strongly that their leader being either the chairperson of CEO is singularly responsible for implementing and driving the decision-making process at either board or TMT levels. They also believed that they were consistently let down by their leaders in this regard, even though the process is completely internal organisationally and therefore controllable and immune to external pressures.

The *main* issues raised were as follows:

No decision-making process: Decisions are made on a case-by-case basis, often by a small sub-group or by the CEO alone, mandating a direction without any discussion.

Lack of transparency: Excluding stakeholders from decision making, withholding information, side-bar discussions between the CEO and individuals outside of the TMT.

Low tolerance for diversity and alternative views: A low appreciation of the value of diversity and experience.

Disrespect: Treating those with different views as disloyal and not as team contributors.

Data: Ignoring data when they did not confirm favoured outcomes. Over-relying on small data samples when they supported the desired outcomes. Pretending that everything was alright when it was not.

Dominant individuals: A CEO or others dominating the discussion and chiding anyone who offered alternative inputs.

Self-interest: Allowing self-interest to be the basis of decision outcomes rather than the organisation's best interest.

Emotional factors: Taking decisions based on gut instinct without cross-checking against the data. Not appreciating the effect of personal biases on decisions.

Narcissistic behaviour: Decisions driven by individuals with over-developed self-belief and the inability to comprehend other people's view or consider themselves wrong.

Ego: Decisions driven by individual people's agendas to further their own interests.

Participants believed that these existed in all TMTs and boards to a greater or lesser extent. Some issues such as emotional factors were regarded as manageable in a respectful and transparent environment where each executive was balanced out by the rest of the team. Other issues such as lack of process, transparency or respect were regarded as critical and essential to superior decision outcomes.

Interview feedback strongly supported the notion that an effective decision-making process that was championed by the leader could eliminate most of the problems with decision making.

4.2.2.4 A Sense of Order

Executives who can rely on an orderly and predictable environment are generally more focused on the business and spend less time worrying about political and personal issues than those in unstable environments.

To enable an effective decision-making ecosystem to exist and thrive, there needs to be a sense of order that encompasses such things as a respectful company culture, clear expectations of one another, clear boundaries and effective delegation. According to participants, unless such a sense of order exists, it is hard for them to engage in meaningful dialogue with their peers at an open and fundamental level. Failure to engage deeply means that open and informed discussions do not occur, and subsequent decision making is at best based on meagre data and therefore sub-optimal. Without a sense of order, participants quickly become concerned with destructive and divisive political issues, and their thoughts turn to tactics to protect their own interests. The use and impact of such tactics have been collectively detailed later in Section 4.2.3.

> Part of my admiration for the CEO is because I see him as a textbook leader, he is the first person I have ever met who sets a strategy and the strategy is not just what we are going to do but also what we are not going to do and he follows up the strategy with investment. He also set strategy and communicated it; he was predictable; you could rely on him to back you up if that was what you did.

As this participant implies, most executives believed that the sense and level of order in their organisations was sub-optimal and that it resulted in heightened levels of political gamesmanship, which in turn directed attention towards destructive non-core activities. They also believed that the CEO and chairperson are responsible for creating order.

4.2.3 Playing the Game

When executives are in the equilibrium position on the career continuum (Figure 4.1), they probably work in an organisation that is stable and orderly and from a decision-making point of view, has a clear and effective decision ecosystem. According to participants, this ideal situation *is rare in practice,* and therefore executives move from side to side on the continuum depending on their situation at a particular time. The better the organisation's stability, order and processes, the more likely are executives to be close to the equilibrium on the career continuum.

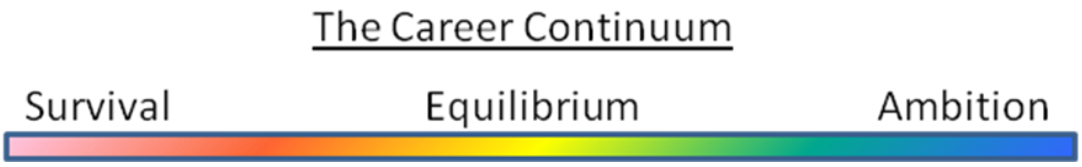


Figure 4.1: The career continuum (developed for this research)

Executives are motivated to act differently and at different levels depending on their situation and personal worldviews. However, most executives try to avoid any activities that might move them away from a place near equilibrium or ambition to a place of survival. The tactics used by executives to avoid moving to the survival position are collectively described here as *playing the game*. Due to the massive and prolonged personal investment in their career development and the dire consequences of failure, career preservation is an executive's *paramount* concern.

Although participants cited many tactics used in playing the game, those mentioned in interviews can be grouped into four kinds: avoiding accountability, pretending, delaying and engaging in politics.

Avoiding accountability: Executives seek to either avoid being responsible for risky business endeavours or to share accountability with their peers so that they cannot be singularly held accountable in the event that things do not work out as expected. Common tactics are blaming competition, markets or some other uncontrollable factor, to reorganise or restructure parts of the company, to bury and spread poor results across multiple business units or to blame peers for not supporting them as expected.

Pretending: Often, executives who feel vulnerable withdraw from active engagement with their leaders and peers and adopt an *apparent conformance* stance. They neither make suggestions nor volunteer anything; they go through the management team rituals and seemingly agree with popular ideas but do not effectively contribute. They do just the minimum amount work to seem credible but focus on staying under the radar and away from controversy—a term often referred to as 'bunkering down'. These executives are typically waiting for some kind of bad result and the subsequent witch-hunt to come and go before they re-engage in the TMT fully.

> We had a meeting where we decided that the best thing for us [CXOs] to do to survive was to withdraw our IP [experience] and that's what we did. We still contributed to the discussions and the team but we withheld our deep knowledge and experience. So, it took them 6 months to learn what we could have explained in an hour but hey, we weren't under threat.

Delaying: Rather than take a decision that will be unpopular with stakeholders or staff, executives push issues to subsequent reporting periods, over the horizon. Delay tactics assume some unexpected external factor, like a GFC occurring downstream, and provide a convenient alternative excuse for poor performance.

Engaging in politics: Executives anticipating poor results spend time aligning themselves with the perceived organisational powerbrokers to build their own personal case at the expense of others.

Participants believed that playing the game is institutionalised in every organisation to some extent. They believed that game playing was lowest in organisations that

demonstrated high levels of order, stability and effective processes and the greatest in organisations that had low levels of these factors.

4.2.4 CEO Issues

Participants consistently nominated the CEO as the most critical person in the decision-making ecosystem. CEOs are responsible for creating a sense of order, including setting the business boundaries, creating the organisational culture, overseeing the application of policies and practices, determining the interpretation of the board's instructions for CXO consumption and ensuring that morale is high on an ongoing basis. They determine the attitude towards diversity and the organisational willingness to embrace inclusiveness and debate. The CEO personally sets the standard for transparency, behaviour, respectfulness and accountability.

The CEO is accountable for the performance of the entire organisation. They are very visible to stakeholders and are subjected to the highest levels of scrutiny and evaluation on a continual basis. Their high visibility and total accountability gives them much less scope to play the games that CXOs and board members do. If a company fails to meet expectations, CEOs typically move rapidly towards the survival end of the career continuum. Without an unexpected external factor to blame for the poor performance, they become extremely vulnerable and are often terminated. This means that CEOs are very focused on meeting short-term market expectations, potentially more so than the board or other members of the TMT.

In this research, CXOs consistently cited the CEO as the person most to blame for poor decision making. The main reasons included failure to create an effective decision-making ecosystem and/or dominance over the TMT bordering on narcissism.

As previously highlighted, most participants noted that it was rare to find organisations with high levels of order and an effective decision-making ecosystem. They consistently saw this as a CEO's responsibility.

The most vivid accounts of poor strategic decision making were those involving CEO dominance. Participants consistently recalled CEOs who ignored conventional decision-making wisdom and chose to rail road their ideas through management meetings by threatening CXOs with dire consequences for not supporting their plans. Participants recalled that the most likely direct cause of CXOs moving to the survival position and playing the game was CEO dominance. The preferred coping survival tactic is *pretending*, where a CXO appears to go along with the CEO but actually withdraws from the activity and instead works on ways to reduce his or her own levels of accountability and exposure to the CEO's plans. The CXO then waits for what is seen as the eventual failure of the CEO while seeming to be publically supportive.

Participants held the view that a larger than usual percentage of CEOs were dominant personalities based on their empirical observations of CEOs and on the typical CEO hiring criteria they had observed. They believed that a chairperson would be intuitively drawn to decisive, confident individuals with excellent presentations skills and an ability to sell their ideas. However, decisive and dominant are often seen to go hand in hand. A person appears to be more decisive as they become more dominant.

> Dominant CEOs are seen to be decisive instead of analytical ... the Chairman is not going to deal with guys that say 'I understand the problem, let me get back to you with the answer' but, if someone says 'I understand what you're saying, we'll get this nailed by doing this and this and this' ... the Chairman thinks it's fantastic!

Participants also expressed the view that a new CEO is generally hired as a consequence of the previous CEO's failure to meet market expectations in a previous period. One of the main driving characteristics of the new CEO will typically be to rapidly and effectively rebrand the organisation and its recovery plans to stakeholders. This requirement was deemed to favour decisive, dominant and confident individuals.

4.2.5 Governance Issues

Participants believed that boards were overly influenced by external market expectations and spent too much time anticipating or reacting to external pressures. However, they understood that failure to meet expectations could spell disaster for the share price and result in control of the organisation being taken away from the board and the TMT. It was often mentioned that boards striving to meet short-term market expectations were not always acting in the best long-term interests of the organisation.

Participants believed that apart from meeting market expectations, inexperienced boards were also overly preoccupied with 'chasing shadows', that is, worrying about things that they have little or no control over. Most feedback stated that boards that chase shadows are those that often lack a formal process to evaluate and test their decisions. This was seen as a key role for the chairperson: '*The Chair guides and leads the board and is ultimately responsible for testing proposals and getting a decision on reasoned grounds including everybody's view'.*

Boards typically meet on a monthly or similar basis. Participants strongly articulated the view that the pressure of time available to make decisions in rapidly moving markets meant that boards were sometimes reluctant to push back on proposals from management by seeking better or more complete information for fear of delaying decisions for months. Compounding this issue was a practice wherein some TMTs prepared board papers using technicians to build technical proposals, which failed to articulate the true strategic intent and business implications clearly.

Implementing a clear decision-making process and allocating sufficient time for discussions are the responsibility of the chairperson. Participants viewed synthesising technical information into coherent business level proposal suitable for the board, including an assessment of risks and capability, as the CEOs responsibility.

Participants almost unanimously deemed that overall, organisational strategy was the responsibility of boards and that plans to implement the strategy were the responsibility of the TMT led by the CEO. Many participants spoke about the pitfalls of the tendency in Australia to only have the CEO on the board. They considered this

to be a narrow feedback channel and a weak link in the flow of information between the board and the TMT.

Boards comprise individuals who typically represent the interests of particular groups of shareholders or other stakeholders. Additionally, board and TMT members are equally influenced by their personal worldviews and situational circumstances. Participants believed strongly that because they are responsible for good governance, chairpersons should understand the effects of their board members' vested and personal interests and moderate them through clear decision-making processes or other means in the best overall interest of the organisation. Participants most familiar with boards spoke of less than half of them having excellent governance and decision-making practices.

4.3 Interpretation: What Does the Data Mean?

Initial codes identified using NVivo 8 to listen to interviews were consolidated where it became obvious that they significantly overlapped in meaning and they eventually became tentative categories. These were developed further and grouped into natural abstract trees to form initial concepts, which eventually formed the basis of theoretical concepts. In parallel, the researcher developed more refined memos to aid in clarifying and explaining the concepts.

4.3.1 Theoretical Concepts

As a consequence of analysing the primary data, five main theoretical concepts were developed to reflect the main factors that interact and influence organisational decision making.

First, individuals bring their unique worldviews to every situation, and each person may react differently to a given circumstance. Individuals have a hard-wired, in-built sense of survival and self-interest. They consciously or subconsciously bring emotional and self-serving factors to the forefront of their thinking. This is especially

true when they feel under threat and their motivation to survive is extremely strong. According to participants, if not managed, these self-serving factors are one of the *root causes* for misalignment between executives and the organisation, as personal biases and vested interests become the basis for decisions. Since the chairperson and CEO stand alone in many respects, they are especially vulnerable to personal biases and vested interests in comparison to other executives. They have much fewer opportunities to offset blame to others or to blame unexpected external forces for poor performance, and their personal well-being is always on their mind. To capture these factors in a collective way, the researcher created a theoretical concept called **personal factors**.

Second, executives tend to be ambitious and driven individuals who have practised the art of getting their way for decades. Few successful executives have been closely associated with or at least held accountable for corporate disasters in the past. To avoid corporate disasters, they have learnt ways to manipulate their surroundings to their best advantage. The consequences of being associated with, or worse, blamed for a corporate disaster are devastating for an executive. They may be terminated, demoted or, in some cases, sued by disgruntled stakeholders. As a net outcome, they could be forced out of their industry or even into retirement. Often, tactics like avoiding or shifting accountability, pretending things are fine when they are not, playing politics and creating delays are used to avoid being associated with corporate disasters. Participants believed that these issues seriously affect decision making because they allow executives to ***always*** place their personal interests above all else. The researcher believes that the net result of these kinds of activities is the reduced value of the decision-making process and designated it a theoretical concept called **situational gaming.**

Third, participants spoke at length about the criticality of not only processes but also the organisational environment and culture to decision making. It became obvious that the researcher needed a larger and more abstract concept than a finite decision-making process to encompass issues like environment, alignment, culture, time pressure and team make-up. The researcher called this theoretical concept the **decision ecosystem.** The decision ecosystem is the embodiment of all the

environmental factors participants believed had to be in place for optimum decision making.

Fourth, CEOs are absolutely critical to decision making in many ways. Their interpretation of the board's strategic agenda determines the way an organisation operates. They set the company culture and thereby the standards for behaviour, including the organisation's approach towards game playing, transparency, respect, accountability, ethical standards and inclusiveness. They champion the development of plans to achieve strategic goals, and they design the compensation and rewards systems to drive CXO behaviour towards these goals. They hire CXOs and decide their functional responsibilities. They hold people accountable for their business areas, and in turn, the CEO is held accountable for the overall organisational performance. To represent this collective impact and influence on decision making by the CEO and to acknowledge the similar effect of these factors on boards through decision making by the *chairperson*, the researcher created a theoretical concept called **decision leadership**.

Strong decision leadership includes aspects that make up this theoretical concept, while weak decision leadership is the absence of some or many of the aspects. Overall, participants believed that the stronger the decision leadership, the better is the environment for effective decision making because of the consequent moderation and reduction of the effects of situational gaming and personal factor motivation.

Fifth, the **decision governance** theoretical concept embodies the issues and factors associated with organisational governance, including determination of strategic imperatives, regulatory compliance, the role of the board and TMT, policy on how to react to external pressures, long-term trade-offs for short-term gains and other issues related to good governance practice. Some participants believed that traditional governance models are insufficient in the current business environment and that another overlay of truly independent governance is needed to ensure that boards and management always act in the best interests of stakeholders.

Governance issues also include such areas as internal reporting to the board and stakeholders and ensuring that transparency exists and due processes are carried out. The responsibility of internal organisational governance ultimately rests with the CEO but is shared by the TMT for issues like statutory financial reporting.

4.3.2 Forced and Unforced Decision Errors

It became apparent through the interview process that poor strategic decision making could be broadly classified into two categories: poor decisions that are knowingly taken but forced on an organisation and those that are not forced but based on some controllable factor. The unique genesis of these two poor decision-making types provides a convenient basis for further interpretation.

4.3.2.1 Forced Strategic Decision-Making Errors

External forces set performance expectations for public companies, government and semi-government organisations. Public companies are subjected to expectations developed by analysts' opinions of markets, which are a combination of global best practices and estimated future trends. Government and semi-government organisations are subject to expectations developed through the political process. Private companies are not subjected to external expectations to the same extent, except when their operations are of public concern.

Performance expectations typically aim to represent the *best practice* in a market, and organisations are under pressure to meet or exceed market expectations to be acknowledged as performing adequately. Under-performing organisations are punished by market forces and may face dire consequences. In public companies, this typically takes the form of significant share price reductions. In repeated or severe cases of unmet expectations, dismissal of the chairperson or CEO is common. To avoid suffering the consequences, boards and CEOs go to great lengths to meet expectations, including hiding elements of the true long-term picture of organisational performance.

In organisations that are truly performing at the industry best-practice level, meeting expectations may only mean minor business-as-usual improvements in productivity aimed at maintaining their outputs and profitability. However, as capabilities such as high-speed internet access enable a global economy, best-practice financial returns for organisations in advanced economies are being challenged by comparatively high performance levels in poorer economies with much lower base costs.

Eventually, in order to ensure best-practice financial performance, most organisations exhaust their business-as-usual options to improve productivity or their options to increase top-line revenue. Organisations are then *forced* to make compromises to meet current expectations, typically to their long-term programs by cutting funding costs in the current period for programs in future periods.

Meeting expectations by cutting long-term funding creates a circular-logic problem that typically cannot be solved. Organisations that meet expectations by cutting long-term funding compound their problem by setting a new performance expectation for the next reporting period. They also potentially set a new market benchmark for their competitors to redefine their own best-practice results. Sometimes, a market crisis of sorts comes along unexpectedly and provides a basis to reset market expectations to new levels, and the circular-logic process also resets and continues as before. Eventually, organisations may run out of options to cut down long-term spending and find themselves with no choice but to report their true financial position to the market.

The consequences for organisations that report unmet market performance expectations and that they have little or no funding for long-term strategies are disastrous. They typically involve a dramatic loss of market confidence and a call from stakeholders to replace the chairperson or CEO or both. In practice, prior to releasing the results, the board usually decides if the chairperson or CEO (or both) will take the blame for poor results, and they often concurrently announce that a search is underway for a new dynamic, decisive, ambitious, confident transformational CEO or chairperson. At this time, market expectations are reset to lower levels, and the circular-logic cycle begins again amid promises of

transformational change and improved results in the forthcoming periods, albeit with a significantly reduced company value as judged by market analysts.

Choosing to meet market performance expectations by reducing short-term costs and thereby compromising long-term strategy in order to avoid dire consequences is often both a necessary and valid business tactic. It may prevent or delay an organisational failure resulting from market pressures and give the organisation some breathing space to devise a new strategy to recover its position. However, in the longer term, because of its circular-logic nature, the problem cannot be solved in a sustainable manner *via* a compromise. Without some kind of positive organisational change or unexpected market intervention, compromising inevitably results in a surprising negative announcement to the market outlining missed expectations.

Although compromising long-term strategy is a legitimate and useful method to buy time to formulate an alternative positive strategy, current governance conventions do not required that long-term funding cuts are necessarily exposed to stakeholders. Stakeholders can only make investment decisions on the reported situation and, unless the chairperson explicitly elects to disclose impacts of funding cuts to future business shareholders are in the dark. Compromising in this way is a strategic decision-making *forced error*, where executives typically understand that better strategic decisions can be taken, but meeting market expectations takes higher priority.

Chairpersons ultimately decides when to disclose organisational issues associated with meeting market expectations. To determine this, they have to take into consideration several competing factors. The board, the TMT, shareholders and chairpersons are rewarded with incentives and job security for seeming to meet the market expectations. Additionally, the impression that market expectations have been met gives an organisation freedom to ‘control its own destiny’ and work on a recovery plan behind closed doors. However, once meeting market expectations extends beyond cutting fat and into cutting muscle, thereby endangering future organisational capability, it is the chairperson’s call on the correct timing and content of disclosure. If factors that combine to create powerful decision leadership exist,

they will guide chairpersons in using the decision ecosystem to determine the best disclosure strategy. With weaker levels of decision leadership, personal factors and situational gaming outcomes may determine how, when and if disclosure occurs.

