Developing Sustainable Corporations in Australia

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Abstract

In the wake of the environmental degradation, social inequality and injustice, and the incidents of corporate frauds and mismanagement reported in Australia, domestic business organisations have been asked increasingly by Australian governments and people to pursue sustainable business practices. As prime movers of creating wealth and employment, business organisations have an important and legitimate role to play in sustainable development, which is defined as a notion that meets the needs of present without compromising the ability of future generations.

Corporate sustainability, which is a subset of the concept of sustainable development, involves integrating financial, social, and environmental values into business policy, planning, and decision-making requiring changes in organisational values, perspectives, culture, structure, and performance measures. Many Australian businesses are wary of meeting financial, social, and environmental objectives simultaneously claiming the agenda as contradictory and almost unattainable, but the demand for achieving corporate sustainability seems inescapable. Since Australian businesses are facing a fierce competition in domestic market as a result of reducing trade barriers, globalisation, and market deregulation, demanding them to contribute more to sustainable development may appear to be unreasonable. Furthermore, business managers are often wary of any organisational changes, as several of them have failed in creating organisational value. As a consequence, business managers are cautious of engaging in sustainable business practices.

In an attempt to unravel the above dilemma, this study mainly examined how to enhance organisational value by sustainable business practices. It examined the two dominant strategic management theories, i.e. Barriers to Entry theory and the Resource-Based View (RBV) theory. It collected the data from 102 Australian business organisations using a survey method. Based on its findings, this study makes
a number of contributions to the theory and practice of strategic management. Notable among them are, first, it shows that socially crafted business practices such as knowledge management, customer relationship management, and stakeholder management can have substantial leverage to building business competitiveness. Second, it demonstrates that environment-oriented business practices can provide a number of effective opportunities for increasing the height of entry barriers to new competition. Third, this study concludes that social-oriented business activities are almost ineffective as entry barriers to new competition. Fourth, it substantiates why environment protection measures such as Environmental Management System (EMS) are least contributing to business competitiveness. Finally, this study substantiates its main claim that a business organisation can enhance its competitive advantage by pursuing corporate sustainability principles. This study upholds the view that business organisations have enlightened self-interest in following corporate sustainability.
Statement of Authorship

I wish to declare that this thesis titled ‘Developing Sustainable Corporations in Australia’ contains no material that has been accepted for the award of any other degree or diploma.

To the best of my knowledge, it contains no material previously published or written by another person except where due reference is made in the text of the thesis.

This thesis is not an outcome of joint research or publications.

Raveendra Nayak
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CHAPTER 1

General Overview and Purpose of the Study

1.1 Building Sustainable Businesses: A Challenge to Australian Business Leaders

This section provides a brief overview of the challenges faced by Australian business managers in building sustainable business organisations. Sustainable business organisations believe that they have responsibility for economic development, environmental protection, and social justice and equity (Wilson 2003). Pursuing sustainable business practices involves integrating economic, social, and environmental values into a business process including decision making and seeking positive outcomes in financial, social, and environmental areas with a minimum trade off. This section presents, firstly, a brief account of environmental degradation and its impact on human life. It is followed by its implications for business organisations, in particular, how it has spearheaded community and institutional backlash on the business sector. As a consequence, business organisations are under pressure to minimise the adverse impact on the environment by their business activities and contribute towards reversing the damage. Secondly, this section provides the background of the community demand in Australia for transparency and accountability from corporate directors and executives. This community awareness has resulted in the call for demonstrating corporate social responsibility (CSR) from every business leader. Thirdly, this section provides a sketch of current competitive realities in Australian markets as a consequence of globalisation, liberalisation, reduced protection, and developments in information technology. The gravity of the three main issues mentioned above emphasises the need for equally valuing financial, social, and environmental business objectives in the post-modern era. It also drives
home the urgent need for achieving balanced and extraordinary results on all three fronts of corporate sustainability in a mutually supportive way.

1.1.1 Crisis Resulting from Degradation of the Environment

In two and a half centuries of industrial civilisation there has been a tenfold growth in global population, a great increase in economic activity and food production, markedly enhanced life expectancy, and huge achievements in material prosperity, employment prospects and human well-being in general (Goldie, Douglas & Furnass 2005).

The price of this progress has been widespread land, atmosphere, and water degradation, loss of species biodiversity, and inequalities in resource distribution between and within industrialised and developing countries. The excessive combustion of fossil fuels which drive agriculture, city construction and maintenance, manufacturing industries, and transport is contributing to significant climate change, which, in turn, is threatening the very ecosystems on which all humans depend (Pearman 2005). As human numbers have increased and technology improved, terrorism and war have escalated to new heights of inter-racial and inter-religious barbarity (Butler 2005).

It has been estimated that humans now appropriate over 40 per cent of the planet’s photosynthetic activity and that the biosphere passed its regenerative and absorptive capacity a quarter of a century ago. Depletion of non-renewable resources such as phosphorus, fossil fuels, and the rich biodiversity of old-growth forests and marine ecosystems have reached a critical stage. Governments define progress in terms of economic growth. Yet if environmental costs exceed economic benefits, growth is making us poorer rather than richer. A transition to sustainability is a no less important chapter in human history than the agricultural and industrial transitions,
whose excesses have contributed to the environmental crisis that we now confront (Carey 2004).

In 1987, the World Commission on Environment and Development (WCED) published a report titled ‘Our Common Future’. The document known popularly as the ‘Brundtland Report’ after the Commission’s chair Gro Harlem Brundtland, defined sustainable development as ‘that which meets the needs of present without compromising the ability of future generations’ (Brundtland 1990).

It is now realised that if we are not sustainable as a human species, our children or their children could die very young and *Homo sapiens* could quite quickly become extinct. It is as simple and serious as that (Goldie, Douglas & Furnass 2005).

### 1.1.2 Call for Corporations to Respond to Environmental Crisis

In the light of the above grim reality, communities around the world are demanding that business organisations should reduce their detrimental impact on the environment. They are also asking business corporations to develop new technologies, renewable energy sources, and innovative designs that reverse the ecological damage that is already done (Dunphy, Griffiths & Benn 2003; Laszlo 2003; Welford 1995; Willard 2002). Thus, business organisations are facing enormous challenges to rise to the legitimate expectations of the communities in relation to environmental sustainability.