As it becomes increasingly obvious to executives that market expectations cannot be met, they begin to develop plans to avoid personal consequences, and their individual focus turns to personal factors. Since they have spent decades building their image, executives are extremely sensitive to the consequences of failure. Paradoxically, the higher they go organisationally, the more they become vulnerable to the dire repercussions of destroyed reputations. Disgraced or under-performing executives can take years to find similar jobs and usually in their fifties or sixties, they may find themselves forced into an early and unexpected retirement. CEOs are especially vulnerable in this regard, as they have no excuse not to be organisationally responsible for everything and have little basis to avoid accountability.

In summary, forced decision-making errors are typically due to uncontrollable external factors that affect the business. External factors can include market expectations, shareholder expectations, regulatory changes, customer expectations and competitive impacts. Typically, these factors put pressure on organisations to improve their performance somehow to meet market expectations. Failure to meet expectations results in dire consequences in terms of losing operational flexibility to be self-determining, reduction in shareholder value and damaged credibility of organisational executives. Meeting expectations is extremely important and often involves cutting funding for long-term initiatives to meet short-term targets, which though a valid method, works only up to a point. In such a scenario, future organisational viability is compromised, and the organisation is *forced* to make a poor strategic decision. In these cases, poor strategic decisions are consciously made and the implications are understood. The chairperson is ultimately responsible for determining the extent of disclosure of the effect of the compromise on long-term viability with the purpose of meeting short-term targets.

Executives who are aware of the organisation’s inability to meet external expectations will almost certainly begin to consider personal factors and move to act

in their own best interests to the extent allowed within the boundaries created by the chairperson or CEOs by applying their decision leadership and their consequent insistence on sound governance principles. Governance principles are most effective when a powerful decision leadership and a decision ecosystem exist in harmony.

4.3.2.2 Unforced Strategic Decision-Making Errors

Unforced decision-making errors occur when otherwise controllable factors are not managed within an organisational framework. These factors and are allowed to develop their own sense of importance as individuals or groups use personal factors for guidance, often without critical assessment of the best interests of the organisation.

Executives may genuinely believe that they have the best interests of the organisation at heart as they make decisions based on their personal views and experience. They may be entirely oblivious to effects of their personal biases or lack of experience. However, often being ego driven, ambitious executives will naturally look for ways to use ambiguous guidelines to maximise their own personal gains within the limits of the possible. The extent to which executives will bend the rules and favour their own interests is limited by the power of the CEO or chairperson's decision leadership. Weak decision leadership often indicates a corporate culture of disorganisation and distain for rules and processes. This leads to CXOs and board members imitating their leader and focusing more on their own interests than those of the organisation. The result is that the weaker the decision leadership, the more likely are TMTs are to make decisions based on their own personal factors, effectively making decisions as individuals with all of the problems with biases and heuristics that creep in without a rigorous decision framework. Powerful decision leadership emphasises process, respect, inclusion and transparency and yields an organisational ethos that values teamwork, process and organisational success.

Throughout the research interviews, participants consistently anchored the effectiveness of internal decision making to the CEO and chairperson and the strength of their decision leadership. The failure of a CEO to lead by example in a

textbook display of managerial competency resulted in sub-optimal decisions. Further, the more the CEO deviated from best-practice management and leadership, the more the rest of the TMT believed that they had the licence to follow, and the effect was even amplified in the TMT. *This issue was the single most significantly discussed behavioural issue in the entire research project.*

The ability of the CEO or chairperson to create and maintain a powerful decision leadership seemed to have a direct effect on the effectiveness of both the decision ecosystem and the level and intensity of situational gaming. Thus, these individuals greatly affect the final quality of decisions. The relationship was not linear, and in fact, small deviations from best-practice management demonstrated by CEOs resulted in significant deviations by CXOs, who were insecure about their personal factors and resorted to situational gaming as a survival strategy. Larger deviations by the CEO resulted in CXOs being completely preoccupied with situational gaming as a survival mechanism.

4.3.2.3 Dominant CEOs

Participants consistently linked CEOs with dominant behaviour. When asked an *open question* to recall instances of poor decision making, they spoke at length almost exclusively about encounters with dominant CEOs. The issue was clearly at the top and front of their mind. A dominant CEO was one who tended to ignore the advice of his or her CXOs and make decisions based on his or her own personal factors.

> The biggest issues around poor decision making that have been observed have involved dysfunctional CEOs. Those [CEOs] that dominate their management teams exhibit characteristics such as large egos, overbearing, self-centred, dogmatic and opinionated. CEO dominance or railroading is a major issue and demonstrates a lack of respect. People who disagree with a dominant CEO are publicly embarrassed amongst their peers so they only do it once or twice and then give up.

Dominant CEOs force CXOs to either leave the organisation or engage in situational gaming as a survival strategy: *'If you're a CXO you might sit down with your peers and talk about things not being right. You don't tell the CEO they have 'no cloths on' because you might get fired ... you're playing the game'.* Participants spoke about

'pretending' as a favoured tactic—pretending to agree with the CEO and pretending to engage in meetings and discussions or as one participant described, *'quit and stay'*. The main situational gaming aim is to avoid being accountable for anything and wait for the CEO to make a fatal mistake.

Decision making is seriously compromised by dominant CEOs from several perspectives. First, they move their teams into the survival position and lose worthwhile objective feedback on their decisions. Second, because their team is not involved in decision making, it is extremely unlikely to buy into the decisions. Third, CEO's develop a false sense of complete support from their team because of the extremely low levels of push back, and thus, they become confident that their dominant style is an effective decision-making method. Finally, they teach their team that the dominant style is the acceptable company culture and thereby push poor decision-making behaviour down through the entire organisation.

Participants offered three main reasons for CEO dominance. First, the kinds of people who strive to become CEOs naturally have dominant personality types, which enable them to overcome barriers and fight competitors to win their position. Second, they believed that for the position of CEO, chairpersons are naturally attracted to extroverted and decisive individuals with high levels of self-belief compared to more introverted, analytical candidates. Dominant individuals are more likely to appear decisive than analytical individuals. Third, CEOs are extremely vulnerable to the consequences of failure. They are responsible for everything in an organisation except the consequences of uncontrollable market shifts. CEOs have no way of passing off failure onto others. This vulnerability makes them extremely sensitive to how decisions will affect their status, and they are sometimes not inclined towards team-based decision making to leave their fate in the control of potentially self-serving and biased other executives.

4.4 Emergent Theory Formulation

4.4.1 Emerging Core Concepts

Primary data interpretation allowed the development of five key high-level theoretical concepts to explain the forces at work that cause TMTs to make poor forced or unforced strategic decisions. In the rest of the paper, decision leadership, decision ecosystem and decision governance remain as described earlier in Section 4.3.1. However, the *situational gaming* and *personal factors* theoretical concepts are now merged to form a more abstract concept called *decision politics*, which is the recognition that the situational gaming concept is a tactic used by executives to reinforce the personal factors concept.

Personal factors: As described in Section 4.3.1, in the absence of a decision-making framework, personal factors become determinants for choices individuals make, and it has a reinforcing relationship with situational gaming.

Situational gaming: These are the tactics used to minimise an executive's exposure to undesirable consequences. It is used to avoid being associated with corporate disasters and involves avoiding/shifting accountability, pretending that things are fine when they are not, playing politics and creating delays. These issues seriously affect decision making because they allow executives to place their personal interests above all else. Situational gaming has a reinforcing relationship with personal factors.

Decision politics: This is a core concept to describe the activities of executives when they use their abilities, knowledge, power and influence to maximise their personal opportunities for gain and to minimise their exposure to personal risks. Decision politics has a destructive relationship with decision governance, decision leadership and the decision ecosystem.

Decision ecosystem: This theoretical concept represents the embodiment of all the environmental factors needed make optimum decisions, including the elements of process, environment, alignment, culture, transparency, time pressure and team make-up. A strong decision ecosystem has most or all of these elements and yields the best results. A weak decision ecosystem is created when key core elements are missing and yields sub-optimal results. Factors that determine if a decision

ecosystem is strong or weak can be quite minor; for example, if transparency is not present but the other elements exist, the decision ecosystem will still be weak. Any omission of core elements that would cause the TMT to feel uncomfortable or insecure is most likely to weaken the decision ecosystem. A strong decision ecosystem has a reinforcing relationship with decision leadership and decision governance and a destructive relationship with decision politics.

Decision leadership: The CEO and chairperson have a very large personal impact on an organisation. They set the company culture and thereby the standards for behaviour, including the organisation's approach towards game playing, transparency, respect, accountability and inclusiveness. CEOs champion the development of plans to achieve strategic goals, and they design compensation and reward systems to drive CXO behaviour towards the goals. They hire CXOs and decide their functional responsibilities. They hold people accountable for their areas, and in turn, they are held accountable for the overall organisational performance. Strong decision leadership includes the positive aspects that make up this theoretical concept, while decision leadership is weak when some or many of the positive aspects are missing. Strong decision leadership has reinforcing relationships with decision governance and decision ecosystem and a destructive relationship with decision politics.

Decision governance: This theoretical concept also ranges from strong to weak and embodies the issues and factors associated with organisational governance, including clear articulation of the role of the board and TMT, determining ways to react to external pressures, positions on long-term trade-offs for short-term gains and issues related to good governance practice. Strong decision governance has reinforcing relationships with decision leadership and decision ecosystem and a destructive relationship with decision politics.

The relationships between the theoretical concepts are shown in Figure 4.2.

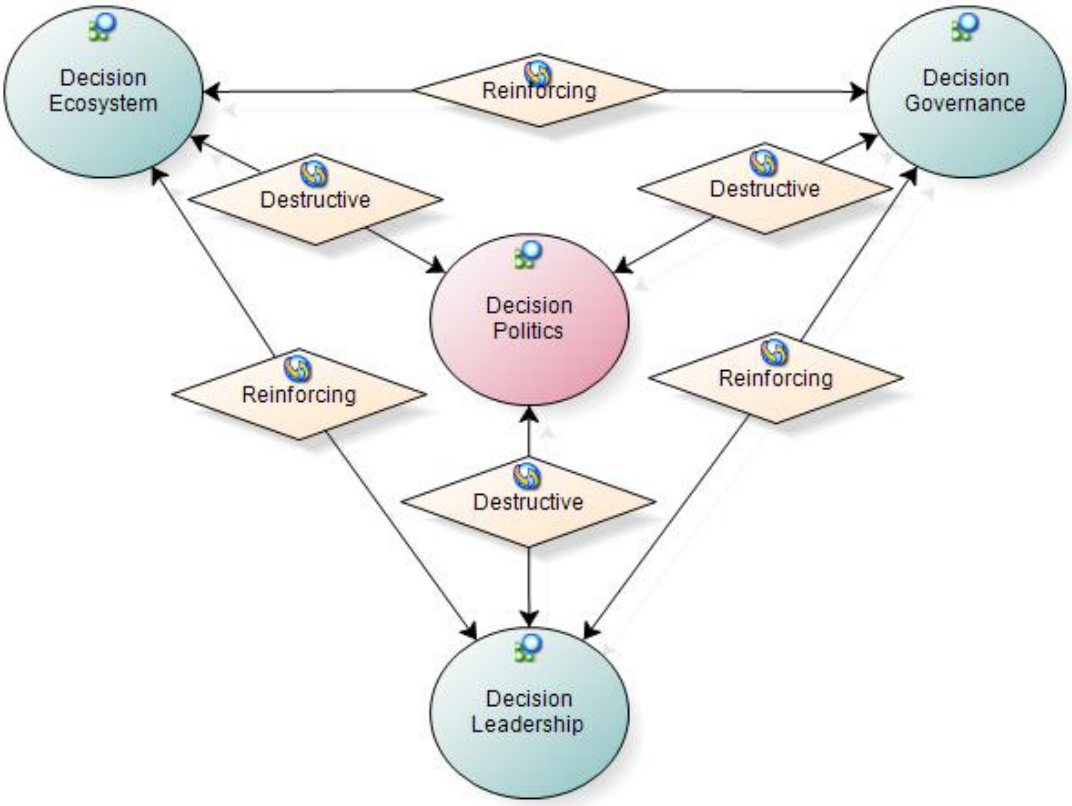


Figure 4.2: Framework detailing the relationships of the grounded theoretical main concepts (developed for this research)

This diagram highlights the relationships between theoretical concepts. Decision governance, decision leadership and the decision ecosystem are closely related and have mutually reinforcing relationships. This means that when these theoretical concepts are individually strong, they will help strengthen the others; when they are weak, they will provide less support and serve to weaken the others. Decision politics has a destructive relationship with all the other concepts, which means that strong decision politics weakens decision governance, decision leadership and the decision ecosystem. Conversely, decision governance, decision leadership and the decision ecosystem serve to weaken and suppress decision politics when they are strong.

4.4.2 Emerging Theory

Once theoretical concepts are identified and their relationships understood, the basis of a theory can be developed by understanding how the relationship model reacts

when stressed by forces and whether the outcomes can be generalised. The researcher believes that the source of pressures that stress the relationship model (internal or external) is not significant to model operation. However, understanding whether the source is external or internal may indicate whether the subsequent decision-making errors are forced or unforced, that is, resulting from either uncontrollable (external) or controllable (internal) pressures, respectively.

Pressures act on executives who consider personal factors, including their worldview and current situation, to determine their personal response to the pressure. Each executive responds differently to a given situation, although all are especially sensitive to negative effects resulting from the pressure but none more so than the CEO. After analysing their current situation and the available options, executives participate in decision politics by engaging in situational gaming either as a contingency against future threats or more vigorously as a survival tactic for current threats. Executives engage in decision politics to the maximum extent allowed under the constraints of the decision governance, decision leadership and the decision ecosystem, which are determined by the CEO and chairperson.

The three core positive concepts of decision leadership, decision ecosystem and decision governance act in harmony to strengthen or weaken each other. These theoretical concepts form the core elements that determine how well an organisation makes business decisions. Ultimately, the CEO (mostly, but also the chairperson) determines how well decisions are made through his or her commitment to these three core theoretical concepts, which when they work together efficiently, induce a state called **decision equilibrium.** They act against decision politics (situational gaming and personal factors), which otherwise undermine decision making. If leaders promote decision politics as a valid part of organisational decision making, they undermine the very basis of good decision governance.

Research question: *What causes top management teams to make poor strategic decisions?*

The grounded data illustrate that:

- Effective decision governance, decision leadership and the decision ecosystem lead to a decision equilibrium and enhance the likelihood of TMTs making better strategic decisions while simultaneously significantly dampening the effects of decision politics as an influence. Thus, superior strategic decision outcomes that are driven by organisational imperatives are achieved.
- Less effective decision governance, decision leadership and the decision ecosystem promote decision politics, which act to undermine decision making, thus yielding inferior strategic decision outcomes that are driven by individuals and their personal agendas.
- This research shows that *most* organisations do not have an effective decision leadership or decision ecosystem, which then undermines decision governance and simultaneously promotes decision politics having a significant influence over strategic decisions.
- The main factors that trigger the need to make a strategic decision are external or internal pressures. External pressures are typically uncontrollable, such as market, shareholder, regulatory, competitor or customer expectations. In contrast, internal pressures are typically controllable and include executive misalignment, poor processes and procedures or dominating individuals, mostly CEOs.
- In response to external or internal pressures, TMTs generally understand how to make effective business decisions, but external market or environmental factors often combine to prevent them from doing so. Failure to appreciate how to make business decisions is not a significant reason for why TMTs make poor strategic decisions.
- The CEO is the most critical actor in the decision-making model from the TMT perspective. CEOs are responsible for creating an effective decision-making environment and dampening the effects of decision politics.

However, they are also the most vulnerable executives in the event that expectations remain unmet. Temptations for the CEO to survive by engaging in decision politics are great because of the potential consequences of failure. The CEO is constantly performing on the high-wire while simultaneously trying to balance both the personal need to survive and the organisation's needs, often with competing interests.

- The lack of a viable strategy is not a significant factor resulting in poor strategic decision making.
- Different personality types are not inclined one way or the other to significantly improve or worsen strategic decisions in a TMT environment.
- The destructive relationships between the three reinforcing concepts of decision governance, decision leadership, decision ecosystem and decision politics are not linear. Small deviations from clear processes and expectations create ambiguity and uncertainty, which result in rapid and disproportional escalation of decision politics and the undermining of strategic decision making.

Given the inputs from participants and the results of the analysis, a preliminary grounded theory can be articulated as follows:

When investigating 'What causes top management teams make poor strategic decisions?- direct feedback from CXO level participants indicated that a clearly articulated and robust organisational decision-making framework encompassing decision ecosystems, decision leadership and decision governance creates decision equilibrium and yields good strategic decisions.

Direct feedback also indicates that poor decision making by TMTs is mostly attributable to utilisation of weak decision-making frameworks that fails to create decision equilibrium, leading to a decision vacuum of uncertainty and ambiguity. In a decision vacuum, participant feedback shows that decision politics become paramount and take control - strategic decisions become highly subjected to human limitations of dealing with complexities and natural self-interest.

Executives are exposed and vulnerable in their roles, and high levels of uncertainty and ambiguity cause them alarm, which both encourages and facilitates them to become risk averse. They become preoccupied with self-interests and bunker down to minimise their exposure to potentially bad outcomes through tactics such as loss avoidance, accountability avoidance and risk avoidance, thereby undermining decision making.

Creating and maintaining decision equilibrium is the responsibility of the decision leader, typically the CEO. Consequently, failure to maintain a decision equilibrium represents leadership failure.

Direct and consistent participant feedback indicates that most organisations do not achieve a state of decision equilibrium, which consequentially leads to decision vacuums that in turn promotes the emergence of decision politics as the basis for strategic decisions.

Politics driving strategic decisions rather than the best interests of the organisation is the main reason for consistently poor strategic decision making by TMTs.

4.5 Conclusions

This chapter began by outlining the scope of the data collected, including an explanation for why sampling was focused at participants who were Australian executives in primarily large high-technology organisations.

Participants typically had considerable experience working with other executives as a CXO, CEO, board member or management consultant. Many participants had played several roles and transitioned, for example, from CFO to CEO to board member and then board chairperson.

The participants were enthusiastic to take part in the research project. They expressed an eagerness to provide their thoughts in candid interviews covering expansive and detailed accounts of their experiences and opinions.

The data demonstrated that the participants had a good understanding of the factors that collectively form an effective decision-making ecosystem and yield superior business decisions. However, they asserted that good decision-making ecosystems are rarely in place in business today. This was both a major cause for sub-optimal decisions and a driver for internal politics and poor decision commitment. Participants believed that chairpersons and CEOs were responsible for creating and maintaining the decision-making ecosystem.

The CEO was identified several times as the most critical player in determining the level of organisational effectiveness in strategic decision making. Further, the tendency of CEOs to dominate organisational decision making and drive the agenda was identified as a major problem for team-based decision making.

The analysis identified three positive concepts that serve to strengthen an organisation's ability to make good strategic choices: decision governance, decision leadership and the decision ecosystem. These factors work together to positively reinforce each other and conversely undermine each other when any of them is weak. The analysis also identified two concepts that serve to strengthen each other and undermine decision-making capabilities: personal interest and situational gaming. These collectively form the core concept of decision politics.

When executives feel under threat or are in overly ambiguous environments, they tend to increasingly drive decision making on the basis of personal interest by engaging in situational gaming to the extent possible under the framework of decision governance, decision leadership and the decision ecosystem.

The researcher developed a concept model highlighting the interdependencies and relationships of the key concepts as the basis for a grounded theory.

The research also demonstrates that even though there was a relatively low level of formal tertiary education in business decision making across the participant sample, executives not knowing how to make a business decision was not a significant driver for poor strategic decision making by TMTs. Indeed, executives generally have a good understanding of the main issues.

Chapter 2 showed the basis for identifying a research gap around poor decision making by TMTs and focused on the core themes of strategic alignment and the decision-making process. Chapter 4 explained the actual grounded research that identified the key issues surrounding the research question. In Chapter 5, to the extent possible, the researcher will ground the developed theory in the available scholarly literature for triangulation among the data, the developed theory and the literature.

Chapter 5 will also discuss the conclusions that can be drawn from each research issue and the conclusions that can be drawn about the research problem, followed by the implications of the theory and delimitations of the research.

Chapter 5: Conclusions and Implications

The previous chapter detailed how the researcher collected and analysed data and theorised to develop a grounded theory related to the causes of poor decision making by TMTs. This chapter brings together the current literature data discussed in Chapter 2, the research results highlighted in Chapter 4 and the developed grounded theory to holistically discuss the conclusions that can be drawn from the research and the implications of the conclusions on business policy and practice.

5.1 Introduction

Current research literature has much to say about decision making for both individuals and organisations. Indeed, a Google Scholar search for scholarly articles and published books on aspects of decision making released over the last ten years returns results that number in the hundreds of thousands. Over time, decision-making research has spanned almost all subject areas from business to clinical psychology, military applications and countless other areas, while new research continues to increase rapidly into even more subject areas.

As discussed extensively in Chapter 2, notwithstanding the large efforts dedicated to understanding decision making, recent research shows that only around fifteen per cent of organisations make and execute important business decisions effectively (Rogers & Blenko 2006, p. 133).

Using qualitative methods, this research investigated the main causes of poor decision making by TMTs spanning both the strategic business issues and the organisational decision making processes. The purpose of this research was to identify a core set of decision-making factors that are consistently associated with poor decision making by TMTs. The principle data collection was by way of interviews with senior business executives about their observations, methods and business prerequisites for making decisions.

The ultimate purpose of this research was to understand how seemingly well-qualified senior business people who have access to abundant business intelligence in most cases fail to make and execute effective business decisions.

The research was principally concerned with analysis of how poor decisions are made rather than analysing past cases to prove that historical decisions were either good or bad. Discovering the main causes of poor decision making and appreciating a TMT's level of understanding of decision-making issues allowed the development of a grounded theory to explain the TMT poor decision making phenomenon. This theory spans both business issues and decision-making processes to provide an integrated approach to understanding, analysing and improving organisational strategic decision making.

As is often the case with grounded research, the eventual landing point of the research was not quite what the researcher had envisaged. The emergent grounded theory methodology process guided the researcher's development of theory to a more abstract concept than was expected as a result of the research issues review (Charmaz 2006; Glaser, B. 1992). Specifically, as expected, the data strongly support the notion that strategic alignment and the decision-making process are extremely important. However, the grounded data also revealed that other important factors have an equal or greater influence on decision making by TMTs.

The contribution of this qualitative grounded research to knowledge is a theoretical framework that illustrates both the interaction and inter-dependence of decision governance, decision leadership, decision process and decision politics in an organisation's ability to make effective business decisions.

Understanding the core concepts, key relationships and interdependencies captured in the theoretical framework will enable organisations to assess their decision-making competency and adjust their business practices to improve overall performance through superior decisions, which yield better business outcomes.

5.2 Conclusions about Research Issues

5.2.1 Strategic Alignment

An organisation's strategy should provide alignment and integration around a common reference point, directing human, informational and organisational resources towards the desired outcomes for customers and shareholders. The tighter the linkage between the resources the better the alignment, the more likely it is that the organisation will be successful (Abraham 2006; Kaplan & Norton 2004). However, the BSC points to a lack of strategic alignment as one of the key reasons that 90 per cent of organisations fail to execute their strategies (Punniyamoorthy & Murali 2008, p. 423).

Strategic alignment has two main parts—organisational alignment and motivational alignment—where organisational alignment is principally concerned with the alignment of tangible organisational assets, and motivational alignment is concerned with the alignment of human assets.

Research has shown that organisational misalignment mostly occurs due to one or more of several key drivers, including poor horizontal or vertical alignment, goal misalignment and timeline misalignment (Drew 2009; Guttman & Hawkes 2004; Irving 2009; Kathuria, Joshi & Porth 2007; Laverty 2004; Marginson & McAulay 2008; Pandey 2005; Porter 1992).

Motivational misalignment occurs when a decision maker's personal motivation is misaligned with the goals of the business, typically from a financial, risk profile, timeline or recognition point of view. Further, agency theory (Ross 1973) purports that agents will always favour their own interests before those of the principal and that executives therefore have a hidden self-serving bias (Bender & Moir 2006; Certo et al. 2008; Chan 2008; Eisenhardt 1989; Frey & Osterloh 2005; Larraza-Kintana et al. 2007; Lovallo & Sibony 2006; Metzger 2006; Ross 1973).

As highlighted in Section 2.3 and supported by the results of this research detailed in Chapter 4, the notion that considerable strategic misalignment as both organisational

misalignment and motivational misalignment exists in organisations appears true. However, the research also points out that self-interest is a driver of strategic misalignment, which is implicit but not explicit in the current literature:

> Are the management team incentivised for strategic thinking? ... I think not. They're incentivised as everyone's told you by short-term goals. Also, we don't expect to last more than 3 or 4 years in the job so what's our incentive? ... it's not LTI (long-term investment) it's short-term bonuses; short-term survival.

Without a motivational alignment framework that expressly aligns the personal needs of executives with those of the organisation, complete strategic alignment is very difficult to accomplish due to conflicts with the personal agendas of TMT members. Indeed, misalignment of motivational and organisational strategies ultimately results in an unmanaged and unplanned change to the organisational alignment by osmosis into one that supports the executive's motivational alignment. Agency theory supports the notion that motivational misalignment ***may*** lead TMTs to make strategic decisions that are not aligned with the organisations' best interests (Chan 2008; Eisenhardt 1989; Ross 1973). This research endorses those findings and finds that motivational misalignment almost certainly ***will*** lead to decisions being taken that are not in the best interests of the organisation. This research also supports the views asserted by Guttman and Hawkes (2004, pp. 35-6) as discussed in Section 2.3.1 being that in strategically misaligned organisations, confusion about the overall strategy is created. Priorities are not defined by an overarching business strategy but by the self-interests of those heading up the functional silos: '*A very specific example would be commission plans that so often force people into the wrong decisions in the wrong [kind] of deals'*.

As detailed in Section 2.3.2, the notion that timing or the pressure of time is a significant reference point for both organisational and personal strategic decision making (Marginson & McAulay 2008, p. 273) is supported in sections 4.2.1 and 4.2.2.2. In an organisational sense, executives, particularly the CEO and chairperson, are acutely aware of the dilemma posed by short-term trade-offs at the expense of long-term benefits as a way of meeting stakeholder expectations (proposed in Section 2.3.3), and this notion is supported by the research results detailed in sections 4.2.4

and 4.2.5. At a personal level, the pressure of time manifests as an expectation that executives will have a lifespan of between three and four years in a job. As can be gleaned from the participant quotation, '*We don't expect to last more than 3 or 4 years in the job so what's our incentive?'* and as described throughout Section 2.3.2, this lifespan expectation and other time-related issues directly affect how executives approach and assess strategic decision making.

Although this research did not specifically probe how a consistent three- to four-year executive lifespan expectation arose, several participants offered plausible bottom-up and alternative top-down theories. In general, bottom-up theories surmised that executives need the first year to plan and execute an organisational transformation, the second year to implement plans and monitor outcomes, the third year to experience good results and the fourth year to find their next job. However, executives who are not getting good results start looking for new jobs at the end of year two before the poor results became apparent to stakeholders. The top-down theory involves the idea that the executive-placement industry drives executive turnover and that they create the typical four year cycle. Artificially stimulating executive turnover builds their business by generating commissions and at the same time creating executive vacancies. Executive placement agencies often cite that with a tenure of less than three to four years, the experience gained is not adequate, while a tenure of more than four years may indicate that the executive is not dynamic enough. The real reasons for and validation of the existence of the executive lifespan of three to four years may be worth more detailed research.

5.2.2 The Decision-Making Process

As originally illustrated in section 2.3 and validated through this research, the decision-making process used by organisations is a combination of uncontrollable behavioural influences acting on the decision makers, the decision-making method and the cognitive styles of the individuals and groups involved.

Decision-making research in business has spanned several generations and ranges from prescriptive instructions on making rational decisions and understanding human

biases and their effect on decision making to behavioural research into the way professional decision makers make decisions and the cognitive processes involved (Beach & Connolly 2005, pp. 2-13). Research shows that rational decision making yields the best results in business (Nutt 2008); however, from a practical point of view, there are serious limitations to implementing rational decision-making methods such as assuming decision makers are rational to begin with and that time, knowledge and resources are available to conduct rational analysis.

Among other things, first generation decision-making research (see Section 2.3.6) uncovered a human trait known as 'bounded rationality', which describes the limitations on human ability to make sense of complex situations: humans tend to subconsciously simplify situations as a coping strategy (Bazerman 2002, pp. 4-5). Feedback during this research supported the assertion of Friga and Chapas (2008, p. 9) that executives have seemingly little knowledge or appreciation of concepts such as bounded rationality*: 'So I'm an intuitive one [decision maker] and I go "Thanks for the data but I'm going to go with the gut on this one. I know the answer"'*. Consequently, when executives attempt to use rational decision-making methods, their own biases can unknowingly limit the information that might be considered for a decision.

The research also supported Friga and Chapas' (2008, p. 8) notion outlined in Section 2.3.4 that it is surprising to find that there is often a lack of systematic decision making at the TMT level to the point that even where systematic decision-making processes do exist, they are often ignored.

> They were examples of bad decisions having been made and I know exactly what the process of those bad decisions was ... so there was no fault in decision tools, no fault in the spreadsheets, there was no fault in the data it was just the dogmatic CEO preaching from the pulpit and making the wrong decisions for an emotional reason.

CEO dominance and overconfidence received substantial attention from participants during the research process for two main reasons (see Section 4.2.4). First, CEO dominance drove TMT decision making in directions that the TMT might have otherwise not taken had the CEO been less dominant. Second, boards are more likely

to select dominant and confident people for CEO positions because they are intuitively appealing.

Based on participant feedback, this research supports the notions of established research that CEOs are more likely to be overconfident than the norm (Malmendier & Tate 2005) and that given a choice between executives of similar levels of experience, boards are more likely to hire overconfident managers in CEO roles even though they are more likely to make value-destroying investments (Goel & Thakor 2008, p. 2739).

Although examination of the drivers behind CEO selection, including personal biases and overconfidence, was out of the scope of this research, one possible explanation for CEO selection may also involve bounded rationality. The board attempts to simplify a complex cognitive task (of hiring a CEO) into simple rules of thumb and thus finds intuitive appeal in someone who says all of the right things in a positive and optimistic fashion. Further, boards using simplistic routine categorisation for selection might find narcissistic candidates most appealing of all because of their unwavering self-confidence.

> Dominant CEOs are seen to be decisive instead of analytical ... the Chairman is not going to deal with guys that say 'I understand the problem, let me get back to you with the answer' but If someone says 'I understand what you're saying, we'll get this nailed by doing this and this and this' ... the Chairman thinks it's fantastic.

Beach, Connolly and Mitchell's (2005, pp. 160-81; 1996) image theory (see Section 2.3.7) may also explain this phenomenon as an effect of screening before choosing, where the screening focuses on the negative features of the options, and options not compatible with the decision makers established standards are screened out based on memory or expectations, after which one of those remaining is selected.

CEO impact was the key factor in determining the effectiveness of organisational decision making most recalled by participants. Consistent with existing research outlined in Section 2.3.6, participants believed that the CEO created and determined the type of decision-making environment in an organisation, ranging from open and

tolerant to intimidating. Intimidating environments breed distrust and double-dealing, whereas open tolerant environments promote moderate risk taking and collaboration (Peterson 2007; Peterson et al. 2003).

As detailed in Section 2.3.6, dominating CEOs create intimidating win-lose environments that tend to become *relationship conflict* based rather than a more positive *task conflict* based, leading to sub-optimal decision making (DeChurch, Hamilton & Haas 2007; Simons & Peterson 2000). Research shows that top-performing teams have a cooperative management style and focus on issues rather than personalities, assigning work based on competencies and being transparent (Behfar et al. 2008, p. 170). The data supported research on the benefits of task conflict rather than relationship conflict.

> Part of my admiration for the CEO is because I see him as a textbook leader, he is the first person I have ever met who sets a strategy and the strategy is not just what we are going to do but also what we are not going to do and he follows up the strategy with investment. He also set strategy and communicated it -, he was predictable; you could rely on him to back you up if that was what you did.

> They were examples of bad decisions having been made and I know exactly what the process of those bad decisions was. So there was no fault in decision tools, no fault in the spreadsheets, there was no fault in the data it was just the dogmatic CEO preaching from the pulpit and making the wrong decisions for emotional reasons ... not a logical fault but the gun was loaded with the wrong material before he got in the meeting. And I saw that on quite a number of occasions actually ... after a number of iterations it causes disenchantment, mutterings in the corridor, poor moral, lack of buy-in ... all those sorts of things. People in meetings would acquiesce rather than disagree ... they'd say 'yeah, whatever' and just go along hoping that it spun down and was replaced by another idea soon.

> He [the CEO] does not like to hear bad news. And he's got an organisation beneath him that strives very hard not to deliver bad news. And the reason they do that is he shoots people who deliver bad news... because he doesn't believe them... if he's got people telling him good news and people telling bad news [about an issue] ... he'll take the good news, consequentially ... people just tell him good news.

Cognitive style affects the way individuals view situations and their decision-making approach (see Section 2.3.8). In groups, the cognitive style adopted by the

group is a composite of the styles of the individual group members and subject to factors such a dominant individuals and power dynamics (Leonard, Beauvais & Scholl 2005). This research did receive feedback confirming that different cognitive styles led to different approaches to decision making and that groups adopted different cognitive styles that shifted as the power of individuals changed over time. Participants also confirmed that dominant individuals can impose specific cognitive styles on groups and that this led to a failure to consider all options when making decisions, as theorised by Chatterjee and Hambrick (2007).

> I think they do have personalities [management teams], I think you can influence them and I think the personalities of those teams either bring out the best or worst of them. I think there is a range of things [influencing team personality] one is the 'who's king of the muck pile at a point in time?' it's also about pride and personal agenda and self-gratification in some cases. In some cases it's basically wanting power within the group.

However, as mentioned in Section 4.1.5, participants were consistent in their assessment that in general, although different cognitive styles lead to different decisions, no particular cognitive style of groups or individuals yields better or worse decisions than any other. This result is somewhat conflicting with the view expressed by various researchers (see Section 2.3.8) that cognitive style affects people's decisions and that some cognitive styles may yield better strategic business decisions than others (Kickul et al. 2009; Leonard, Beauvais & Scholl 2005).

Managing political risk is accomplished by executives as they maximise their opportunity to receive praise, rewards and recognition while simultaneously minimising their exposure to blame, sanctions and job insecurity. In this research, managing political risks mostly involved executives avoiding loss, blame or risks—the negative side of politics—rather than the positive side of politics such as managing their image and value (see Sections 4.2.1 and 4.2.3). Although political behaviour is a necessary and normal part of business life (Buchanan 2008; Chan 2008; Hood 2007), it has special significance for executives since they are typically better rewarded but also more vulnerable in their positions compared to most other employees.

> And of course what the Boss went for and the Boss accepted was that they would deliver with the short-term result rather than the long-term results otherwise he could be out of a job 6 months earlier.

Research outlined in Section 2.3.2 shows that CEOs and other senior management members take less corporate risks as they near retirement in an effort to preserve their status, meaning that loss avoidance is often at the front of their mind in risk-reduction strategies (Helliar, Power & Sinclair 2005; Larraza-Kintana et al. 2007; Lovallo & Sibony 2006). Indeed, although executives do consider their organisational responsibilities, executive political behaviours are driven by personal goals (Fritsch 2010, p. 228). The preference for avoiding blame rather than acquiring credit could be explained by the asymmetric curve of importance attached to losses versus importance attached to gains. According to prospect theory, a loss has a much greater impact than a gain of the same magnitude (Holmes et al. 2010; Kahneman & Tversky 1979).

> The first part of the model is to increase stockholder wealth so I look good but if I can't do that it's important to not look bad. What comes in here is an agenda of decision makers ... the personal agenda of decision makers and I think this is no different than anyone else in the organisation... people want to look good or not look as a failure. Within that there are certain timelines [that you need to be aware of] and since no one wants to look bad you come up with very positive forecasting or short-term strategies or you come up with something to keep the chair you're sitting in which links [the] decision to personal agenda.

5.3 Conclusions about the Research Problem

As has been shown in Section 5.2, for the most part, existing research is reasonably closely supported by the current results. However, research to date has not closely examined the interaction of those factors with respect to its effect on decision making.

5.3.1 Decision Politics

Politics exists in most organisations and is generally defined as activities aimed at improving or protecting the self-interests of individuals or groups (Buchanan 2008, pp. 50-1). This research was interested in a subset of organisational politics that

included self-interest and the consequent situational gaming tactics used by executives that affect organisational strategic decision making as shown in Section 4.4.1.

5.3.1.1 The Influence of Self-Interest

Negativity bias is a term used to describe the tendency for negative information to produce more action than positive information, and it may provide a root cause for executive risk and loss avoidance behaviour. Negativity bias is associated with similar consequences as those described by prospect theory, which also demonstrates that negative consequences have a greater impact than positive consequences of a similar utility (Hood 2007; Kahneman & Tversky 1979).

As outlined earlier in Section 5.2, executive behaviours are driven to a large extent by their personal goals (Fritsch 2010, p. 228). Consistent with negativity bias and prospect theory, the results of this research indicate that executives are more concerned with managing their *personal goals* through the loss-avoidance strategy rather than using the risk-taking strategy (Lovallo & Sibony 2006, p. 22). Supporting this finding, current research has shown that loss avoidance is often the primary aim among decision makers (Helliar, Power & Sinclair 2005, p. 8).

Given these factors, it follows that to the extent possible, executives will pursue their personal goal of loss avoidance when formulating decisions. This finding is supported throughout the data with one participant in particular observing:

> Sometimes, you get seriously under pressure and when you are under pressure you get seriously into defence mode and you're making sure that you defend number 1 at the detriment of anything else.

These factors together allowed the researcher to conclude that decision making by executives is driven to a large extent by personal goals and that they are also more likely to be concerned with loss avoidance than risk taking as a strategy to manage their aims (Helliar, Power & Sinclair 2005; Hood 2007; Larraza-Kintana et al. 2007; Lovallo & Sibony 2006). In addition, given that executives are in high-profile positions with extreme consequences for poor performance, it is likely that their

attention is acutely focused on loss avoidance when they feel at risk. These factors indicate that personal concerns will undermine effective organisational decision making.

5.3.1.2 Situational Gaming

Similar to playing politics, the concept of situational gaming derived from the data (see Sections 4.2.3 and 4.3.1) refers to the tactics used by executives to maximise their personal gains and minimise their personal risks, which affect decision making.

Recent research supports the idea that playing politics effectively can enhance an executive's career prospects and that executives who do not play politics will probably see their career suffer (Buchanan 2008, p. 59). Further, senior management were seen as organisational triggers for politics even though most participants in the research indicated that they would prefer to avoid playing politics altogether (Buchanan 2008, p. 60).

The common tactics found during the current interviews (see Section 4.2.3) are consistent with those outlined in existing research, such as bending rules, blaming others, withholding information and delaying (Buchanan 2008, p. 60).

> We had a meeting where we decided that the best thing for us [CXOs] to do was to survive was to withdraw our IP [experience] and that's what we did, we still contributed to the discussions and the team but we withheld our deep knowledge and experience. So, it took them 6 months to lean what we could have explained in an hour but hey, we weren't under threat.

> When they make a mistake, they spend most of their time covering their arse after they made the mistake instead of dissecting and figuring out at what point did they make a decision that didn't work.

> People in meetings would acquiesce rather than disagree ... they'd say yeah, whatever and just go along hoping that it spun down and was replaced by another idea soon.

Considering this research, the current data and existing research together allow the researcher to conclude that situational gaming can be considered a facet of

organisational politics. Further, situational gaming provides a mechanism for executives to pursue their personal goals. Like in organisational politics, self-interest and situational gaming appear inter-dependent and mutually reinforcing, and together they form the basis of the concept of decision politics.