### 1.1.3 Social Responsibility of Australian Businesses in the Spotlight

As prime movers of wealth and employment creation, business organisations play a crucial role in sustaining societies. In Australia, the social responsibility of business organisations has come under critical examination in the recent past. For example, Australians were disappointed and disgusted at the corporate frauds that resulted in
the collapse of HIH Insurance Group and the telecommunications company One.Tel. (Kehl 2001; Kimber 2001). Similarly, the nation stood up to widely condemn corporate mismanagement when Australia’s second largest and oldest domestic carrier Ansett Airlines went into liquidation resulting in the loss of 16,000 jobs (Cook 2001). Likewise, Australian consumers and union movement showed a resilient protest when a New South Wales inquiry into Australian building materials manufacturer James Hardie’s decision of transferring its asbestos liabilities into a foundation found grounds for criminal charges and evidence of deceptive conduct by the company and several senior executives. Australian consumers decided to boycott the products of James Hardie, resulting in drastic loss of revenue and the company subsequently agreed to compensate adequately the unfortunate victims (BRW 2005). Australians are now demanding increasingly a ‘fair go’ from corporations in their dealings with employees, customers, occupational health and safety (OHS) matters, and communities. They are demanding more transparency and accountability. They want corporations to hear and value their concerns.

In the above discussion, it is clear that Australian business organisations are coming under continuing pressure from environmental, social, legal, and regulatory entities and lobbies to do the right thing and to do more in relation to the environment and social equity.

1.1.4 High Paced Competition—Market Reality in Australia

Continued deregulation of Australian trade and the economy in the past two decades has led to a number of structural changes in the business sector. Australian business organisations are facing increasing competition from imported products and services. Many industry sectors such as clothing and footwear are almost decimated. In response to competitive pressures, many businesses have either closed down their operations or moved their manufacturing operations offshore where they could tap into cheap and flexible labour. For example, in recent years, large Australian
corporations such as Telstra, ANZ Banking Group, and National Australia Bank have progressively moved many of their back-office, software development, and call center jobs to India (Murray 2005; rediff.com 2004; Vicziany 2001).

1.1.5 Sustainable Business Practices—Is it an Oxymoron?

Many Australian businesses have indicated that meeting financial, social, and environmental objectives is a contradictory and near impossible agenda to achieve. While Australian corporations increasingly pay lip service to the need to demonstrate greater environmental and social responsibility, die-hard perceptions that doing so is antagonistic to maximising profits, remain a stumbling block for a wider acceptance of corporate sustainability principles (Wallace 2002). Deplorable corporate performance in sustainable development may also be due to an entrenched general perception that business organisations exist only for economic reasons (Dunphy, Griffiths & Benn 2003).

Furthermore, in the past, management practitioners and academics had advised business managers to embark on organisational change to enable businesses to face intensive competition (Burnes 2004). However, the change management strategies of the past two decades have largely been put in place and yet the benefits seem to be only marginal. Cost reduction and competitive positioning in the 1980s, process improvement and re-engineering in the early 1990s, and enterprise resource planning, customer relationship management and web technologies of the late 1990s have all but run their course. Corporate leaders are yet to be convinced of organisational value generated from these corporate changes. They are not sure how value can be reaped by glamorous and numerous management prescriptions that are on offer (IBM Business Consulting Services 2005). In the same vein, Australian corporate managers are cautiously evaluating the organisational benefits of sustainable business practices. On the one hand, World Business Council for Sustainable Development (WBCSD) claims that the pursuit of sustainable development is not only good for the planet and
its people but it makes firms more competitive, more resilient to shocks, nimble in a fast-changing world, more unified in purpose, more likely to attract and hold customers and the best employees, and more at ease with regulators, banks, insurers, and financial markets (Wallace 2002). However, there appears to be a lack of empirical studies done in Australia to justify these claims. This may be the reason why Australian business managers are generally reluctant to embrace sustainability principles as central to the business process. For example, Wallace (2002) reports that only about 5 per cent of the Australian companies are prepared to put environmental issues before profits, and they are all in the resources sector. Australian business leaders are yet to be convinced that corporate sustainability is a reality and not utopia.

While CEOs and other top executives face a complex set of challenges in achieving revenue growth and profitability, it may be equally important for them to understand that there is a determined undercurrent in Australia, where people are demanding business organisations not to ignore their social and environmental responsibilities as demonstrated in the cases of HIH, One.Tel, Ansett, and James Hardie (Dunphy, Griffiths & Benn 2003).

1.2 Responding to the Challenge of Building Sustainable Businesses: Contextual Justification and Contribution of the Study

This study recognises the challenge faced by today’s business managers in Australia who are entrusted to build sustainable businesses that meet the economical, social, and ecological aspirations of the Australian communities. The aspirants include our people, future generations, customers, employees, governments in all three levels, shareholders, and business leaders themselves. As Dunphy, Griffiths and Benn (2003) contend, the challenge is to change organisational values, perspectives, culture, structure, and performance measures. Singular emphasis on measuring organisational success in terms of increasing shareholder wealth is no longer valid. Instead
businesses are required to perform well on their social and environmental goals while performing equally well on financial goals. There is an increasing need to integrate financial, social, and environmental values into their policy, planning, and decision making.

In addition to meeting the demands of stakeholders, business managers have to keep tab on day to day competitive realities. Today the Australian market has become extremely competitive in most of its sectors. In the domestic market, they have to compete not only against the domestic counterparts, but also against the global competitors. Australian businesses are resenting that it is not a level playing field. For instance, in the domestic market, they have to compete with manufacturers from the competing countries where labour is cheaper and flexible, government subsidies are higher, currency exchange rates are fixed, and tax breaks are favourable (Vicziany 2001). Similarly, in the service sector, the information revolution has enabled seamless global service delivery. In the new competitive reality, business executives must be open to all kinds of tactics and competition strategies to survive and possibly to prosper.