Decision politics serves to undermine effective organisational decision making by allowing personal goals to outweigh organisational goals, which in turn, sabotage the decision process, interpretation of the governance framework and the effectiveness of the CEO or chairperson to achieve organisational alignment.

5.3.2 Decision Leadership

The leader of the organisation—the CEO or equivalent—and the leader of the governance board—the chairperson or equivalent—are exposed to high levels of scrutiny and carry great responsibilities. They are required to show that their organisations can meet short-term market expectations and simultaneously manage short- and long-term trade-offs to build a sustainable company (Drew 2009; Marginson & McAulay 2008; Nicholson & Cook 2009). These leaders greatly influence the way an organisation conducts its business, by defining the internal culture, tolerance for politics or process breaches and how decision making is undertaken (Peterson 2007; Peterson et al. 2003). In essence, the CEO and chairperson set down and monitor the guidelines about how the organisation formulates decisions. Further, superior decision making is a competitive advantage (Rogers & Blenko 2006, p. 133).

At the same time, these leaders are the most vulnerable members of the executive team, and they share the same personal factors as other executives, including a desire to avoid losses.

> As a CEO you think about it more often [consequences of poor performance] because you're more naked, it's fundamental; as CEO I can't hide. I can only hide when it's about the market, so if the market goes to shit, I can be OK. I can't pass off accountability any other way.

Research results supported existing literature regarding the impact of leaders on organisational decision making and recognised the effects of pressure to satisfy both personal goals and organisational goals and how these effects can manifest as a conflict of interest when misalignment exists.

> It's the CEO and board's responsibility to put in place the critical questioning mechanisms that keep the processes and the structures vibrant and alive. My view is that C level appointments are lonely and vulnerable places and when you open your processes up questioning ... your decisions up to questioning ... that can be a bridge too far for a lot of people.

> If the CEO makes a decision and I should have been there because I had all the data but I wasn't ... it was made in some back-room, then I'm not bought-in. I wasn't listened to, I didn't agree, I'm concerned about politics going on. I'm not saying it's important to have consensus it's important to not have consensus. Everyone who has reasonable input should be involved.

The researcher concluded that interview data supported existing literature with respect to the importance of the leader in formulating processes, policies and behavioural norms for decision making. The existing literature showed that leaders are vulnerable to risk-avoidance behaviours, similar to the current results. They exhibit the same behaviour as other executives and tend to favour their personal goals over organisational goals to the extent possible. However, relatively greater public scrutiny tends to hamper personal goal pursuit by leaders in comparison to other executives.

5.3.3 Decision Ecosystem

Participants raised issues associated with the decision-making processes or lack thereof more than any other issue related to the research topic. Feedback demonstrated that participants understood the main core elements of good decision making but for some reason believed that the processes were not in place or followed (see Section 4.2.2.1). However, most participants believed good decision-making processes were essential: *'In my view proper decision-making processes should be built-in to the business as a part of day-today operational function'.* One possible explanation for a lack of systematic decision making in organisations is the increased complexity of

decision making, which humans are intuitively not well equipped to deal with (Friga & Chapas 2008, p. 9). Humans are equipped with simple and routine matching and sorting systems that are not naturally capable of considering complex multi-faceted business problems. This issue is compounded as today's executives have to deal with information overload, increasing market expectations and shorter business cycles (Friga & Chapas 2008, p. 8). As described in sections 2.3.6 and 5.2.2, prospect theory and bounded rationality also limit the natural ability of executives to objectively assess situations and make decisions.

Consistent with current literature, most participants recognised that using a decision-making process under normal circumstances produced superior results when all the relevant stakeholders were included in an open and frank debate (Behfar et al. 2008; Eisenhardt, Kahwajy & Bourgeois 1997; Friga & Chapas 2008).

> He [CEO] got everyone in the room and said 'this is what we're going to make a decision on and we're all going to be in the room and debating it so everyone gets to have their say'. That had a big impact on the degree of politics that got played because everyone knew that it was an open and transparent forum for people to express their views and that it would be a fair process for everyone to bring the right data into the process and so forth.

However, as outlined in Section 5.2.2 above and consistent with the existing literature, participants believed that is rare to have effective decision-making processes in organisations, and where they existed, they were often ignored. Additionally, participants believed that the CEO was responsible for both creating and enforcing decision-making processes (Peterson 2007; Peterson et al. 2003), and as outlined earlier, the CEO is often the person most likely to ignore these processes.

Based on the interview data and existing research, a robust decision-making process was confirmed to be a key enabler for better business decisions.

5.3.4 Decision Governance

Theoretically, boards or the equivalent governance mechanism is designed to provide an overarching representation of shareholder interests within an organisation.

Agency theory assumes that agents will consciously or subconsciously place their personal interests ahead of the organisation's or the principal's. The role of governance is to ensure that this does not happen to the detriment of the principal (Certo et al. 2008). As businesses increasingly compete on a global scale, marketplace consolidation is taking place, and board members may find themselves as agents rather than principals if they stand to benefit from their own decisions (Certo et al. 2008, p. 220).

Boards determine who becomes the CEO and how they and their TMT are rewarded (Bender & Moir 2006; Certo et al. 2008; Frey & Osterloh 2005); through those compensation plans, Boards drive the behaviour of the TMT. When the compensation incentives provided by the Board to the TMT are misaligned with the Board's organisational intentions, it promotes ambiguity and motivational misalignment. Consistent with these research results, participants stated the following:

> I think the boards and big business actually need to take a whole lot of responsibility for that because they're incenting people the wrong way... people say 'this is a waste of time, this [strategy] is about 5 or 10 years and I won't actually be here so I won't pay too much attention, my most important task is tomorrow.

> Are the management team incentivised for strategic thinking? I think not. They're incentivised as everyone's told you by short-term goals. Also, we don't expect to last more than 3 or 4 years in the job so what's our incentive? It's not LTI (long-term investment) it's short-term bonuses; short-term survival.

The board determines the business-level strategy for an organisation and is obliged to keep shareholders and the market appraised of the issues affecting the ability of the organisation to meet expectations. Determining the level of transparency in meeting expectations is a difficult task in that failure to meet expectations will detrimentally affect shareholders but meeting expectations at the cost of long-term initiatives may damage the organisation in the long term. This balancing act can undermine good governance and directly affect the way boards motivate TMTs to drive the business (Nicholson & Cook 2009, p. 303). Participants also believed that boards are too sensitive to market expectations, which often led to poor organisational governance:

> Quite often we [CEOs] know that it's the wrong decision... [but] we have a set of instructions, we have a set of deliverables and we know it can't be done... but it still has to be done—you're told 'just do it'. I'm told to cut my costs by 20 per cent and I know I can't do it because I'm already lean—the only way to do it is to cut into muscle and that means I won't be able to close deals in 6 months time. The board knows the impact but the financial release to the market is coming up in a few weeks and that means I have to cut [to meet market expectations]. As a CEO you're between a rock and a hard place.

Most participants believed that on average, when compared to other senior management members, CEOs were more likely to be dominant or even narcissistic. As predicted by bounded rationality and image theory, boards responsible for hiring CEOs may simplify their complex decision criteria to simple rules of thumb by selecting the most confident and intuitively appealing person rather than conducting a more detailed and objective analysis.

5.3.5 Strategic Decision Making Theoretical Model and Grounded Theory

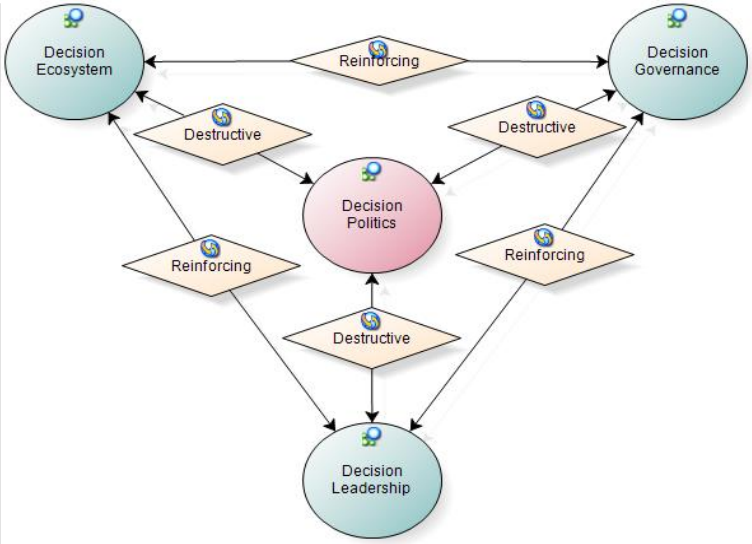
Identifying and understanding the key core concepts and their relationships from the data along with validating these concepts and relationships on the basis of existing research endorses the grounded theory and model developed in Chapter 4 (Figure 5.1; Strategic decision-making theoretical model).

This model simplifies the dynamics around decision-making into four key concepts and their interrelationships. It is extremely important to note that decision-politics is central and that it acts to undermine good decision-making from every aspect through destructive relationships. Permitting decision-politics to undermine any of the other concepts leads to a knock-on effect occurring. That is, if decision-politics undermines decision-governance (for example) then support from decision-governance to decision-leadership and decision-ecosystem is lowered. Further, as decision-leadership and decision-ecosystem are now weaker they are more susceptible to decision-politics and so on. This implies that small levels of decision-politics can result in large levels of destabilisation in decision-making.

Decision ecosystem encompasses all the elements required to analyse and reach effective business decisions, including clearly defined processes, policies, responsibilities and monitoring. A strong decision ecosystem provides governance with robust tools to optimise decision making and leadership with unbiased and optimised choices.

Decision governance oversees stakeholders' interests and determines overall business strategy. Deals with short-/long-term trade-offs and market expectations. Appoints CEO (leader) and sets up motivational alignment to support organisational goals. Clear organisational goals reinforce the decision ecosystem; strategic alignment drives CEO and TMT behaviour in the most effective way.

Leaders determine the way things are done. They drive the adoption of processes and policies for decision making and by example, demonstrate what kind of behaviour is acceptable. They create the organisational culture, which flows down into lower levels of the organisation. Strong decision leadership reinforces both the decision ecosystem by enforcing objective decision making and governance, with relevant data to help determine the best organisational strategy.



Decision politics are driven by self-interest and aimed at minimising personal exposure to risks or losses and maximising personal gains. As threats and ambiguity or uncertainty levels rise, so do the level of politics, as individuals make contingent plans to protect themselves. Strong decision politics undermine good decision making. Strong decision governance, decision leadership and decision ecosystem hamper decision politics.

Figure 5.1: Strategic decision-making theoretical model (developed for this research)

The researcher designated the *theoretical* optimum state for decision making as **decision equilibrium**, which is when the theoretical model is in balance. This implies that decision politics is minimised by strong reinforcing relationships between decision governance, decision leadership and the decision ecosystem to a point where good strategic decision making is not affected in a significant way by decision politics.

Consequently, a final grounded theory for the research question 'Why do top management teams make poor strategic choices?' can be rearticulated as follows:

> *When investigating 'What causes top management teams make poor strategic decisions?- direct feedback from CXO level participants indicated that a clearly articulated and robust organisational decision-making framework encompassing decision ecosystems, decision leadership and decision governance creates decision equilibrium and yields good strategic decisions.*
>
> *Direct feedback also indicates that poor decision making by TMTs is mostly attributable to utilisation of weak decision-making frameworks that fails to create decision equilibrium, leading to a decision vacuum of uncertainty and ambiguity. In a decision vacuum, participant feedback shows that decision politics become paramount and take control - strategic decisions become highly subjected to human limitations of dealing with complexities and natural self-interest.*
>
> *Executives are exposed and vulnerable in their roles, and high levels of uncertainty and ambiguity cause them alarm, which both encourages and facilitates them to become risk averse. They become preoccupied with self-interests and bunker down to minimise their exposure to potentially bad outcomes through tactics such as loss avoidance, accountability avoidance and risk avoidance, thereby undermining decision making.*

Creating and maintaining decision equilibrium is the responsibility of the decision leader, typically the CEO. Consequently, failure to maintain a decision equilibrium represents leadership failure.

Direct and consistent participant feedback indicates that most organisations do not achieve a state of decision equilibrium, which consequentially leads to decision vacuums that in turn promotes the emergence of decision politics as the basis for strategic decisions.

Politics driving strategic decisions rather than driven by the best interests of the organisation is the main reason for consistently poor strategic decision making by TMTs.

5.4 Implications for Theory

This research aimed to examine strategic decision making by TMTs from a macro perspective to understand why their decision making is so often flawed when they are best placed to predict, visualise and deal with organisational threats, capabilities and opportunities.

Based on the current body of knowledge and detailed in Figure 2.1, the diagram *Conceptual model: Organisational strategic decision making* highlights the conceptual model developed from a decision-making perspective aimed at decision making by TMTs. This model identifies the two main parent topics of *strategic alignment* and the *decision-making process* as the main inputs for strategic decisions. That is, the conceptual model assumes that when an organisation has a clear, viable strategy with the required resources and a robust decision-making process, it will mostly make good strategic decisions.

Although clear strategic intent and robust decision-making processes would work well for computer analysis, based on the results of this grounded research, the original conceptual model (Figure 2.1) significantly omits the effects of self-serving human intervention on strategic decisions. Consciously or sub-consciously, humans

tend to favour their own self-interest in both their personal and professional lives. Self-interest may manifest quite differently in different people depending on an individual's worldview, value systems and current circumstances.

Consistent with prospect theory (Gallen 2006; Holmes et al. 2010; Kahneman & Tversky 1979), the research found that TMT members who exist in vulnerable and visible organisational positions are more inclined to employ risk- and loss-reduction tactics rather than higher-profile winning tactics as a way of protecting their positions. This is because losses attract greater attention than wins of the same magnitude.

Consistent with bounded rationality (Gallen 2006; Holmes et al. 2010; Kahneman & Tversky 1979), without a robust decision-making framework, executives tend to simplify their decisions into simple rules of thumb within the limits of their experience and values system. As business cycles shorten, information overload becomes common and market expectations drive shareholder sentiment, the gap between human decision-making capabilities and the complexity of decision-making processes widens rapidly. As an example, many participants singled out CEO hiring decisions as very complex and needing great consideration but often being awarded using simple rules of thumb to the person who had best first impression or surface-level appeal.

In addition to underestimating the impact of human intervention, the original conceptual model (Figure 2.1) also fails to identify the critical role of leadership in decision making. The leader sets the tone of the decision-making environment, from open and tolerant to intimidating. Intimidating environments breed distrust and double-dealing, while open, tolerant environments encourage moderate risk taking and collaboration (Peterson 2007; Peterson et al. 2003). In this way, leadership styles can greatly determine decision-making outcomes and the level of organisational politics.

Consequently, several noteworthy qualitative factors are implicit in the findings of this research. Although they are not addressed by the original conceptual model (Figure 2.1), they are important for further decision-making theory:

1. Motivational alignment and organisational alignment have a *hierarchical relationship*. Unless care is taken to align the motivational goals to the organisations goals, the organisational goals over time ***will*** be morphed to support motivational goals as a consequence of collective self-interest creating a driving force to satisfy personal goals.
2. Driven by conscious and sub-conscious self-interest, decision politics will thrive to the maximum extent possible within the limits imposed by the decision ecosystem, decision governance and decision leadership. Therefore, the level of politics is a determinant in the quality of organisational decision making.
3. Many executives tend to consider three to four years as their average lifespan and use this timeline as a guide to their level of interest and commitment to organisational initiatives. It is not clear why this lifespan expectation exists, but it can be a source of time-based motivational misalignment.
4. With massive increases in data, shorter timelines, increased market and stakeholder expectations, globalisation of markets and greater scrutiny, business decisions continue to become more complex at increasing rates (Friga & Chapas 2008, p. 8). Against the backdrop of human limitations in dealing with complexity and other cognitive shortcomings, business decisions made without the required tools will increasingly become sub-optimal and lead to a competitive disadvantage.
5. Long-term trade-offs to satisfy short-term goals are often used and are a legitimate business lever available to boards and the management to meet market expectations while reconfiguring the organisation. However, the extent to which the long-term viability of the organisation is compromised through short-term trade-offs is not easily discernable to stakeholders and therefore provides a way to hide poor performance albeit for a relatively short period. This ability to hide poor future performance from stakeholders is a flaw in current governance and disclosure practices.

6. An effective best-practice leader who is motivated in a way that is consistent with organisational goals is a key cornerstone of effective organisational decision making.

A conceptual model should include these factors and is depicted in Figure 5.2, where strategic alignment is expanded conceptually to become decision governance, and allowances for human factors are made to complete the picture.

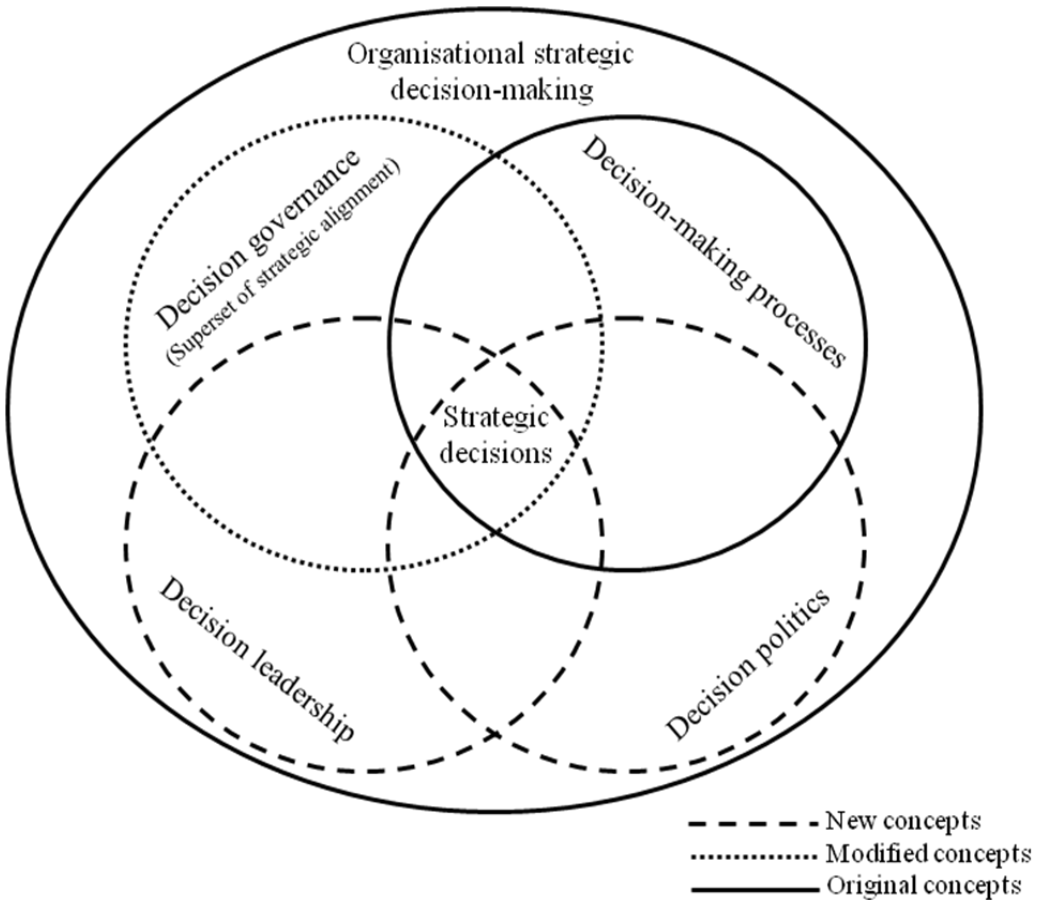


Figure 5.2: Modified conceptual model (developed for this research)

The modifications to the conceptual model are predominantly to take account of the impact of human interaction in decision making and to recognise the great effect that these interventions have on decision outcomes.

A major discovery of this research is the recognition that for the most part, executives have a reasonable understanding of how to make good business decisions

and that individual biases are typically cancelled out in group decision-making environments. However, where self-interest is permitted to drive decision politics, executives deviate from good business practices and devote their efforts to self-preservation, and the avoidance of risks and losses becomes their primary aim. This diversion from business to politics driven by self-interest is the main reason that TMTs have such a poor record of making good strategic decisions.