However, we must hasten to add that the business scenario is not all that gloomy and destructive. The same competitive structure, free market economy, mutual reduction of trade barriers, globalisation, access to international financial markets, foreign investment, and developments in information technology have opened exciting opportunities for Australian entrepreneurs and business leaders that were not there before. For example, China and India, our close trade partners are poised to become economic superpowers of the next decade. Their growing economies have created exponentially increasing demands for Australian commodities including metals, minerals, wool, meat and grains. Their markets offer unprecedented opportunities to export. Australia is not a stranger to them. For example, in 2005, China is Australia’s third largest trading partner with total goods and services trade reaching US$23 billion in 2004. This is an increase of 23.5% on the previous year. Similarly, bilateral
trade between India and Australia during the year 2004 reached a record A$6.54 billion. The value of total trade has seen a steep increase of nearly 52% since 2003. These figures clearly show that Australia’s trade relationships with India and China are expanding rapidly. Therefore, the future is up for grabs if Australian businesses play their cards correctly (Australian Embassy, Beijing 2005; Consulate General of India 2005; Vaile 2004).

As Australian businesses are at a crossroads, our executives are faced with a steep learning curve as to how to seize the new global opportunities, how to implement business practices in line with a sustainable agenda, how to win the new competition, and where and how to create organisational value. They are offered whole range of new management theories and paradigms. In the past decade, they have heard about and experimented with many of them such as competitive positioning, downsizing, outsourcing, knowledge management and organisational learning, reengineering, customer relationship management, web technologies, triple bottom line reporting, mergers and acquisitions, expansion into other countries, intellectual property, innovation and so on. These organisational change practices and new technologies promised to deliver organisational growth, renewal, and profitability. While every practice, process, theory, paradigm, and framework had some value in its own right, but success and benefits were not guaranteed. The literature abounds with examples of organisational change projects that have gone wrong, some disastrously so (Burnes 2004). Beer and Nohria (2000) claim that nearly two-thirds of change efforts do fail. Before investing dollars and resources in these management strategies and processes, business executives would like to have some tools that can forecast whether their new investment will return value at the desired levels and in the desired areas. Australian corporate history is strewn with strategies that have backfired. For example, the National Australia Bank (NAB)’s ambitious banking acquisitions in Britain and Ireland resulted in enormous financial strain on NAB balance sheet (Ferguson 2004). Needless to say, executives are more or less in a quandary about how much to invest in an organisational change process. What has worked in the US or Japan will not
necessarily work in Australia for the simple reason that our culture, demography, workplace, and competitive realities are different from theirs. By the same logic, what makes for a sustainable business elsewhere, may not work successfully in Australia.

This study aims to develop guidelines that are useful to Australian executives and managers in assessing and evaluating business practices that foster sustainable development. The practical criteria formulated in this study can help Australian business leaders build sustainable corporations that are not only financially viable, but are also socially and environmentally successful. The set of guidelines proposed in this study is designed to create comprehensive competitive advantage. This freshly minted notion of competitive advantage, viewed in the light of corporate sustainability principles, is believed to put the business ahead of its competitors in terms of financial, social, and ecological outcomes. It can allow business leaders to think and evaluate social and environmental opportunities as sources of creating organisational value. This study aims to provide a set of guidelines that enable business managers to implement sustainable business practices effectively based on the insights into the dominant theories in strategic management, which are gained from its findings.

In the forthcoming sections, an aerial view of the specific objectives and related research problems is presented. The synopses of the objectives are provided whenever they increase the understanding of the objectives. Indeed, these specific objectives and associated research problems have emerged from the literature review, gaps in the current research, and aspirations of the researcher discussed at length in Chapter 2 on Literature Review. The specific objectives and associated research problems are presented and discussed in detail in Chapter 3 on Research Design, Methodology, and Instrumentation. However, the outline view of them is presented here with a desire to provide a panoramic view of this study.
1.3 Understanding the Variables Used in the Study

Before presenting the outline of research objectives and associated research problems in each objective, the latent variables used in this study as research constructs are outlined below. The main focus of the study was to explore how to build sustainable business organisations by applying the dominant organisational strategies, and how to use sustainable business practices to gain competitive advantage.

The two latent variables representing the specific strategic organisational practices were:

i) Barriers to Entry,
ii) Strategic Resources and Capabilities.

Sustainable business organisations not only value financial performance outcomes, but also outcomes from their social and environmental performances. This corporate sustainability principle was incorporated in this study in the following three latent variables. They were:

i) Corporate Financial Performance Outcome (CFPO),
ii) Corporate Social Performance Outcome (CSPO), and
iii) Corporate Environmental Performance Outcome (CEPO).

1.4 Specific Objectives and Research Problems

As mentioned earlier, a bird’s view of the specific objectives and the related research problems in each of the objectives is given in this subsection.
1.4.1 Specific Objective 1:

To examine the nature of the research variables used in the study, i.e. Barriers to Entry, Strategic Resources and Capabilities, CFPO, CSPO, and CEPO in Australian business organisations.

In order to meet the above objective, the following problems relating to the objective were put together and their solutions were explored.

i) Research Problem 1:
   What are the comparative heights of barriers to entry, which may act as deterrence to potential entrants into an industry, across Australian business sectors and business sizes?

ii) Research Problem 2:
    What are the comparative amounts of strategic resources and capabilities, which are internal to a business organisation, across Australian business sectors and business sizes?

iii) Research Problem 3:
     What are the comparative levels of corporate financial performance outcome (CFPO) across Australian business sectors and business sizes?

iv) Research Problem 4:
    What are the comparative levels of corporate social performance outcome (CSPO) across Australian business sectors and business sizes?
v) Research Problem 5:
What are the comparative levels of corporate environmental performance outcome (CEPO) across Australian business sectors and business sizes?

1.4.2 Specific Objective 2:

*To examine the relationships between industry level Barriers to Entry and each of the three dimensions of sustainable performance outcomes in Australian business organisations.*

The study endeavours to solve the above research objective by initiating the following three associated research problems. Before stating the research problems, a brief introduction to the context of the examination of the objective is presented.

Barriers to entry theory provides an insight into how various elements of industry structure can impose disadvantages on new entrants relative to incumbents (Karakaya & Stahl 1989). Rooted in Bain’s theory of entry (Bain 1956), the concept is further elucidated by Porter (1980) as a strategic measure that can be deployed by a business organisation in order to defend itself against the threat of new entrants and to establish a favourable competitive position in an industry. The historical theory of barriers to entry has lost neither its practical value nor its specific potency in solving various organisational problems (see, for example, Chang & Tang 2001; Han, Kim & Kim 2001; Robinson & McDougall 2001).

The theoretical linkage between industry-level barriers to entry and sustainable competitive advantage is clearly established (Bain 1956; Porter 1980). In particular, influenced by theories of economics, it is argued that the existence and additional deployment of entry barriers in an industry, may subdue the entry of new
competitors. As a result, during this suppressed period, the incumbents in the industry may appropriate monopoly rent, characterised by above-normal rates of financial returns (Mahoney & Pandian 1992; Robinson & McDougall 2001).

The notion of sustainable development integrates social equity, environmental sustenance and economic prosperity in all human endeavours. The articulation of sustainable development principles in the context of business organisation has resulted in a large interest in the development of multi-perspective frameworks to measure the performance of business organisations (Dunphy, Griffiths & Benn 2003). As a consequence, the singular measurement of organisational performance in terms of financial indicators, for example, Return on Investment (ROI) and share price, has given way to multiple perspectives of measuring and reporting corporate performance (Willard 2002). Corporate sustainability discourse supports a view that business performance must reflect the three pillars of corporate sustainability, which are economic prosperity, environmental stewardship, and social responsibility (Dunphy, Griffiths & Benn 2003). Consistent with these changes in the corporate ideology, the study measures corporate sustainable performance by means of three variables stated earlier namely Corporate Financial Performance Outcome (CFPO), Corporate Social Performance Outcome (CSPO), and Corporate Environmental Performance Outcome (CEPO).

In recognition of the continued usefulness of Barriers to Entry theory and the current shift in evaluating the corporate performance from multiple perspectives, this study examined the relationships between barriers to entry and the three dimensions of corporate sustainable performance outcomes, i.e. CFPO, CSPO, and CEPO. Before formulating this specific objective, the following perplexing questions arose to the researcher: Do barriers to entry only impact financial performance outcome? Do they also impact social performance outcome? Do they impact environmental performance outcome? Looking from another vantage, more questions came to the mind of the researcher such as: Can we create effective barriers to entry by pursuing corporate
social responsibilities? Does business philanthropy create barriers to new competition? Can we build barriers to entry by raising the benchmark for environmental protection in the industry? Does our investment in environment-friendly products create new entry barriers?

The study attempts to find answers to the above specific objective as well as most of the related questions by formulating and solving the following research problems.

i) Research Problem 6:
What is the nature of the relationship between Barriers to Entry and Corporate Financial Performance Outcome (CFPO) in Australian business organisations?

ii) Research Problem 7:
What is the nature of the relationship between Barriers to Entry and Corporate Social Performance Outcome (CSPO) in Australian business organisations?

iii) Research Problem 8:
What is the nature of the relationship between Barriers to Entry and Corporate Environmental Performance Outcome (CEPO) in Australian business organisations?

1.4.3 Specific Objective 3:

To examine the relationships between Strategic Resources and Capabilities and each of the three dimensions of organisational performance outcomes of Australian business organisations.

Organisational resources and capabilities are described as heterogeneously distributed and non-elastic in supply across firms. For example, resources and capabilities such as leadership, vision and values of the leader, organisational culture, reward structure,
and organisational flexibility are heterogeneously distributed across business organisations within an industry, as they are mostly path dependent, causally ambiguous, and socially complex. An organisation cannot source a deficient resource or capability in the factor market at short notice, reflecting their non-elastic supply. These arguments are the building blocks of the resource-based view (RBV) of the business organisation (Grant 1991; Penrose 1959; Richardson & Teece 1997; Teece 1984). Streamlining several RBV themes, Barney (1991) contends that when a business organisation owns rare, valuable, imperfectly imitable, and non-substitutable resources and capabilities, it may appropriate Ricardian rents and quasi rents (Mahoney & Pandian 1992). Thus, RBV theory upholds the view that specific organisational resources and capabilities can be of strategic importance and may become the foundation for a firm’s long-term strategy.

However, only measuring the rent generated through the deployment of strategic resources and capabilities by financial indicators appears to be a narrow approach. This study believes that strategic resources and capabilities, which are created, enhanced, and deployed in a competitive context, may generate several other valuable outcomes, in addition to generating above-average financial returns. Indeed, the link between strategic resources and capabilities and organisational performance outcomes is complex and multi-dimensional.

The corporate sustainability movement is a subset of a global aspiration for sustainable development. Sustainable development integrates the guiding principles for development that meets the needs of the present without compromising the ability of future generations to meet their own needs. As they are the prime movers of economic prosperity in communities and nations, business organisations are under increasing external pressure to shoulder more responsibility to contribute to a sustainable world through their business activities. While they must pursue the business objective of providing an excellent return to their shareholders or owners, business organisations are being asked by communities and governments to take
proactive roles in promoting ecological sustainability. This requires that their business activities make the smallest possible imprint on the environment. They must contribute to the emergence of a fair and equitable society, and foster human fulfilment within and beyond their organisational boundaries (Dunphy, Griffiths & Benn 2003). Consistent with this view, the study proposes to measure outcomes from sustainable business practices, as outlined earlier, in terms of the three comprehensive variables: CFPO, CSPO, and CEPO.

The above objective highlights a desire to understand the relationships between strategic resources and capabilities and corporate sustainable development. In order to fulfil the objective, the following three research problems were proposed. This study made an effort to empirically find the answers to them.

i) Research Problem 9:
What is the nature of the relationship between Strategic Resources and Capabilities in Australian business organisations and Corporate Financial Performance Outcome (CFPO)?

ii) Research Problem 10:
What is the nature of the relationship between Strategic Resources and Capabilities in Australian business organisations and Corporate Social Performance Outcome (CSPO)?

iii) Research Problem 11:
What is the nature of the relationship between Strategic Resources and Capabilities in Australian business organisations and Corporate Environmental Performance Outcome (CEPO)?

1.4.4 Specific Objective 4:

To examine the relationships between the three dimensions of corporate sustainable performance outcomes, i.e. Corporate Financial Performance Outcome (CFPO),
Corporate Social Performance Outcome (CSPO), and Corporate Environmental Performance Outcome (CEPO) in Australian business organisations.

This study attempts to meet the above research objective by seeking answers to the three associated research problems listed below. Before outlining the problems, it may be useful to briefly present the rationale for measuring and communicating the corporate performance outcomes in terms of these three dimensions.