This research discovered that one key way to suppress organisational and decision politics is to implement and manage a three-sided framework consisting of sound decision governance, strong decision leadership and a strong decision ecosystem. This framework includes the factors necessary for executives to make decisions that are optimised to support the overall business goals while simultaneously dampening the ability of personal interests to hijack the business agenda.

The most significant contribution of this research is the development of a simple four-concept decision making framework and operating model. Adoption of the decision framework incorporating methods to suppress personal politics and emphasise governance, leadership, and decision-process as a business as usual operating model is extremely likely to yield significant decision making improvements for most organisations.

5.5 Implications for Policy and Practice

The generalised level of good decision making and effective execution in organisations is thought to be around fifteen per cent (Rogers & Blenko 2006, p. 133). Given that good decision making and execution is one of the highest leveraged activities a TMT can use to provide competitive advantage, it seems that there is an almost inexplicably large gap between the best practice and actual practice. To address this gap and provide some practical steps towards resolving this issue, the research points towards the following suggestions for moving organisations to a high performance position.

Most participants in this research believed that their organisation did not have an effective decision-making ecosystem but that implementing one would have a significant positive impact on their business. Further, they believed that the CEO or chairperson should be the advocates who introduce and drive ecosystems to yield better business outcomes. The implication is that most organisations consistently engage in sub-optimal decision making as a normal practice and that these organisations can improve their competitive position quickly and effectively if the CEO and/or chairperson introduces the culture, processes and policies needed to construct an effective decision ecosystem.

Decision leadership is an extremely important issue validated by both the existing body of knowledge (Peterson 2007; Peterson et al. 2003) and the present research (see Section 4.3.2.2). Root causes for the issues surrounding decision leadership typically come from two separate areas: motivational misalignment and poorly skilled leaders. Participants believed that it is common for CEOs to be rewarded with incentives that do not support the best long-term interests of the organisation. They also believed that too often, CEOs were hired without enough consideration of their ability to manage a TMT effectively. The implication is that much greater care needs to be taken when hiring CEOs to ensure that they are targeted correctly and that compromised hiring criteria do not lead to the hiring of overconfident or even narcissistic individuals instead of highly competent but less outgoing candidates. Dominant CEOs hamper effective decision making and are often sabotaged by their TMT as a survival tactic.

Consciously or sub-consciously, executives, including the governance board, will always act in their own best interests to the extent possible under the rules they work within when they stand to benefit from their own decisions. To remove ambiguity and room for interpretation, and to provide checks and balances, a strong framework such as the decision ecosystem supported by strong decision leadership and clear strategic aims from the governance are necessary to dampen the effect of self-interest.

Stakeholders have little or no ability to understand the future effects of short-term trade-offs at the cost of long-term viability. The current governance rules do not explicitly require disclosure of all potential effects, and even when disclosed, these are not necessarily explained in transparent ways. While it has been argued earlier in this document that these kinds of trade-offs are a legitimate tool for executives to adjust business imperatives, the responsibility to determine the level of disclosure to stakeholders rests with the governance board. When executives stand to benefit from undisclosed trade-offs, there is a potential conflict of interest with stakeholder interests. It is very likely that executives' compensation is misaligned for reasons already documented and that they will act in their own best interests to the extent possible. Therefore, it is very likely that undisclosed trade-offs are being conducted to the benefit of executives at the expense of stakeholders. Implicitly, this points to a need for another type of independent validation of business decisions by those who have no personal or professional vested interests in the organisation.

5.6 Implications for Further Research

As this research progressed, it became apparent that there are several key areas for further investigation that are connected to but out of the scope of this research project. These areas include the following:

Decision leadership: As discussed in Section 4.3.2.2, participants consistently anchored the effectiveness of internal decision making to CEOs or chairpersons and the strength of their decision leadership. The failure of a CEO to lead by example in a textbook display of managerial competency resulted in sub-optimal decisions. Further, the more the CEO deviated from best-practice management and leadership, the more the rest of the TMT believed that they had licence to follow, and the effect was even amplified in the TMT. *This issue was the single most significantly discussed behavioural issue in the entire research project.*

The researcher believes that further research is needed to understand the level of impact on decision making associated with weak or strong decision leadership. That is, in this research, small deviations from best practice decision leadership by CEOs or chairpersons appeared to cause disproportionate reactions from TMTs. Once this factor is understood, it could provide important guidance for CEO hiring criteria in the future.

Motivational misalignment: This is the motivation of executives with rewards that do not accurately support the organisational goals. This research and the greater body of knowledge, including agency theory, indicate that misalignment is a major cause of sub-optimal performance (Beatty & Zajac 1994; Bebchuk & Fried 2003; Eisenhardt 1989; Frey & Osterloh 2005; Jensen & Murphy 1990; Larraza-Kintana et al. 2007; Ross 1973).

The researcher believes that more work needs to be undertaken to understand the root causes for continued widespread executive motivational misalignment and to develop a framework to ensure that incentives are in line with operational alignment to achieve complete strategic alignment.

Executive lifespan: During this research, many participants spoke about an expected lifespan of executives, which is about three to four years (see Section 4.2.1). When the executive lifespan expectation does not match an organisational strategic initiative, misalignment occurs. This implies that making decisions about dealing with a long-term strategy that requires investment outside of the current executives' expected tenure creates motivational misalignment. Given this situation, self-interested executives might divert long-term funding into short-term projects that yield personal payback before they leave their role.

It is clear from the research that this lifespan phenomenon exists: '*Also, we don't expect to last more than 3 or 4 years in the job so what's our incentive?'*. However, the cause is not clear. The researcher believes that it would be beneficial to understand the drivers behind the phenomena and potentially develop a predictive tool to aid in identifying these misalignment issues.

Governance hole: As identified earlier, current corporate governance models have a potential flaw that allows executives to hide the true long-term organisational situation by not requiring disclosure of the extent of cuts to long-term funding in current periods in order to meet short term market expectations.

The researcher believes that work should be undertaken to assess the viability of improving transparency in organisational reporting aimed at providing a complete and detailed picture of any short/long-term trade-offs made by executives to achieve their short-term financial reporting results. In this way, stakeholders can assess the potential future effects and adjust their investment decisions appropriately.

Other segments: This research was conducted by interviewing participants in the high-technology industry and focused on TMTs. Based on participant feedback, the researcher believes that the findings are likely to be generalisable both across industries and in lower management levels. However, it is appropriate to conduct further research with alternative industry participant groups to determine if the results are indeed generalisable.

Gender: Over two-thirds of the participants in this research were male, which is consistent with the gender proportions in the high-technology industry. Since the sample is skewed towards male participants, a research question exists over the validity of the results for a sample that is predominantly female.

Methodology crosscheck: This research is a qualitative grounded research theory development exercise. Further research should be carried out using alternative qualitative and quantitative methods to validate or dispute the findings as a crosschecking mechanism.

Theory revalidation: The theory developed herein should be further validated using quantitative methods, case studies or longitudinal studies to understand its generalisability and applicability across organisations, industries and locations.

It is my *view* that this grounded theory is generalisable because it is well grounded in both existing literature data and the research data and was verified as correct by participants. Additionally, the sample was representative of other TMTs in other industries, the context of the research is applicable across industries and the theory abstraction of concepts is at a level that allows application in other settings. Hopefully, further research will examine the generalisability of this grounded theory and reinforce external validity.

The current body of knowledge suggests that good decision making provides a clear competitive advantage in business. Additionally, given a clear plan and well defined decision-making criteria, organisations should have a basis for sound decision making. However, this grounded theory-building research shows that effective decision making is much more complex than just plans and processes and sets the foundation for further research about moderating human self-interest and uncertainty avoidance for better business outcomes.

5.7 Concluding Remarks

This research has addressed the main original aims - to understand the causal factors in poor decision making by TMT's. Indeed, process, governance and leadership are key elements in successful decision-making as one would have expected but discovery of the sensitivity to and significant disruptive consequences of decision-politics has been a major discovery.

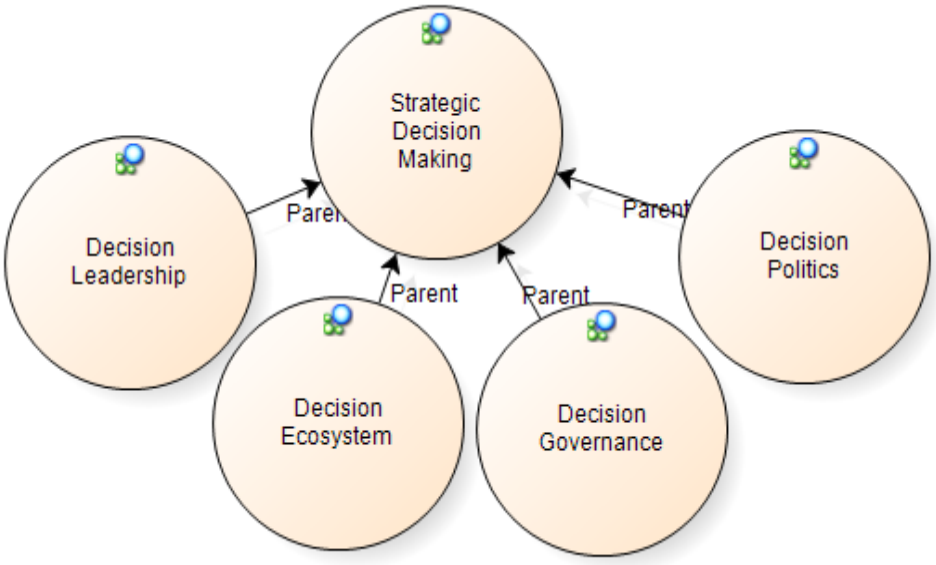
Appreciating that decision-politics are always front-of-mind for executives and that executives will engage in politics to their own benefit at almost every opportunity is a critical factor in understanding and deconstructing how TMT decision-making fails organisations.

The leaders, typically CEOs, are responsible for creating the ideal decision-equilibrium that serves the organisation by regulating the way decisions are made and preventing self-interest from driving organisational behaviour or priorities. However, CEOs are also the most visible and vulnerable to the pressures and difficulties of balancing short and long-term organisational goals. This means that CEOs walk a difficult path on a high-wire balancing personal and organisational goals with short and long-term organisational goals that often have competing interests. Consequentially, CEO temptation to engage in decision-politics is significant and good governance must provide a framework to ensure stakeholders know that decisions are always made in best interests of the organisation and not that of individuals. Clearly, thoughtful alignment of organisational and executive goals has considerable potential to reduce the motivational drivers for negative decision politics that undermine good strategy.

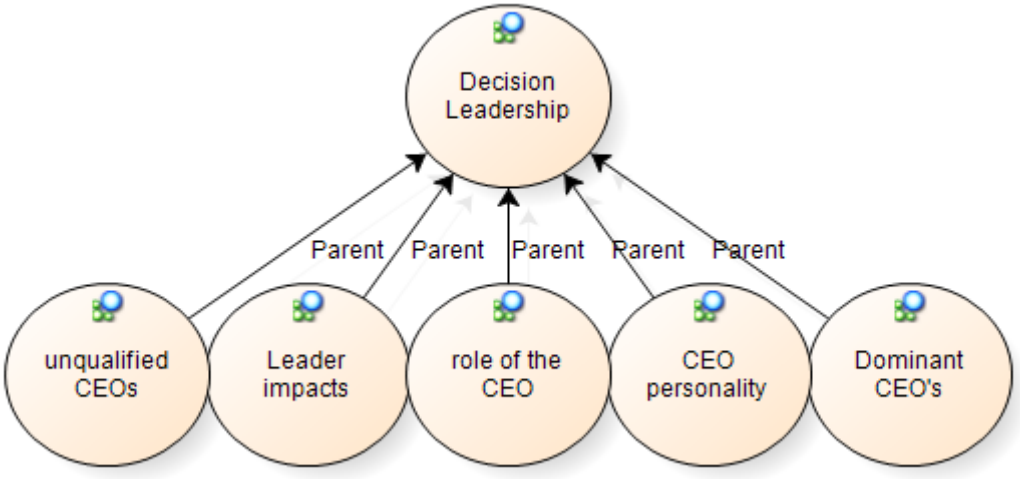
The conceptual theoretical model developed through this research, based on data grounded in real businesses, describes the cause and effect of poor decision-making by TMT's. Consequentially, effectively implementing and monitored a decision-making framework based on this theoretical conceptual model has enormous potential to improve the decision quality across the board and therefore business results in most organisations.