Corporate sustainability theory proposes that business organisations can improve social and human welfare, and reduce their ecological footprint, while ensuring the achievement of the traditional organisational objective of wealth maximisation of their shareholders or owners. The principles of corporate sustainability are shaped by institutional forces exerted by various entities including social, political, environmental, religious, and community organisations (Shrivastava 1995a). A growing interest in multiple perspectives in organisational theory is also influencing the aspirations of corporate sustainability (Dunphy, Griffiths & Benn 2003). Efforts to embed principles of corporate sustainability are shown by measuring and communicating the organisational performance in multiple dimensions. Triple bottom line is one of the methods of such measurement and disclosure (Willard 2002).

Whether corporations should contribute to sustainable development is a long debated issue. Why should corporations alone take up a higher responsibility for protection of the environment? — is another controversial issue. Both issues are discussed in some length in Chapter 2. Furthermore, in Chapter 2, this study argues that imposing moral and ethical pressures on business executives and managers to engage in environmental and social activities may be less acceptable in the current competitive environment. This study argues that, on the other hand, corporate sustainability principles may have ready acceptance, if it can be demonstrated that social and environmental business practices can create competitive advantage. The answers found to this research objective are crucial to understand whether or not investments
made in social and environmental related business processes can produce any organisational value.

This study makes an effort to achieve the above objective by raising the following three research problems and finding answers to them.

i) Research Problem 12:
What is the nature of the relationship between CSPO and CFPO in Australian business organisations?

ii) Research Problem 13:
What is the nature of the relationship between CEPO and CFPO in Australian business organisations?

iii) Research Problem 14:
What is the nature of the relationship between CSPO and CEPO in Australian business organisations?
1.5 Proposed Conceptual Framework of the Research Objectives

Figure 1.1 illustrates the tentative conceptual framework of the research objectives. It shows the various relationships between research variables examined in this study.

**Figure 1.1 Proposed Conceptual Framework of the Research Objectives**
1.6 Delimitation

The following delimitation apply to the study:

i) The item statements in the two scales used in the survey questionnaire, i.e. Competition Strategies Scale (CSS) and Corporate Sustainable Performance Outcomes Scale (CSPOS) were developed from the practical insights found in the extant literature including journal and conference papers, books, reports, and so on. The scales were not taken from previously used survey scales because the researcher found them either to not meet the research context or to be too impractically complex.

ii) The empirical examinations are delimited to latent variables such as Barriers to Entry, Strategic Resources and Capabilities, Corporate Environmental Performance Outcome (CEPO), Corporate Social Performance Outcome (CSPO), and Corporate Financial Performance Outcome (CFPO).

1.7 Assumptions

The following assumptions are made in relation to this study:

i) The Chief Executive Officers, Managing Directors, and senior managers who responded to the survey questionnaire are able to comprehend each item in the instrument in the manner intended by the researcher,

ii) The responses supplied in the survey questionnaire are made in a sincere and factual manner, and
iii) The latent variables (research constructs) obtained from the measurement scales, which were primarily based on the extant literature, such as Barriers to Entry, Strategic Resources and Capabilities, Corporate Environmental Performance Outcome (CEPO), Corporate Social Performance Outcome (CSPO), and Corporate Financial Performance Outcome (CFPO) are quantifiable and measurable.

1.8 Limitations

The delimitation and assumptions outlined above have resulted in certain limitations to the study. The following limitations apply:

i) The sample of small, medium, and large Australian business organisations is obtained from a sample frame provided by the electronic database named Kompass.com, which was available from the library of the Swinburne University of Technology (Kompass 2004). This commercial database cannot be considered as containing the exhaustive list of Australian businesses of all the sizes and from different sectors. Therefore, any generalisations that are made in the study are limited to the population of Australian businesses provided in the electronic database.

ii) The study is limited by the time and resource constraints involved in completing the doctoral study.

iii) In the survey conducted in this study, a total of 102 completed questionnaires were collected back out of 600 that were distributed. Thus, the response rate was 17 percent. According to Hart (1987), response rates in industrial or business surveys vary from 17 percent to 60 percent, with an average of 36 percent. The response rate of 17
percent obtained in the study’s survey was found to be within the acceptable range of response rates for business surveys. In this context, it may be noted that a larger sample size lowers the likely error in generalising the results from the sample to the population (Saunders, Lewis & Thornhill 2000).

iv) The findings in the study are limited by the extent to which the respondents were honest, careful, and without bias in responding to the survey instrument.

1.9 Summary

This chapter provided an overview of the challenges faced by Australian business managers in building sustainable business organisations. It presented the context and background for conducting this study. It explained why Australian business organisations must pursue sustainable business practices by emphasising the alarming levels of environmental degradation in Australia and by showing some incidents of fraud, mismanagement, and unethical behaviour in Australian corporate sector. It also brought to the fore the intense competition faced by Australian business organisations in the domestic markets on account of globalisation, market deregulation, and free trade practices. After explaining the importance of incorporating sustainable development principles in the management of business organisations, this chapter identified that the main focus of this study is to examine whether or not sustainable business practices in a business organisation can enhance competitive advantage. It identified that in the context of the enormous challenges faced by Australian business managers in pursuing sustainable business practices, the above focus of this study is justified and worthwhile. The chapter underscored that by examining the organisational value of sustainable business practices, this study has potential to contribute to Australian corporate sustainability research. It also emphasised the usefulness of developing tools and guidelines that can forecast the effectiveness of
sustainable business activities in creating organisational value and enhancing business competitiveness in the context of inadequacy and failure of several organisational change practices that were tried in the past by Australian business managers. This chapter made an attempt to further strengthen the understanding of the context and background of this study by providing an aerial view of the specific research objectives and related research problems addressed in this study. It was followed by an illustration of the proposed conceptual framework of the research objectives. Lastly, it gave the study’s delimitation, assumptions, and limitations. The remainder of this thesis contains the following:

Chapter 2 Literature review.
Chapter 3 Research design, methodology, and instrumentation.
Chapter 4 Analysis of the competition strategies and sustainable performance outcomes in Australian business organisations.
Chapter 5 Analysis of impact of business sector and business size on competition strategies and corporate sustainable performance outcomes in Australia.
Chapter 6 Relationships between competition strategies and corporate sustainable performance outcomes.
Chapter 7 Appraisal of the results, conclusions, and recommendations.
CHAPTER 2

Literature Review

This chapter is organised into four sections. In Section One, a brief review of the literature related to strategic management and competitive advantage is presented. In Section Two, the literature concerning sustainable development and corporate sustainability is reviewed. In Section Three, many related theories, debates, views, and findings concerning business organisation, ecology, and sustainability are critically analysed. The literature review in Section Four relates to the intersection of business, society, and sustainability. The chapter concludes with a summary.
Section One

Business Strategy and Competitive Advantage

2.1 Overview of Business Strategy Research

Glueck (1984) defines business strategy as a unified, comprehensive, and integrated plan designed to ensure that the basic objectives of an enterprise are achieved. However, business organisations can embrace a variety of objectives, which are usually stated in their vision and mission statements. Due to the broad spectrum of stated objectives, the task of theorising on strategy has become highly complex. Since the objectives must be achieved in an ever-changing competitive environment, the complexity of strategic management theory and practice has further increased. Furthermore, the nature of the business organisation may also add to the complexity (Simon 1964). For example, a business organisation may have several goals that are likely to be conflicting as well as competing. These multiple goals existing in a complex hierarchy may complicate the strategic planning process.

The reach and scope of business strategy as a discipline has expanded beyond the task of planning. Mintzberg (1998) views strategy as not only a plan, but also as a ploy, pattern, position, and perspective. According to Mintzberg (1998), a strategy becomes a ploy when used as a “manoeuvre” intended to outwit competitors. A strategy appears as a pattern when it is viewed as a stream of actions. It is considered as a position when efforts are directed to locate a business in a competitive environment. It is described as a perspective as it is an ingrained way of perceiving the world (Mintzberg 1998).
While it is true that the landscape of theories in corporate strategy is ever expanding, McKiernan (1997) classifies the large collection of the theories into four main schools—Planning and Practice, Learning, Positioning, and Resource-Based. This classification of the extant theories seems to be consistent with the classification suggested by Campbell, Stonehouse and Houston (1999). McKiernan (1997) states that the scholars and practitioners in the planning and practice school view strategy as a process of engaging in large and long-term decisions. The learning school views strategy as both emergent and planned process taking place in response to unpredictable and complex external environment. Furthermore, the proponents of the learning school argue that strategy processes are underpinned by organisational culture, politics, and context. When describing the positioning school, McKiernan identifies Michael Porter as the pioneer of the school, who analysed the industry structure in terms of the five competitive forces to determine the extent of competition and profit potential within the industry (Porter 1980). Lastly, McKiernan notes that the theories in the resource-based school recognise that the resources and capabilities are firm specific and heterogeneous across the firms in an industry and have the potential to become sources of competitive advantage.

Indeed, the discipline of business strategy has organically grown with impressive theories under its canopy. However, it may be noted that in the past, the main focus of business strategy literature was to explain why certain business organisations showed superior economic performance measured by financial indicators such as return on investment (ROI) and stock price (Campbell, Stonehouse & Houston 1999). However, measuring business performance on the basis of financial results, ignoring outcomes of social and environmental performance, has been highly disputed (Roome 1998). Influenced by this shift in organisational values, a trend in strategy literature is to extend and apply the past theories to a new paradigm, which is about integrating financial, social, and environmental values into business practices. Strategy scholars have proposed how their theories, models, and frameworks, which were originally proposed to achieve superior financial performance, could also be relevant to the new

Such multiple perspectives in organisational theory are justifiable because organisations are indeed complex and are likely to have conflicting and often competing goals (Hatch 1997). However, Cravens et al. (1997) claim that several of the growing numbers of strategic guidelines have become less relevant to business organisations, which now face global and high paced competition. Cravens et al. blame a lack of empirical studies supporting the proposals for new contexts for the apparent irrelevance of the many guidelines to practice. In an original context, the efficacy of a theory might have been proved. Yet it may be necessary to empirically reexamine the applicability or effectiveness of the theory in a changed competitive reality or a different value expectation. This argument demonstrates the importance of empirical research to developing theory in strategic management. Consistent with this view, this study makes an effort to empirically examine how to achieve superior outcomes from corporate financial, social, and environmental performance by applying two traditional theories in strategy literature. In other words, this empirical study explores how to build sustainable business organisations.

2.2 Sustainable Corporations and Strategic Management Theories

The notion of competitive advantage is at the heart of strategic management research, which enables a firm to attain superior performance over an extended period of time (Campbell, Stonehouse & Houston 1999). The study considers the following two strategic management theories, which have mainly addressed the fundamental question of how firms can achieve and possibly sustain competitive advantage. The application and practice of the two theories is empirically examined in the light of how they are related to the sustainable performance outcomes and how they can
influence the success of sustainable business practices. The two theories considered are:

i) The theory of barriers to entry (Bain 1956; Chang & Tang 2001; Han, Kim & Kim 2001; Karakaya & Stahl 1989; Porter 1980; Robinson & McDougall 2001), and


It may be noted that the above theories were applied to a limited extent in studies on sustainable development in corporations. For example, Dean and Brown (1995) have empirically shown that environmental regulations inhibit a new firm’s entry in a variety of the U.S. manufacturing industries. On the other hand, Argon-Correa and Sharma (2003) and Hart (1995) have applied Resource-Based theory to analyse corporate environmental strategy. This study attempts to empirically examine how the above two strategic theories influence the sustainable business performance in Australian business organisations. The sustainable business performance is evaluated in terms of the financial, social, and environmental outcomes. Understanding how to achieve corporate sustainability is critical in the light of increasing pressures experienced by Australian business organisations as well as business organisations in other developed countries from their informed customers, governments, regulators, employees, community representatives, environmental lobby groups, and competitors. The stakeholders are demanding business organisations to protect the environment from their business activities, shoulder corporate social responsibilities, and demonstrate corporate citizenship. While meeting these expectations, the Australian businesses must also face global competition as a result of reducing trade barriers in Australia. In this context, the study aims to suggest a set of useful guidelines to managers and practitioners to develop sustainable business practices and to achieve overall competitive advantage.
2.3 Barriers to Entry and Competitive Advantage

In economics literature, entry refers to a firm’s establishing operations in an industry or a market in which the firm was not previously present (Dean & Brown 1995; Scherer & Ross 1990). A new firm entry refers to the establishment of operations in an industry by a firm that did not exist prior to its entrance into that industry (Willard & Savara 1988). Many firms enter new or familiar markets in an attempt to grow by introducing new or modified products or services, whereas some enter with products or services that are identical to the ones already in the market. In either case the firms face entry barriers and great financial risk (Karakaya & Stahl 1989). Shepherd (1979) states that the barriers to entry decrease the likelihood, scope, or speed with which potential competitors can come into the industry.