Appendices

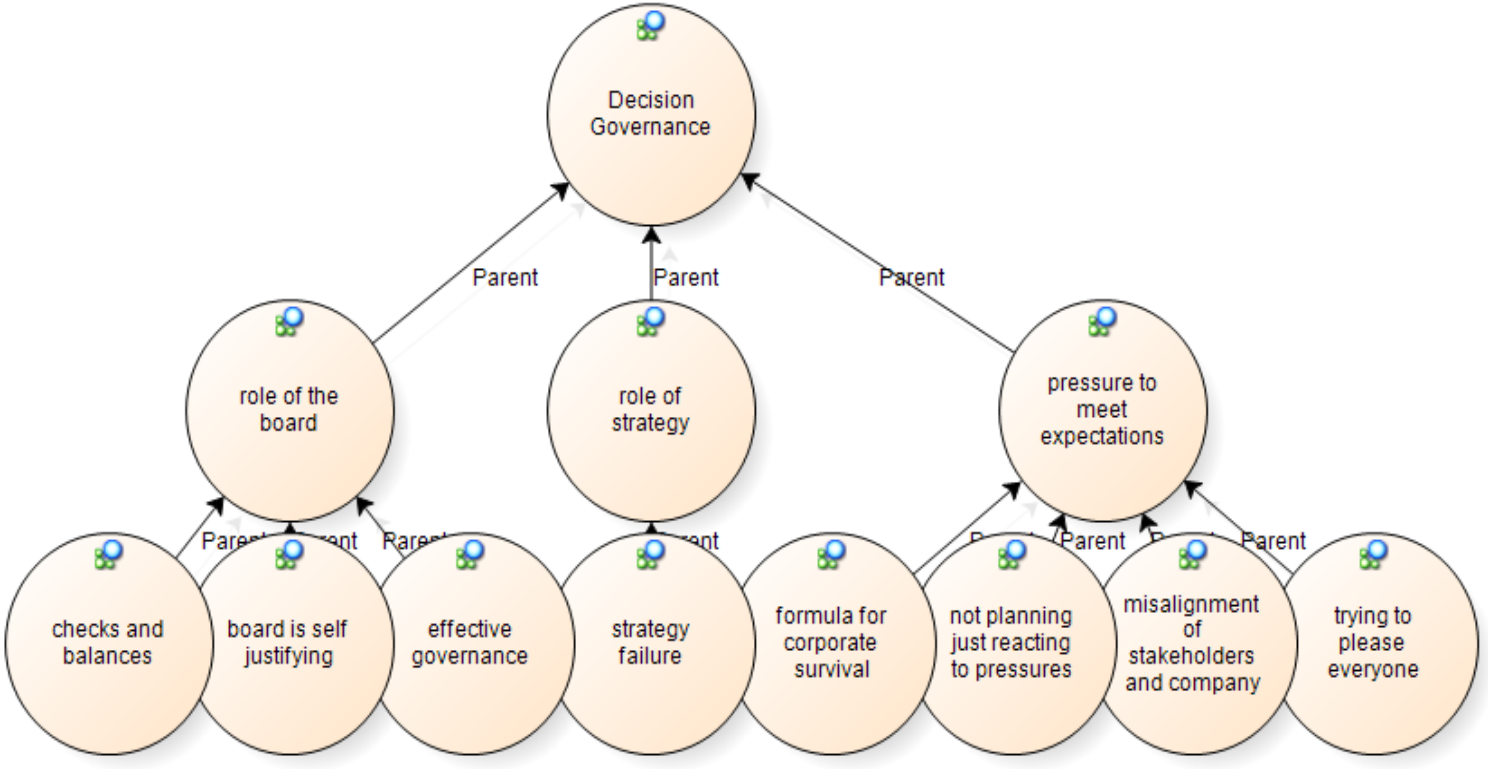
Appendix A: Concept Diagrams



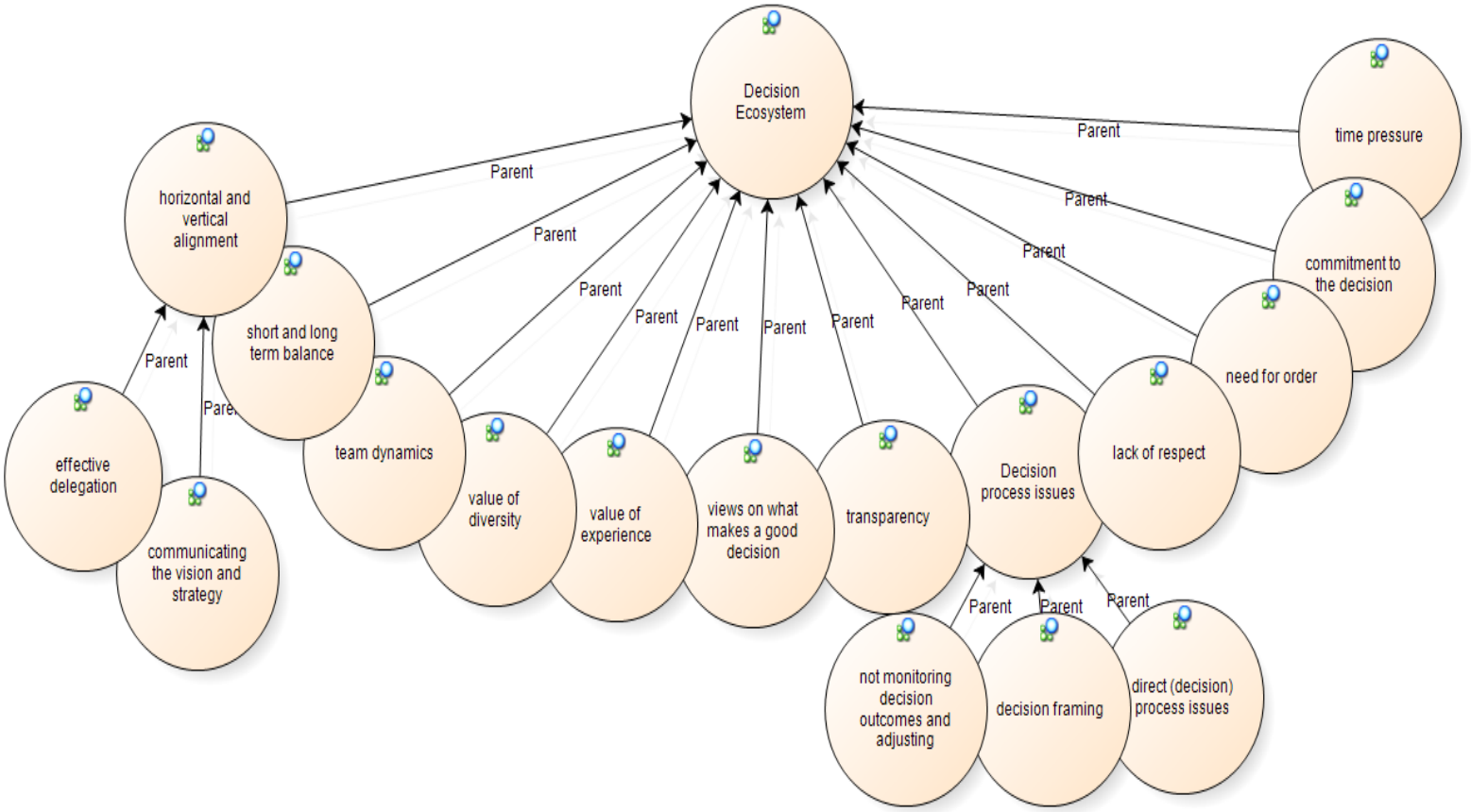
Strategic decision making



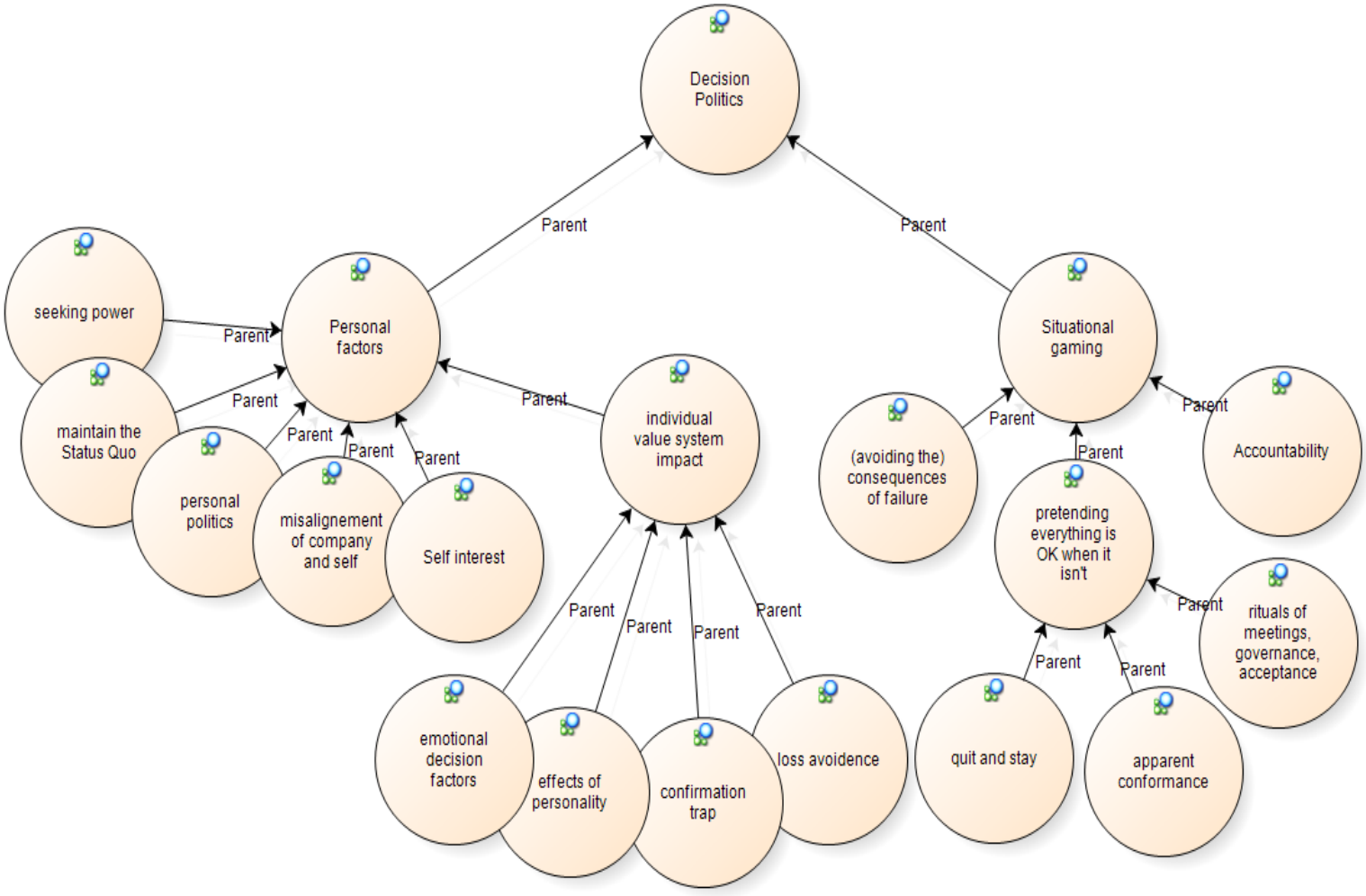
Decision leadership



Decision governance



Decision ecosystem



Decision politics

Appendix B: A note on research sample and saturation

During the data collection part of the research project, information came concurrently from several different sources to help form and shape an evolving group of core concepts. It is the researcher's view that grounded theory and in particular, a constructivist view of grounded theory accepts that all sources of information ranging from formal interviews and scholarly literature through to and including casual conversations and self created impressions all form part of the data to collectively build and enrich the final theoretical proposition. However, one of the major strengths of using grounded theory for analysis is in tracing core concepts back to original data thereby validating the linkages and providing a solid audit trail for conceptual and theoretical developments.

Although the logical end point for data collection using grounded theory is simply when saturation occurs - where no new information that reshapes concepts is discernible, there remains some debate about what constitutes enough data as discussed in Section 3.6.2.1.

In this research, realisation of reaching saturation did not occur as an identifiable maturity flashpoint but rather over the course of several interviews with a gradual realisation. Indeed, saturation seemed to occur after approximately fifteen formal interviews with Chairperson, CEO, and CXO level participants. Saturation was formally tested and validated in approximately a further five interviews while the researcher was triangulating the developed theory with both new participants and existing participants.

While formal analysis of interview material clearly contributed to the development of the core concepts and grounded the research in data, the researcher also had many (probably hundreds) of informal conversations with individuals in the target sample that shaped their thinking and often highlighted new research issues and ideas that blended into the ongoing research.

Appendix C: Post analysis literature review – a further survey

This post analysis review specifically focuses on discovering literature directly relevant to this research project. It provides substantiation, correlation, or triangulation with regard to the appropriateness of the methods, findings and theory. This review does not introduce new concepts or attempt to identify further research gaps.

Since completion of data gathering and analysis for this empirical research, several scholarly journal articles have been published which further add context or provide additional triangulation. However, no significant discoveries published since completion substantially alter any underpinning research conclusions or indeed the generated theory itself.

The value of long-term incentives to overcome short-termism

Long Term Incentive Plans (LTIP's) are one of the key tools used to overcome executive short-termism. In theory, they shape executive behaviour and decision making to be more mindful of long-term implications for organisations. Conventional management thinking assumes that one of the most effective ways to achieve organisational strategic alignment is to harmonise short-term choices with long-term strategic goals.

However, recent research in both the academic and public sphere has raised significant doubts over the effectiveness of LTIPs (Pepper, Gore & Crossman 2012; PricewaterhouseCoopers International Limited (PwC) & London School of Economics and Political Science 2012). Results show that executives dramatically discount LTIP benefits when compared to short-term benefits, and that the level of discounting varies significantly across cultures. According to PwC's (2012) research, executives discount the value of LTIPs over three years by around 50% in western economies and 66% in emerging economies largely due to the uncertainties surrounding the business outcomes. The research also shows that LTIPs motivated less than half of those executives surveyed.

In this research project, one of the key findings was that to the extent possible under the framework and governance structures in place, executives typically gravitate to short-term decision making centred around self interest, risk avoidance and uncertainty avoidance.

Recently published results triangulate with the research project findings and underscore the tendency of executives to have a short-term focus at the expense of long-term incentive. These findings also validate the theoretical requirement for strong governance to moderate the executive short-term and long-term trade-offs in the best interests of shareholders.

Heuristic decision making

Heuristics are error-prone mental decision making tools linked to intuition and emotions. One persistent theme throughout the thesis literature review in this thesis was the concept that heuristic based decision making failed to yield consistently good business decisions. Indeed, prescriptive decision making frameworks are acknowledged as the proven way to consistently yield the best results (Nutt 2007, 2008). It is acknowledged however that even though prescriptive decision-making methods are more appropriate for business decisions, much of the time people use heuristics anyway.

Prescriptive decision making tools assume that the knowledge required to make a decision is available and known – which is not always the case. Often not all of the information required for prescriptive decision making is known or, information is extrapolated from small samples. Analysis by assuming small samples can be extrapolated to accurately represent the true larger value is contrary to the fundamental principles of prescriptive decision making (Gigerenzer & Gaissmaier 2011). In cases for complex problems, where parts of the required information is unknown or estimated, heuristic based decision making has been shown to be more accurate than standard statistical methods (Gigerenzer & Gaissmaier 2011).

As business becomes more complex and faster paced and the pressure to make decisions with incomplete or estimated data rises, there may be a legitimate requirement to formalise the use of heuristic decision making for a specific type of

business problems. Although understanding that heuristic methods can be accurate is not a new discovery, Gigerenzer and Gaissmaier (2011) are advocating that heuristic decision-making models when used appropriately can be the most accurate and should be regarded as equal to logic and statistics in the right place. Their research work aims to discover which heuristics work best and in which environments.

In this research project, one of the main elements in developing a best-practice decision making ecosystem was shown to be an effective decision making process supported by decision leadership and decision governance. Although not directly altering any part of the final theory or concept model, it might be appropriate in the future to include an allowance for decision making by consciously using heuristics as one of several optional processes depending on the situation – especially under uncertainty.

Gigerenzer and Gaissmaier (2011) discuss the possibility of a time when we understand which heuristic decision processes can be relied upon to give the most accurate decisions and, that we are able to train managers to recognise those situations and consciously deploy them. A recent study of traders in investment banks in the UK noted that experienced successful traders dealing with decision making under the pressure and complexities associated with fast moving trading rooms relied to a large extent on their intuition to make the best choices (Fenton-O'Creevy et al. 2011). The successful traders attributed their superior performance compared to less successful traders to being able to control, manage, and regulate their emotional state while they engaged their intuition. This trading room behaviour may indeed be an example of the type of use of heuristic decision making Gigerenzer and Gaissmaier (2011) visualise as being common place in the future.

Impacts of politics in decision making

Jocelyn Fritsch (2010) published ‘Toward a theory of personal politics’ that drew on the Theory of International Politics (TIP) developed by Kenneth Waltz (1979) to devise a Theory of Personal Politics (TPP).

In this research, decision politics are a central concept that directly influences decision outcomes and Fritch's TPP provides three supporting inputs that help to validate the research. First, a proposed framework including a six-concept model for visualising how personal politics evolve from individual to group to organisation and then eventually to global which could enhance the understanding of how political interests manifest as behaviours during decision making. Second, her research underscores that the pursuit of collective good is only valuable when it is serving an individual's self-interest – providing direct triangulation with the research results. Third, triangulation on methodology – Fritsch advocates a qualitative methodology and in particular highlights grounded research as appropriate for this type of theory building.

Decision leadership – the importance of creating the right environment

Decision leadership is a core concept developed in this research referring to the need for the strategic decision leader – typically the CEO to create the right environment for the TMT to be empowered to make strategic decisions. Specifically the concept model states:

> **Leaders** determine the way things are done. They drive the adoption of processes and policies for decision making and by example, demonstrate what kind of behaviour is acceptable. They create the organisational culture, which flows down into lower levels of the organisation. Strong decision leadership reinforces both the decision ecosystem by enforcing objective decision making and governance, with relevant data to help determine the best organisational strategy.

Recent research into the relationship between the CEO and the TMT tends to support the notion that creating the right positive environment does have significant positive impacts on strategic decision quality (Carmeli, Tishler & Edmondson 2012). In particular, the research finds that a CEO who fosters trust amongst the TMT is rewarded with a team that is more capable of and open to learning from failures. This in turn leads to superior strategic decision making capabilities which also in turn leads to improved organisational performance (Carmeli, Tishler & Edmondson 2012, p. 45).

These new results provide a level of triangulation with this research by underscoring the importance of the CEO in creating the decision ecosystem and by demonstrating

that a decision ecosystem based on learning from failures as part of the normal process is likely to produce superior results over time. In addition, recognising trust as an important factor in improving the decision ecosystem indirectly supports the notion in this research that TMT decision making improves as political behaviour reduces.

Impacts of too much cognitive conflict

Recent research conducted in the US on the impacts of cognitive conflict appears to reinforce the discussion in the main literature review of this thesis with some slight modification that may directly influence how CEO's should manage their TMT's and decision-making processes.

As discussed previously, cognitive conflict is a term used to describe conflict over issues rather than affective conflict that relates to person or personality conflicts. It is generally accepted that affective conflict drives negative outcomes whereas cognitive conflict can drive positive outcomes albeit inconsistently (Parayitam & Dooly 2011, p. 342).

In their research, Parayitam and Dooly (2011) find that the quality of decision making improves as cognitive conflict increases but only to a point. They go on to emphasise that too much conflict creates poor results and instead recommend only moderate amounts of conflict be allowed by CEO's which in turn almost always improves decision making outcomes.

These cognitive conflict findings also support the conceptual model developed in this research in particular influencing the CEO's responsibility to engender the best decision-making environment.

Summary

Although no new scholarly research in the period post-analysis has emerged that significantly influence this research project, several findings have emerged that provide some additional level of triangulation and validation.

Two separate research projects have verified a tendency for short-termism by executives - heavily discounting the value of LTIPs. LTIPs as a way of dealing with short-termism are therefore questionable and so, the importance of the decision ecosystem model developed herein is underpinned and this potential situation also validates the need for a strong decision governance concept.

Heuristic based decision making has been raised as a potential solution to complex problems where data is incomplete or missing. Further, experienced investment bankers recently provided direct evidence of the superior results using heuristics. Challenges to using heuristics in an effective way are many and varied so a greater understanding and identification of which heuristics work best in what situations is required. Also, understanding how to manage emotions during heuristic decision making so as to moderate their affect is important. While proposing heuristic decision making for business being as valid as logic or statistics is somewhat revolutionary, results show promise. In this research, the decision process concept supports a move to heuristic based decision making. Specifically, the method of decision making is flexible provided that it conforms to an acceptable recognisable process allowable under governance rules. This validates the developed decision ecosystem model as flexible and appropriate.

The impact of personal politics on decision making is further emphasised by Fritsch (2010) underscoring the critical role of the developed core concept decision-politics as a significant moderator on good decision making. Fritsch also provides triangulation on grounded theory as an appropriate research methodology where politics are a main consideration.

Recent research also supports and triangulates finding in this project on the importance of the CEO as the one responsible for creating the best decision-making environment and the consequential improvement in strategic decisions. The major points of triangulation are around the CEO being directly responsible for creation of a trusting environment and management of cognitive conflict situations to maintain moderate and productive levels – correlating with the decision-leadership concept.

Appendix D: Ethics application and approvals

Ethics application

Human Research Ethics Committee (HREC)
Human Research Ethics Sub-Committee (HRESC)
(Coffs Harbour and Tweed Heads)

Low and Negligible Risk Research

EXPEDITED REVIEW APPLICATION FORM

(This form is subject to review)

INSTRUCTIONS

*(*By crossing the box after each statement, you acknowledge that you have read and understood the instruction)*

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1. Before completing this application form you must read the National Statement on Ethical Conduct in Human Research (National Statement or NS) www.nhmrc.gov.au *☒

2. All approvals which are expedited and approved by the delegated HREC authority are ratified by the full HREC. If there are any queries from the full HREC, the researchers are obliged to comply with these. *☒

3. If you need to complete an Information Sheet and an Informed Consent Form, they must be written in plain English to suit your proposed research plan. Some inclusions would be: *☒

   - The name of the project;
   - Introduction to include who you are and what you are studying (if applicable) and your position within the University (current status - eg lecturer, Honours student, PhD, Masters)
   - An explanation (in plain English) about the subject of your research, its purpose and aims;
   - Explanation of what will be required of the participants in this research;
   - Any risks, inconveniences, discomforts which participants may experience;
   - Details about the likelihood of publication of the research results;
   - That participation in the research is voluntary;
   - Advice to the participant that he/she may withdraw at any time without negative consequence;
   - Provision of services to participants adversely affected by the research (if applicable to your research project);

- Details of the estimated time that it will take the participant to complete the research (including the opportunity of taking a break if required);
- Details of how the anonymity / or confidentiality of any information provided by participants will be ensured;
- Details of how adequate security will be provided for the research data;
- Inclusion of the researcher(s) and supervisor's (if applicable) contact details;
- The ethics approval number – once it has been received;
- Contact details of the University Complaints Officer.

A sample of Information Sheets and Consent Forms are available on the Ethics website. http://www.scu.edu.au/research/ethics/ *☒

4. If you are conducting research where the participant's consent is implied with their return of a questionnaire/survey then an Informed Consent Form is **NOT** necessary. *☐

5. An ethics application for 'Expedited Review' can be submitted at any time to the HREC or a HRESC. *☒

6. You must submit two copies of this application, with all the relevant attachments, to the Secretary of the HREC or HRESC as follows:-

   (a) One electronic copy;
   (b) One copy with relevant signatures. *☒

7. You must not make contact with any participants or begin the data collection component of your research until you receive an ethics approval number. *☒

8. Contacts for HREC inquiries and submission of application forms:

   HREC Secretary
   Sue Kelly
   Tel: (02) 6626 9139
   Fax: (02) 6626 9145
   Email: sue.kelly@scu.edu.au

   HRESC Coffs Harbour
   Leanne Carpenter
   Tel: (02) 6659 3197
   Fax: (02) 6659 3622
   Email: leanne.carpenter@scu.edu.au

   HRESC Tweed Heads
   Sue White
   Tel: (07) 55069303
   Fax: (07) 5506 9202
   Email: sue.white@scu.edu.au

Human Research Ethics Committee (HREC)
Human Research Ethics Sub-Committee (HRESC)
(Coffs Harbour and Tweed Heads)

EXPEDITED REVIEW APPLICATION FORM
Low and Negligible Risk Research

SECTION 1 – ETHICAL CONSIDERATIONS

		YES	NO
1.	Is this a new project?	☒	☐
1(a)	If NO, please advise relevant details such as the name of the Ethics Committee, the Ethics Approval Number and the month/year of review:		
2.	Is this a project which has received external ethics approval and now requires Southern Cross University ratification?	☐	☒
3.	Is this project currently before another ethics committee? If YES, which committee?	☐	☒
4.	The nature of this project is most appropriately described as involving: *(please mark the relevant box or boxes – more than one may apply)* ☐ Observation ☐ Questionnaire/s, Survey/s *(please attach a copy)* ☒ Interviews ☐ QA/Evaluation surveys ☐ On-line data collection ☐ Focus groups ☐ Experiments ☐ Other (please provide details):		
5.	Is this research Low/Negligible Risk to participants? (refer to the National Statement on Ethical Conduct in Human Research (NS Section 2) www.nhmrc.gov.au) *(If your answer is NO, then your research is not suitable for expedited approval.* You must submit the National Ethics Application Form [NEAF], available at www.neaf.gov.au)	**YES** ☒	***NO** ☐

6.	Reason for Expedited Approval: Please select the reason/s why you consider this application can be given expedited review for approval *(please mark all the relevant boxes – more than one may apply)*: (a) Data obtained is anonymous and/or will be held confidentially ☒ (b) The research plan is safe and poses low/negligible risk to participants ☒ (c) The research plan is safe and poses no risk to the researcher ☒ (d) The research does not involve the participation of vulnerable groups ☒ (e) Other, (please specify): ☐		
7.	Does the research involve any other institution (such as a hospital or school)? If YES: (a) What is the name of the institution? (b) Does the institution require ethical approval from its own ethics committee? (c) If YES, has that approval been obtained?	**YES** ☐ **YES** ☐ **YES** ☐	**NO** ☒ **NO** ☐ **NO** ☐

SECTION 2 - ADMINISTRATIVE DETAILS

8. Title of project:

What causes Top Management Teams to make poor strategic decisions?

9. Estimated commencement date:

Answer - May/June, 2009

10. Expected duration of the project (months):

Answer - 12 Months

11. **Principal Investigator** (Main Researcher/Student):

Name: Chris Stephenson

Qualification/Status: Doctoral Candidate

Degree being undertaken (if applicable) and School: Doctor of Business Administration, GCM

Phone No: +61 407 233 300

Email address at Southern Cross University: ChrisBStephenson@gmail.com

12. **Supervisor/Person Responsible***: (NS 5.1.2) (Not required where the Principal Investigator [above] is a staff member of the University)

Name: Dr. Doug Long

Position: Doctoral Supervisor

Qualifications: PhD

School/Centre: GCM

Phone No: +61 412 029 754

Email address at Southern Cross University: Douglas.long@scu.edu.au

13. **FUNDING** (NS 5.2.7)

Have you (or your supervisor if applicable) received or applied for external funding or sponsorship for this research? YES ☐ NO ☒

If YES:

(a) What is the name of the funding organisation?