The study of barriers to entry was pioneered by Bain (1956). According to Bain,

i) economies of scale,
ii) product differentiation, and
iii) absolute cost advantages

serve as barriers to new competition. Over the decades, the body of literature on barriers to entry became large, from which Karakaya and Stahl (1989) have identified nineteen different entry barriers such as

i) Cost advantage of incumbents,
ii) Product differentiation of incumbents,
iii) Capital requirements,
iv) Customer switching costs,
v) Access to distribution channels,
vi) Government policy,
Bain (1956) was in the forefront to recognise that entry barriers in the form of a variety of industry structural conditions may provide advantages to established sellers in an industry over potential entrants. An entry barrier is also conceptualised as a cost, which must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry (Stigler 1968). Though not entirely consistent in their results, empirical studies have generally verified the prohibitive impact of a number of entry barriers (e.g. Acs & Audretsch 1989; Chang & Tang 2001; Dean & Brown 1995; Harrigan 1981; Shapiro & Khemani 1987). Based on the extensive economics theory on barriers to entry, Mann (1966), Shepherd (1979) and Yip (1982) argue that barriers to entry may result in fewer entries into the industry and reduced competition culminating in above-average profits by incumbent firms. These arguments are consistent with the views of Bain (1956), Pepperell and Turner (1981), and Yao (1988) that the competitive advantage generated by barriers to entry is characterised by monopoly rents (Mahoney & Pandian 1992). Yao (1988) also provides a different insight into this by arguing that barriers to entry may result in failure of the competitive market, which then becomes the necessary condition for supra normal
profitability. Yao argues that barriers to entry are in fact the impediments to efficient economic activity.

Incumbent firms reaping advantages from entry barriers need to be aware that the entry barriers may also compromise their competitiveness by discouraging their commitments to innovation. Incumbents may view barriers as a safeguard against entry and a prolonged over-reliance on these structures may impair their ability to innovate (Han, Kim & Kim 2001). Furthermore, since entry barriers are not interchangeable proxies for one another in relation to their effectiveness as deterrents to future new competitors, the notion of barriers to entry is considered as being complex (Robinson & McDougall 2001). Pepperell and Turner (1981) explain the impact of antitrust laws on entry barriers by easing the entry of new competitors against the endogenous economic phenomena.

Porter (1980), in his influential book on competitive strategies lists six major sources of barriers to entry. They are:

i) Economies of scale,
ii) Product differentiation,
iii) Capital requirements,
iv) Switching costs,
v) Access to distribution channels, and
vi) Government policy.

In his theory of competitive forces, Porter explains that threat of entry into an industry, which is closely influenced by the barriers to entry, is one of the five competitive forces that jointly determine the intensity of industry competition, profitability, and strategy formulation. Furthermore, he states that firms use three major entry strategies. They are:
i) entry through internal development that involves the creation of new business entity in an industry, including new production capacity, distribution relationships, sales force, and so on,

ii) entry through acquisition, and

iii) sequenced entry, which entails initial entry into one group and subsequent mobility from group to group (Porter 1980).

In the section that follows, Resource-Based View (RBV) theory is discussed in relation to competitive advantage.

2.4 The Resource-Based View (RBV) of the Firm and Competitive Advantage

The RBV of the firm has its roots in the works of Penrose (1959), Richardson and Teece (1972), and Teece (1984). The theory offers an explanation for the inter-firm differences in both realised performance and current opportunities, with a view to provide unique and path dependent development of organisational resources and capabilities (Barney 1986; Wernerfelt 1984). Grant (1991) and Lockett and Thompson (2001) argue that resurgence of interest in RBV reflects dissatisfaction of many strategy scholars and practitioners with the static, equilibrium framework of industrial organisation (IO) economics. Differing from earlier theories, RBV explains performance differentials in terms of resources and capabilities that are internal to the firm rather than being dependent upon the product-market structure.

According to Barney (1986) and Grant (1991), historically determined collection of resources and capabilities of a firm are the foundations for the firm’s long-term strategy. Their argument rests upon the following two premises. First, internal resources and capabilities may be heterogeneously distributed across firms. Second,
several of the resources and capabilities are non-elastic in supply due to the reasons such as:

i) they can only be developed over a long period of time, i.e. they are path dependent,

ii) it may not be clear how to develop these capabilities in short to medium term, i.e. they are causally ambiguous, and

iii) they cannot be easily bought or sold, i.e. they are socially complex.

It may be noted that RBV theorists reverse the assumption of supply elasticity grounded in the earlier neo-classical microeconomics (Barney 1991).

Distilling the above premises, Barney (1991) argues that sustainable competitive advantage derives from the resources and capabilities a firm controls that are valuable, rare, imperfectly imitable, and not substitutable. Furthermore, these resources and capabilities can be viewed as tangible and intangible bundles such as administrative framework, the reporting system, explicit and implicit planning methods, mechanisms for control and coordination, reputation, informal relations among groups, alliances between business units and entities outside it. It also includes values, vision, communication, employee empowerment, teamwork, and relationships with stakeholder groups.

According to Barney, Wright and Ketchen (2001), RBV is perhaps the most influential theory in strategy. The reason being that it not only explains the source of competitive advantage and the mechanism through which it may be sustainable, but also relates to conventional theoretical paradigms such as Structure, Conduct, Performance (SCP), which largely focus on industry determinant of firm’s performance (Bain 1956). Other theoretical frameworks such as neo-classical microeconomics (Porter 1980), evolutionary economics (Nelson & Winter 1982), and
dynamic theory (Grant 1991; Teece, Pisano & Shuen 1997) are also explained by the resource-based view.

2.4.1 Criticism of RBV Theory

Although, RBV theory has remained as the most influential framework in the field of strategic management, nevertheless the perspective has not gone unchallenged. For example, Mahoney and Pandian (1992) criticise RBV theory for its disengagement from equilibrium analysis. However, Barney (2001a) counters this objection by stating that RBV theory is established by reversing several main assumptions in neo-classical microeconomics. One among them is debunking the equilibrium analysis, which is a theoretical tool from the neo-classical microeconomics theories.