(b) What are the details of the funding or sponsorship (including details of any in-kind contribution)?

(c) Amount of external funding/sponsorship: $

(d) Details of in-kind contribution:

13.1 Are there any conditions or restraints on the research as a result of the funding arrangements (eg. intellectual property, publication of results) (NS 5.2.11) YES ☐ NO ☒

(a) If YES, please state the nature of the conditions and/or restrictions:

SECTION 3 - PROJECT DETAILS

14. **Aim or purpose** of the research: (NS 1.1 – 1.13)

Making good strategic decisions and implementing them effectively directly relates to superior company performance. Further, good strategic decision-making is a competitive advantage yet most organisations fail to build and adopt effective organisational decision-making frameworks.

> *"What sets apart the high performers is the quality of their decision-making. They make the most important decisions well, and then they make them happen, quickly and consistently. We found again and again that these achievers as decision-driven organizations, build for effective decision-making and execution." (Rogers & Blenko 2006).*

This research aims from a qualitative perspective to investigate the main causes of poor decision-making by Top Management Teams spanning both the strategic business issues and the organisational decision-

making processes. The goal of this research is to identify a core set of decision-making factors that consistently relate to poor decision-making in Top Management Teams. The principle data collection will be by interviewing senior business executives about preferred methods and business prerequisites for making decisions.

The ultimate purpose of this research is to understand how seemingly well qualified senior business people who have access to abundant business intelligence in most cases fail to make and execute effective business decisions.

The research is principally concerned with qualitative analysis of how poor decisions are made rather than analysing past cases to prove that historical decisions were either good or bad. Discovering the main causes of poor decision-making together with appreciating a Top Management Team's level of understanding of decision-making issues will allow future development of decision frameworks. These frameworks will span both the business issues and decision-making processes to provide an integrated approach to understanding, analysing and improving organisational strategic decision-making.

15. Research Plan

Please provide the following details in relation to your Research Plan *(maximum 4,000 words in total)*:

(a) Methodology – must include a literature review (NS 1.1):

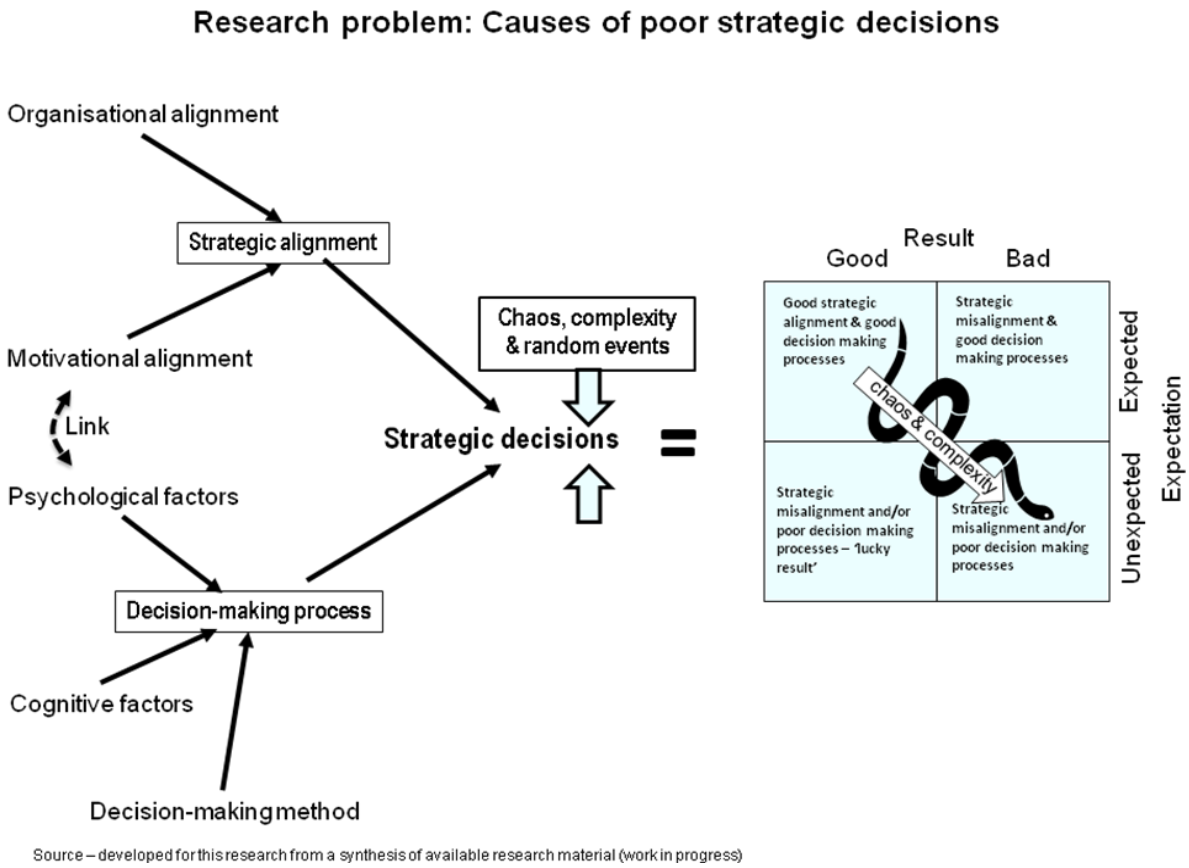
Preliminary Literature Review

When Top Management Teams make strategic decisions they are conducting the highest leveraged activity they can for an organisation. Indeed, a track record of decision successes is the most significant contribution that Top Management Teams can make in any kind of formal organisation (Harrison & Pelletier 2000). Given this level of potential impact on an organisation it is unsurprising that Michael (2007) believes that the company that wins today is the one that makes the best decisions and acts on them quickly.

Unfortunately, Bain & Company research shows that only around 15% of organisations have the ability to make and implement important decisions effectively (Rogers & Blenko 2006). Their research is only one of many studies that raise a fundamental question about why most organisations do not have the ability to make and implement effective decisions.

Research into organisational decision making generally agrees that the best organisational decisions aim to resolve the major issues facing an organisation and that the decision-making process takes all the relevant information into consideration (Michel 2007; Miller 2008; Rausch 2007; Rogers & Blenko 2006). Additionally, careful analysis is required to both understand and manage issues associated with hidden psychological biases that adjust how individuals and teams assess situations and reach decisions (Amason 1996; Bazerman 2002; Beach & Connolly 2005; Eisenhardt 1989; Eisenhardt, Kahwajy & Bourgeois 1997; Myers et al. 1998; Peters et al. 2006; Robbins et al. 2001).

The major strategic decision-making considerations can be diagrammatically depicted conceptually as follows:



Source – developed for this research from a synthesis of available research material (work in progress)

An organisation's strategy provides a common reference point for alignment and integration. The strategy directs human, informational and organisational resources toward desired outcomes for customers and shareholders (Kaplan & Norton 2004). Without an effective overarching business strategy confusion about the organisation's goals leads to misalignment where priorities are defined by the self-interest of senior managers (Guttman & Hawkes 2004). Effective organisational decision-making is therefore dependent on an organisational strategy that directs decisions toward the best interests of the shareholders and customers.

Vertical organisational alignment refers to the implementation of both the overarching business strategy and top management's decisions from the top of an organisation down through all levels. Horizontal alignment refers to coordination across an organisation to capture synergies (Kathuria, Joshi & Porth 2007).

Vertical and horizontal alignment is essential to drive informational and organisational resource integration but directing human integration involves motivational alignment. Individuals should be motivated to support the organisational strategy through a series of carefully monitored measures to ensure alignment of incentives, recognition and risks (Bender & Moir 2006; Chan 2008; Eisenhardt 1989; Frey & Osterloh 2005; Larraza-Kintana et al. 2007; Ross 1973). Principally due to differing risk profiles or timelines, employees may have different motivations to owners. In theory, owners align their interests with employees by creating and monitoring reward systems that drive employee behaviour in the best interests of the organisation. In practice, many shareholders allow senior management to design and develop incentive systems themselves. Consciously or unconsciously, employees will tend to have a self-serving bias (Frey & Osterloh 2005) when faced with situations characterised by ambiguity or discretion. This self-serving bias may lead to decisions that are not in the best interests of the organisation where individual misalignment exists.

Misalignment between core business drivers can create difficult situations for managers to make effective decisions. Market pressures such as quarterly reporting can drive organisations to trade short-term decisions at the expense of long-term decisions (Marginson & McAulay 2008). Unfortunately, because investors do not have access to forward looking information they make their assessments on trailing short-term indicators such as previous period's profitability, market share and so on but research shows that long-term investment strategies in research and development for example are better indicators for organisations that are delivering superior shareholder returns (Marginson & McAulay 2008). When faced with decisions to balance short-term and long-term requirements the organisation which selects short-term decisions that support their long-term position makes more effective decisions (Marginson & McAulay 2008).

Effective decision-making consists of a series of events: diagnosis, action selection and implementation (Beach & Connolly 2005). Anomalous events caused by internal or external changes trigger the need for diagnosis. The process of figuring out what to do can be a nonlinear exercise that loops around and changes as the options are uncovered until finally an action (option) is selected. Implementation involves turning the selected action into a workable solution which will likely deviate from the original action plan but end up with the desired outcome (Beach & Connolly 2005).

Original decision-making research focussed on prescribing how to make effective decisions. While prescriptive decision-making consistently yields good results (Nutt 2008) psychologists noticed that in many cases decision-makers do not actually naturally follow the steps prescribed. Additionally, some problems are so complex that it is impossible to satisfy many of the constraints of prescriptive decision-making such as knowing all possible solutions. However, even in situations meeting all prescriptive decision-making conditions psychologists noticed that decision-makers often chose alternate decision-making strategies.

Study of the alternate decision-making strategies highlighted the invisible biases that decision-makers introduce into their deliberations either consciously or unconsciously. This first generation of behavioural decision research was principally concerned with devising ways to adjust prescriptive decision-making methods to account for systematic human biases (Beach & Connolly 2005).

The second generation of behavioural decision-making research dispenses with trying to fit observed decision-making into a prescriptive decision-making paradigm and analyses the processes of decision-makers from a process point of view and takes non-rational factors such as emotion into consideration (Beach & Connolly 2005).

When considering organisational decision-making, research overwhelmingly supports the notion that prescriptive (rational) methods yield the best results for business when the conditions suit and they can be used effectively (Miller 2008; Nutt 2007, 2008) . First generation behavioural decision-making research provides many explanations for decision-makers deviating from prescriptive methods and suggests ways to manage invisible human biases that undermine rational analysis. Second generation behavioural theory makes important contributions to areas that have been typically ignored in prescriptive and first generation behavioural research such as the role of emotions, the decomposition of some of the heuristic and bias tendencies into psychological drivers. Significantly the second generation behavioural theories recognise that choice is a much smaller part of decision-making than earlier thought and that screening is an important part of simplifying our decision processes.

When the situation permits, using prescriptive methods for rational decision-making is a reliable way to make effective business decisions (Nutt 2008). However, it is very difficult to eliminate the invisible effects of human biases that effect decision framing and choice so checks must be in place to minimise their disruption on rational decision-making (Bazerman 2002). In complex situations, prescriptive decision-making is not a workable solution so decision-makers must resort to one of many other available methods and at the same time be mindful of the potentially disruptive human bias effects (Beach & Connolly 2005).

Each decision-maker has an individual cognitive style and in theory, each management team has a cognitive style. First identified by Jung in the 1920's, cognitive styles result in individual ways of processing and organising information. Cognitive style also effects how decision-makers arrive at judgements or conclusions and therefore effects how they make decisions (Hough & Ogilvie 2005). In theory, an individual's personality naturally adopts either a S (sensing) or N (intuition) alternative and either a T (thinking) or F (feeling) alternative giving a possible combination of ST, SF, NT or NF cognitive style (Myers et al. 1998). Sensing individuals utilise their five senses to gather information from the environment while iNtuitive individuals tend to focus on possibilities, meanings, and relationships. Thinking individuals make logical connections and rely on principles of cause and effect during decision-making where Feeling individuals weigh the relative values and merits of an issue and rely on an understanding of personal values and group values (Jung 1923 as cited by Leonard, Beauvais & Scholl 2005).

Although individual cognitive style is a proven and useful measurement, management-team cognitive style is currently a theoretical construction (Leonard, Beauvais & Scholl 2005). The current thinking about group cognition theorises that the cognitive make-up of the group is an aggregation of the individual cognitive styles combined in various ways depending on the group dynamics (Leonard, Beauvais & Scholl 2005).

Since group cognitive style is still being defined it is difficult to use the concept in a practical way to analyse the effect on decision making but research on individual cognitive style does provide important decision-making background that might be applicable to groups (Leonard, Beauvais & Scholl 2005). Individually different cognitive styles naturally gravitate to predictable behaviours such as iNtuitive types seeing problems as strategic compared to Sensing types seeing the same things tactically. Clearly these orientations have important impacts on decision-making by management teams when balancing the short-term needs with the long-term needs of the organisation.

Proposed methodology

Quantitative platforms such as strategic plans, organisational goals, strategic alignment and defined rational decision criteria should form the basis of good strategic decisions (Nutt 2008). However, research also shows that in practice decision-making is a very subjective process heavily impacted by a person's cognitive style and invisible personal biases (Beach & Connolly 2005; Brafman & Brafman 2008; Chapman 2006; Hall 2007; Hammond, Keeney & Raiffa 2003).

To quote from a recent McKinsey Global survey on strategic decision-making:

"*Since its inception nearly three decades ago, behavioral economics has upset the pristine premise of classical economic theory—the view that individuals will always behave rationally to achieve the best possible outcome. Today it's clear that the vagaries of individual and group psychology can cause irrational decision making by both individuals and organizations, resulting in less than ideal outcomes." (Dye, Sibony & Truong 2008)*

This research aims to understand the causes of poor decision-making by analysing inputs from business executives. This line of enquiry assumes that individuals create their own versions of reality influenced by their personal values, traits and biases and that those realities will be transitory and situational. Therefore, a qualitative research paradigm is required since this research is not an objective reality and will involve collecting and interpreting subjective data in natural management decision-making settings.

Behavioural theory predicts that executives will have subjective or distorted views of both their previous decision-making activity and the observed effectiveness of decision-making by others (Bazerman 2002; Beach & Connolly 2005; Brafman & Brafman 2008; Kida 2006). These distorted views make it difficult to use case studies as a basis for understanding decision-making because executives may tend to reverse-engineer their explanations to suit the outcomes rather than admit any failure on their part (Kida 2006). Additionally, case studies are by their nature trailing indicators of past decisions and may not represent the future behaviour concerning decision-making.

Ethnography probably provides an excellent method to observe and understand how a Top Management Team makes decisions by embedding the researcher into the day-to-day activities over a long period for in-depth study and observation (Nueman 2006). However, it might be very difficult to gain access to such an environment and the research findings may only be applicable to that group. Anticipated difficulty of access to data and non-generalisability therefore make Ethnography an unsuitable research method.

Grounded theory is a type inductive social theory that builds toward abstract theory by making comparisons of empirical observations of social phenomenon (Nueman 2006). Research using grounded theory begins with gathering rich data from research participants consisting of their views, feelings, intentions, and actions as well as the contexts and structures of their lives (Charmaz 2006). Rich data includes such things as extensive field notes, written personal accounts, interviews and information in records and reports. Based on detailed analysis of the rich data theories emerge and are investigated until conclusions can be drawn.

Grounded theorists begin their studies with certain research interests and a set of general concepts. These concepts provide ideas to persue and sensitise the researcher to ask particular kinds of questions about the topic (Charmaz 2006 (quoting Bulmer 1969)). However, researchers need to be mindful of asking 'loaded questions' based on preconceived ideas that might drive responses in narrow prescriptive directions.

Intensive interviewing is used as a useful data-gathering tool in many kinds of qualitative research to provide the framework to have directed conversations that provide in-depth information on the research topic (Charmaz 2006). Grounded theory methods particularly suited to intensive interviewing since both are open-ended yet directed, shaped yet emergent, and paced yet unrestricted approaches (Charmaz 2006).

The combination of grounded theory methods for data analysis and intensive interviewing for data collection would allow the researcher to collect in-depth information directed at the topic of interest. The directed questioning will allow the researcher to guide the conversation away from past case studies and other areas where respondents might feel the desire to justify or rationalise past events toward future intentions and thereby avoid some of psychological tendencies to contaminate past data. Additionally, the researcher will collect rich data to provide greater context and insights into the drivers behind the activities being analysed.

Since grounded theory combined with intensive interviewing techniques for data collection seem to allow the researcher to focus in on the research topic and avoid many of the pitfalls of data errors through interpretation and cognitive rationalisation grounded theory is proposed as the main method for this research.

Access to data will be by intensive interviews with senior executives predominantly in the high technology field where the researcher has access to potential respondents and business knowledge to provide the basis for in-depth conversations. Based on the general concepts articulated in the concept map derived from the preliminary literature review, questions would be formulated to guide the participant to reveal the various environmental, process and psychological factors at play without actually leading them to conclude predetermined answers resulting from questions that suggest outcomes. In this way the researcher can avoid data corruption and false outcomes. The real underlying aim is to probe the decision-making framework from the perspectives of the strategic environment, the decision processes and the team-working issues.

Typical questions could include the following examples:

1 Key strategic factors

Tell me about a time you have observed good strategic decision-making by a management team.

- What do you believe were the key elements that made that decision process successful?
- How would you describe a good decision making environment?
- What influenced the way decisions were made?
- What was the environment like in the organisation at that time?
- In what ways did the management team interact?
- How did the team go about choosing options?
- What factors determined the ultimate choice?
- Was the team in agreement with the choice?
- What kind of decision-making skills were evident?

Can you think of instances where you have observed poor strategic decision making by management teams?

- What do you believe were the key elements that made that decision process unsuccessful?
- How would you describe a poor decision making environment?
- What influenced the way decisions were made?
- What was the environment like in the organisation at that time?
- In what ways did the management team interact?
- How did the team go about choosing options?
- What factors determined the ultimate choice
- To what extent did the team agree on the choice?
- What kind of decision-making skills were evident?

2 Key psychological/cognitive factors

- Do you believe that a different set of people would have reached the same decision conclusions? Why?
- How were new options considered and evaluated?
- Does everyone have chance to give their views? Do they all count for the same value?
- How often did people disagree? What happened when people disagreed?
- What motivated people to suggest various options?
- In the event of disagreement how were issues resolved?
- How were opinions weighed against each other?
- What is the role of the CEO in management team decision-making?

3 Participant's opinion on the root of the problem

- What do you think are the most important things for a team to consider when making strategic decisions?
- How have you evolved in your decision-making as a result of those interactions?

- Are there other factors that we haven't talked about which you believe have significant influence on the decision-making?
- Is there anything you think I should know or understand better?
- Is there anything you would like to ask me?

(b) Justification of Sample Selection (NS 1.4):

Answer –

The research methodology proposed is Grounded Theory. The number of participants is indeterminate because the interview process will continue with existing and potentially new participants during the data collection and analysis phases until no new significant rich data emerges. It is envisaged by the researcher that the sample size of CEO's and CEO direct reports will be greater than fifteen participants and less than forty participants.

(c) Data analysis (NS 3):

Data analysis would be conducted in-line with established grounded theory methods by analysing rich data for emerging trends. Initially coded into fragments, in later phases once concepts emerge data is coded in a more focussed way. The researcher writes memos that provide explanation for groups of codes as a further step in analysing data and are used to prompt data analysis early on in the research process (Charmaz 2006). After reaching data sampling saturation the researcher completes data sorting and the work of reconstructing theory based on the collected data begins.

(d) Expected Outcomes (NS 1.6-1.9):

This research aims to investigate the main causes of poor decision-making by Top Management Teams spanning both the strategic business issues and the organisational decision-making processes from a qualitative perspective. The purpose of this research is to identify a core set of decision-making factors that consistently related to poor decision-making in Top Management Teams. The principle data collection will be by interviewing senior business executives about their preferred methods and business prerequisites for making decisions.

The ultimate purpose of this research is to understand how seemingly well qualified senior business people who have access to abundant business intelligence in most cases fail to make and execute effective business decisions.

The research is principally concerned with qualitative analysis of how poor decisions are made rather than analysing past cases to prove that historical decisions were either good or bad. Discovering the main causes of poor decision-making together with appreciating a Top Management Team's level of understanding of decision-making issues will allow future development of decision frameworks. These frameworks will span both the business issues and decision-making processes to provide an integrated approach to understanding, analysing and improving organisational strategic decision-making.

16. What are the expected **benefits** of this research? (NS 1.6-1.9 and 2.1*)*

(a) To participants:

Practicing managers will gain an insight into the major causes of poor decision-making and be able to assess their organisational performance against those potential pitfalls.

(b) To the broader community:

Tertiary education institutions will benefit from understanding where they can target their management education in decision-making to build practical awareness in business. Targeted decision-making

management training aimed at the identified high incidence causes for poor decision-making should feed superior decision-making skills into business and the community over time.

(c) To increasing knowledge:

Future researchers will benefit from a better understanding of the *actual* decision-making methods used by practicing senior business people and the identification of the inter-working of strategy development and decision processes.

17. **Risk** (NS 2)
Describe the level and nature of the risk to the participants in this research.

Answer – Low risk, participants will only be providing their personal opinions and reflecting their thoughts on causes driving poor decision-making. No specific decision-making cases will be analysed in detail other than to illustrate the decision-making or strategic processes that were involved.

18. **Review process** (NS 1.2)
Please give a brief description of the process of review and quality assessment for your research proposal. (eg. has your supervisor or an external reviewer assessed the research plan?)

Answer - The research proposal has been reviewed and graded by my Doctoral Supervisor – Dr. Doug Long.

19. PARTICIPANTS

19.1 **Recruitment/Source of participants**:
Please give details of how the participants are to be recruited/selected.

Answer - The researcher has worked in the high technology industry for over 20 years and plans to use his experience and contacts to approach senior managers in the IT and Telecommunications fields to participate in the research. The researcher will contact the potential participants by telephone to assess their initial interest level and if a positive reaction is received follow-up with a letter including an Information Sheet describing the research and a research Consent Form. The letter will be on Southern Cross University letterhead as detailed in Appendix 1 and 2.

Participants name:

Participants signature:

Date:

Contact: Tel:

Email:

19.2 **Intended number of participants**:

Answer – The number of participants is indeterminate. The number of participants is indeterminate because the interview process will continue with existing and potentially new participants during the data collection and analysis phases until no new significant rich data emerges.

19.3 **Age range of participants**:

Answer - Typically senior management range from thirty five to sixty five years old

19.4 **Sex of participants**:

Answer - Male and female

19.5 Will you be using equal numbers of male/female participants? Yes ☐ No ☒
If NO, please explain why:

Answer - Currently there exists a significant gender imbalance in Top Management Teams in Australia it is expected that the sample will reflect this imbalance.

19.6 How will research participants be affected?
(*Please provide answers under the following headings)*:

(a) What procedures will participation in this research involve for your participants?

Answer - Participants may be interviewed several times.

(b) What time commitment and what travel (if any) will the research involve for your participants?

Answer - Participants will not be required to commit to anything other than the time required for an interview and time to review the interview transcripts for accuracy.

(c) Where will the research/data collection take place?

Answer – Typically at the participant's work place or any other convenient meeting place.

(d) Please include any additional information you feel is relevant.

20. **Feedback**:

All participants are entitled to receive the results of research in which they participated.

How will you advise participants that they can obtain **feedback** on the results of the research once it has been completed?

i) There will be a tick box on the Consent Form where participants can indicate if they wish to receive the research results. If so, they will be asked to provide their email address. ☐

ii) In the Information Sheet, participants will be advised that research results will be made available at the Southern Cross University Library at a later stage ☒

iii) A summary of the research results will be made available to all participants *(you must state how this will be provided)*:

Answer – I will provide any participant who indicates that they would like a summary of the research with a full copy of the research, a copy of the research conclusions and/or if desired a personal briefing as it relates to their work environment. This offer is mentioned in my information sheet to all participants. ☒

iv) Other *(provide details)*:

21. **Informed Consent** (NS 2.2)
How will the researchers address the requirements for consent of the participants?

Answer – Participants will sign and return a Consent Form to the researcher indicating their consent to participate.

22. **Research conducted in overseas countries** (NS 4.8)

22.1. Are you conducting research in an overseas country? Yes ☐ No ☒

If YES, are you familiar with the National Statement Chapter 4.8: People in Other Countries? Yes ☐ No ☐

22.2. How will local cultural values be acknowledged in the design and conduct of the research whilst maintaining the basic principles of the National Statement? In relation to the National Statement please provide full information below about the local cultural values and how they will be maintained.

22.3 *Appendix B – Research Conducted Overseas*. This form **MUST** be completed.

SECTION 4 - CERTIFICATION

Researchers, including the principle researcher and the Supervisor.

I/we certify that:

- Information provided in this application is truthful and complete.
- I/we have read the *National Statement on Ethical Conduct in Human Research (National Statement).*
  www.nhmrc.gov.au
- The research will be conducted in accordance with the National Statement.
- The research will be conducted in accordance with the ethical and research requirements of the institutions involved.
- I/we have consulted any relevant legislation and regulations (such as the *Privacy Act 1988*), and the research will be conducted in accordance with these.
- I/we will immediately report to the HREC anything which might warrant review of the ethical approval of the proposal (NS 5.5.1 – 5.5.10), including:

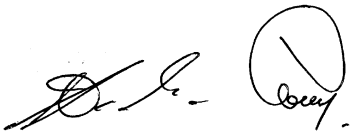
  Serious or unexpected adverse effects on participants;
  Proposed changes in the protocol; and/or
  Unforseen events that might affect continued ethical acceptability of the project.

- I/we will inform the HREC, giving reasons, if the research project is discontinued before the expected date of completion (NS 5.5.1 – 5.5.10).
- I/we will not continue the research if ethical approval is withdrawn and will comply with any special conditions required by the HREC.
- I/we agree to adhere to the conditions of approval stipulated by the HREC and will cooperate with the HREC's monitoring requirements. At a minimum, annual progress reports and a final report will be provided to the HREC. (NS 5.5.1 – 5.5.10).
- I/we acknowledge that failure to complete all details of the form may lead to delays for which I am/we are therefore responsible.

22. **Full Name of Supervisor/Person Responsible:**

Douglas G Long PhD

Position: Doctoral Supervisor
Email: dglong@bigpond.net.au
Telephone: +61 412 029 754



x.....**Date: 17 – April - 2009**.....
Signature *of Supervisor/Person Responsible*

23. **Name of School/Department/Centre:**
Where the applicant is Head of School, this section should be completed by the Director of Postgraduate Studies and Research:

Insert title of signatory: *(i.e. Head of School/ Director of Postgraduate Studies and Research):*

Name of *Head of School / *Director of Postgraduate Studies and Research (*delete as appropriate):

Email of Head of School: /Telephone:

x.....**Date:** .....
Signature of Head of School / *Director of Postgraduate Studies and Research *(*delete as appropriate)

24. Has the Head of School agreed to the use of equipment/ resources for this study? ☐YES / ☐NO

If your answer is NO, please explain why?

25. **Name of Principal Investigator** *(Researcher/Student)***:**

Christopher Stephenson

Email: ChrisBStephenson@gmail.com
Telephone: +61 407 233 300

X.....**Date: 17 – April - 2009**.....
Signature *of Principal Investigator (Researcher/Student):*

Please complete the following checklist to ensure you have correctly finalised the Ethics application form.

CHECKLIST:

Have you read the National Statement on Ethical Conduct in Human Research	☒YES / ☐NO
Have you attached the completed Information Sheet	☒YES / ☐NO
Have you attached the completed Consent Form (if applicable)	☒YES / ☐NO
Have you attached a copy of the proposed Questionnaire (if applicable)	☐YES / ☐NO ☒NOT APPLICABLE
Have you answered all the questions?	☒YES / ☐NO
Do you have ALL the required signatures?	☒YES / ☐NO
Have you completed two (2) copies of the application? One must be in electronic format and is to be forwarded to the Secretary of the HREC or the Secretary of the HRESC. Original signatures must appear on one copy so this is usually a hard copy and is sent by mail or delivered to the appropriate Secretary. Alternatively, the signature pages can be faxed to the appropriate Secretary. The signature pages will then be included in the electronic copy by the Secretary and submitted to the delegated authority of the HREC for approval.	☒YES / ☐NO

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Appendix 1

INFORMATION SHEET

What causes Top Management Teams to make poor strategic decisions?

Dear Mr Kramer (example),

Further to our telephone conversation, I am conduction research into decision-making by Top Management Teams as part of my Doctoral degree in Business Administration at Southern Cross University.

What is this research?

Some people believe that when Top Management Teams make strategic decisions they are potentially conducting the highest leveraged activity they can for an organisation. Indeed, a track record of decision successes is one of the most significant contributions that Top Management Teams can make in any kind of formal organisation. This belief is confirmed by research showing that high performance organisations are particularly strong in *making good decisions and making them happen*. Unfortunately, the same research also shows that only around 15% of organisations have the ability to make and implement important decisions effectively (Rogers & Blenko 2006).

My research is concerned with identifying core factors that can consistently relate to poor decision-making in Top Management Teams to be able to then develop awareness, methods, tools and processes to address those factors for the benefit of the business.

Participants in the research would be interviewed by me to discuss their experience in being part of and observing Top Management Team decision-making. The aim of the interview would be to collect their observations and thoughts about decision-making based on their experience rather than investigating specific decision-making instances such as in case studies.

As the researcher, my role will be to synthesise the rich data that I collect from various expert sources such as you and develop theories that attempt to explain the underlying causal factors that drive poor decision-making outcomes.

As a participant, you would be interviewed and then shortly after provided with a written transcript of our conversation to review, edit and approve. All information will then be de-identified prior to further analysis to protect your privacy.

The final research thesis will be available in the Southern Cross University library and may be published. However, if you desire I would be pleased to either send you a copy of the final report, send a summary of the key findings or provide a briefing session on the implications of the analysis as they may apply in your business setting.

Attached to this letter you will notice a research consent form that is based on the Australian National Statement on Ethical Conduct in Human Research which outlines specific ethical guidelines for conducting research and also your rights. If you agree to participate in the research, I would ask you to read and sign the document to certify your understanding of the ethical guidelines and indicate your approval to include your input as part of the research process.

At any stage you can make further inquiries about the research by contacting me or my Doctoral Supervisor as follows:

Chris Stephenson – Doctoral Candidate
Phone: +61 407 233 300
Email: ChrisBStephenson@gmail.com

Or

Dr. Doug Long (PhD) – Doctoral Supervisor
Phone: +61 412 029 754
Email: dglong@bigpond.net.au

This research has been approved by the Southern Cross University Human Research Ethics Committee. The approval number is: XXX-YYY-ZZZ

If you have concerns about the **ethical conduct** of the research, the following procedure should occur.

Write to the following:

The Ethics Complaints Officer
Southern Cross University
PO Box 157
Lismore NSW 2480
sue.kelly@scu.edu.au

All information is confidential and will be handled as soon as possible.

I sincerely hope that you will consider this request to be involved in important research and allow me to investigate one of the most vexing questions in business and thereby provide you and the business community with rich informative feedback on a critical issue.

Sincerely,

Chris Stephenson

Appendix 2

CONSENT FORM

(This consent form is based on the National Statement on Ethical Conduct in Human Research (National Statement/NS)

Title of research project: **What causes Top Management Teams to make poor strategic decisions?**

NOTE: This consent form will remain with the Southern Cross University researcher for their records.

Tick the box that applies, sign and date and give to the researcher

I agree to take part in the Southern Cross University research project specified above.	Yes ☐	No ☐
I have been provided with information at my level of comprehension about the purpose, methods, demands, risks, inconveniences and possible outcomes of this research. I understand this information.	Yes ☐	No ☐
I agree to be interviewed by the researcher	Yes ☐	No ☐
I agree to allow the interview to be audio-taped	Yes ☐	No ☐
I agree to make myself available for further interview if required	Yes ☐	No ☐
I understand that my participation is voluntary.	Yes ☐	No ☐
I can choose not to participate in part or all of this research at any time, without consequence.	Yes ☐	No ☐
I understand that any information that may identify me, will be de-identified at the time of analysis of any data. Therefore, I, or any information I have provided cannot be linked to my person/ company. (*Privacy Act 1988 Cth*)	Yes ☐	No ☐
I understand that neither my name nor any identifying information will be disclosed or published, except with my permission.	Yes ☐	No ☐
I understand that all information gathered in this research is confidential. It is kept securely and confidentially for 5 years at the University (unless there are special circumstances, that have been explained to me.	Yes ☐	No ☐
I am aware that I can contact the Supervisor or other researchers at any time with any queries.	Yes ☐	No ☐
I understand that the ethical aspects of this research have been approved by the SCU Human Research Ethics Committee.	Yes ☐	No ☐

If I have concerns about the **ethical conduct** of this research, I understand that I can

contact the SCU Ethics Complaints Officer. All inquiries are confidential and should be in writing, in the first instance, to the following: Yes ☐ No ☐

Ethics Complaints Officer
Southern Cross University
PO Box 157
Lismore NSW 2480
Email: sue.kelly@scu.edu.au

Ethics approval

HUMAN RESEARCH ETHICS COMMITTEE (HREC)
NOTIFICATION

To: Dr Doug Long/Mr Chris Stephenson
Graduate College of Management
ChrisBStephenson@gmail.com,douglas.long@scu.edu.au

From: Secretary, Human Research Ethics Committee
Division of Research, R. Block

Date: 23 June 2009

Project: What causes Top Management to make poor strategic decisions?
Approval Number **ECN-09-080**

The Southern Cross University Human Research Ethics Committee has established, in accordance with the *National Statement on Ethical Conduct in Human Research – Section 5/Processes of Research Governance and Ethical Review*, a procedure for expedited review by a delegated authority.

This application was considered by the HRESC at Tweed/Gold Coast Campus.

This research is approved and you may commence your research.

The approval is subject to the mandatory standard conditions of approval. Please note these and inform the HREC when the project is completed or if there are any changes of protocol.

This approval will be ratified by the full Human Research Ethics Committee (HREC) at its August meeting. If the full HREC has any further queries, the researchers are expected to respond to those queries.

Standard Conditions in accordance with the National Statement on Ethical Conduct in Human Research (National Statement) (*NS*).

1. Monitoring
NS 5.5.1 – 5.5.10
Responsibility for ensuring that research is reliably monitored lies with the institution under which the research is conducted. Mechanisms for monitoring can include:
(a) reports from researchers;
(b) reports from independent agencies (such as a data and safety monitoring board);
(c) review of adverse event reports;
(d) random inspections of research sites, data, or consent documentation; and
(e) interviews with research participants or other forms of feedback from them.

The following should be noted:

(a) All ethics approvals are valid for **12 months** unless specified otherwise. If research is continuing after 12 months, then the ethics approval MUST be renewed. Complete the Annual Report/Renewal form and send to the Secretary of the HREC.

(b) *NS 5.5.5*
Generally, the researcher/s **provide a report every 12 months** on the progress to date or outcome in the case of completed research specifically including:

- The maintenance and security of the records.
- Compliance with the approved proposal
- Compliance with any conditions of approval.
- Any changes of protocol to the research.

Note: Compliance to the reporting is **mandatory** to the approval of this research.

(c) Specifically, that the researchers report immediately and notify the HREC, in writing, for approval of **any change in protocol.** *NS 5.5.3*

(d) That a report is sent to HREC when the **project has been completed**.

(e) That the researchers report immediately any circumstance that might affect ethical acceptance of the research protocol. *NS 5.5.3*

(f) That the researchers report immediately any serious adverse events/effects on participants. *NS 5.5.3*

2. Research conducted overseas

NS 4.8.1 – 4.8.21
That, if research is conducted in a country other than Australia, all research protocols for that country are followed ethically and with appropriate cultural sensitivity.

3. Complaints

NS 5.6.1 – 5.6.7
Institutions may receive complaints about researchers or the conduct of research, or about the conduct of a Human Research Ethics Committee (HREC) or other review body.

Complaints may be made by participants, researchers, staff of institutions, or others. All complaints should be handled promptly and sensitively.

Complaints about the ethical conduct of this research should be addressed in writing to the following:

Ethics Complaints Officer
HREC
Southern Cross University
PO Box 157
Lismore, NSW, 2480

Email: sue.kelly@scu.edu.au

All complaints are investigated fully and according to due process under the National Statement on Ethical Conduct in Human Research and this University. Any complaint you make will be treated in confidence and you will be informed of the outcome.

All participants in research conducted by Southern Cross University should be advised of the above procedure and be given a copy of the contact details for the Complaints Officer. They should also be aware of the ethics approval number issued by the Human Research Ethics Committee.

Sue Kelly
Secretary HREC
Ph: +61 +2 6626 9139
sue.kelly@scu.edu.au

Professor Bill Boyd
Chair, HREC
Ph: (02) 6620 3569
william.boyd@scu.edu.au

Ethics approval - renewal

HUMAN RESEARCH ETHICS COMMITTEE (HREC)
NOTIFICATION

To: Dr Doug Long/Chris Stephenson
Graduate College of Management
douglas.long@scu.edu.au,ChrisBStephenson@gmail.com

From: Secretary, Human Research Ethics Committee
Division of Research, R. Block

Date: 18 August 2010

Project: What causes Top Management to make poor strategic decisions?

Approval Number **ECN-10-142**

The Southern Cross University Human Research Ethics Committee has established, in accordance with the *National Statement on Ethical Conduct in Human Research – Section 5/Processes of Research Governance and Ethical Review*, a procedure for expedited review by a delegated authority.

Your renewal and annual report were considered by the HRESC, Tweed/Gold Coast and have been approved. A new approval number has been issued. Your research may commence.

The approval is subject to the usual standard conditions of approval. Please ensure that these standard conditions of approval are noted.

Standard Conditions in accordance with the National Statement on Ethical Conduct in Human Research (National Statement) (*NS*).

1. Monitoring
NS 5.5.1 – 5.5.10
Responsibility for ensuring that research is reliably monitored lies with the institution under which the research is conducted. Mechanisms for monitoring can include:
(a) reports from researchers;
(b) reports from independent agencies (such as a data and safety monitoring board);
(c) review of adverse event reports;
(d) random inspections of research sites, data, or consent documentation; and
(e) interviews with research participants or other forms of feedback from them.

The following should be noted:

(a) All ethics approvals are valid for **12 months** unless specified otherwise. If research is continuing after 12 months, then the ethics approval MUST be renewed. Complete the Annual Report/Renewal form and

send to the Secretary of the HREC.

(b) *NS 5.5.5*
Generally, the researcher/s **provide a report every 12 months** on the progress to date or outcome in the case of completed research specifically including:

- The maintenance and security of the records.
- Compliance with the approved proposal
- Compliance with any conditions of approval.
- Any changes of protocol to the research.

Note: Compliance to the reporting is **mandatory** to the approval of this research.

(c) Specifically, that the researchers report immediately and notify the HREC, in writing, for approval of **any change in protocol.** *NS 5.5.3*

(d) That a report is sent to HREC when the **project has been completed**.

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All participants in research conducted by Southern Cross University should be advised of the above procedure and be given a copy of the contact details for the Complaints Officer. They should also be aware of the ethics approval number issued by the Human Research Ethics Committee.

Sue Kelly
HREC Administration
Ph: (02) 6626 9139
E. ethics.lismore@scu.edu.au

Prof Bill Boyd
Chair, HREC
Ph: 02 6620 3650
E. william.boyd@scu.edu.au

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