Priem and Butler (2001) argue that the RBV is fundamentally tautological in nature. According to them, since RBV theory claims that the strategic resources and capabilities must be rare and valuable, they obviously are not amenable to empirical testing. In other words, they ask how can one measure and compare a variable that is rare, valuable, and is not widely found in the given population. However, Barney (2001a) responds to this criticism by arguing that, if the logic followed by Priem and Butler (2001) is correct, then all strategic management theories, including the Porter’s theory can be shown as tautologies. Furthermore, there is no merit in the argument that rare and valuable organisational resources are difficult to capture and evaluate. In contrast, Lockett and Thompson (2001) suggest that it is possible to measure them by qualitative and quantitative research methods.

D’Aveni (1995) criticises that the traditional RBV fails to suggest strategies for business organisations facing high-velocity markets. However, Eisenhardt and Martin (2000) have proposed the dynamic capability framework in order to compete and win in such highly competitive markets. The framework is mostly based on RBV theory.
Therefore, it is incorrect to suggest that RBV has failed to provide any strategic guidelines for firms to compete in fast paced market conditions.
Section Two

Sustainable Development and Business Organisation

2.5 The Sustainable Development Agendas

The core idea of sustainable development was defined most influentially and enduringly by the World Commission on Environment and Development (WCED), also known as the Brundtland Commission (Brundtland 1990; Gladwin, Kennelly & Krause 1995). It defined sustainable development as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Schaltegger, Burritt and Petersen (2003) contend that sustainable development is a normative ideal. In the normative approach, sustainable development is considered as an objective. However, the authors provide no specific scientific reason for why sustainability should be an objective. In fact, they claim that neither ecology nor economics provide the rationale for sustainable development. Viewing sustainable development from normative perspective opens the concept of sustainable development to a wide spectrum of interpretations and becomes subject to the motives of different actors who themselves have different and sometimes conflicting goals. Indeed, various scholars have conceived sustainable development in different terms such as vision expression (Lee 2001), value change (Clark 2003), moral development (Rolston III 1988, 1995), transformational process (Viederman 1997), and ethical expression (Alroe & Kristensen 2003).
Most recent conceptions of sustainable development recognise that it must merge three important areas—environment, society/people, and economics—into an integrated perspective (Bansal 2002; Schaltegger, Burritt & Petersen 2003). Drawing from this conception, Roome (1998) claims that sustainable development provides the framework to integrate the environmental, social, and economic dimensions of human activity at every level and scale that extends from local to global boundaries.

Taking a post-modernist view, Carley and Christie (2000) argue that sustainable development is a social and institutional process, which requires innovative institutions and inter-organisational relationships in economic, social, and environmental domains. In this sense, sustainable development is a negotiated, multi-actor social process, guided by the principles of inclusiveness, precaution, and justice. The notion of sustainable development as a multi-actor social process has apparently generated several theoretical debates. Areas of dispute are mainly concerned with adherence to weak or strong sustainability (see Hediger 1999), and importance of intergenerational or intragenerational equity (see Attfield 1998).

Since business organisations are prime movers of the economy, the need for sustainable development has created challenges for business managers (Venkatesan & Giridhar 1998). In the next section, sustainable development is discussed in relation to business organisations.

### 2.6 Corporate Sustainability

Embedding sustainable development agendas into organisational framework results in a new and evolving management paradigm known as corporate sustainability (Schaltegger, Burritt & Petersen 2003). It is an alternative to the traditional shareholder wealth maximisation model (Sharplin 2003). Corporate sustainability recognises that business growth and profitability are important, however it also
recognises that a corporation must emphasise and pursue sustainable development. Business organisations should be responsible for environmental protection, social justice and equity, and economic development (Wilson 2003).

Starik and Rands (1995) argue that striving for corporate sustainability must begin with substantial organisational change, much of which is antithetical to short-term economic self-interest. Furthermore, it is not only about how the corporation can contribute to global sustainable development, but also about how it can engage in incremental and transformational changes to create sustainable competitive advantage (Dunphy, Griffiths & Benn 2003).

Willard (2002) argues that a corporation can gain a number of benefits by engaging in sustainability strategies. On the other hand, Bansal (2002) claims that potential benefits perceived by business organisations are few. A review of the empirical research in corporate sustainability by Salzmann, Ionescu-Somers and Steger (2005) concludes that sustainable business practices result in positive, neutral, and negative outcomes in environmental, social, and financial areas. Therefore, at the outset it may appear that corporate sustainability strategies must be carefully honed to the specific circumstances of individual companies. It may also appear that organisational value created by them is enigmatic. In order to gain a better understanding in this area, this study attempts to identify which strategic approach may result in above-average outcome from sustainable business practices.

Triple Bottom Line (TBL) is a concept allied to corporate sustainability, which is used as a framework for voluntarily measuring and reporting of corporate performance against economic, social, and environmental parameters (Elkington 1998). Global Reporting Initiative (GRI) has published TBL reporting guidelines (Sustainability Reporting Guidelines 2002).
Roome (1998) is critical of the meager contribution made by business organisations to sustainable development. Bansal (2002) also laments that sustainable development has not been fully institutionalised in the regulations, norms, and mindsets of people, as well as in the systems, structures, and practices of organisations. Deplorable corporate performance in sustainable development may be due to an entrenched general perception that business organisations exist only for economic reasons. Furthermore, Sharplin (2003) states that although corporations have sufficient ethical and moral grounds to embrace sustainable development principles, it is not widely practiced. Therefore, the apparent gap between ethical subscription and actual implementation leads to the conclusion that moral and ethical reasons may not have sufficiently persuaded corporations to embrace sustainable development agendas. However, Sharma and Ruud (2003) suggest that instrumental implications of corporate sustainable development could become an effective driving force. In other words, instead of looking for ethical and moral grounds, a meaningful approach could be to demonstrate with examples how sustainable business practices can create organisational value, how they can provide competitive advantage, how they can impact the bottom line, and how they can enhance the competitiveness. This argument is also supported by Bansal (2002) in her argument that business organisations may subscribe to sustainable development principles only when sustainable development is valued and accepted as the norm by organisational stakeholders.

It seems there are limited empirical studies demonstrating a link between corporate sustainable practices and competitive advantage. This study is an effort to explore the nature of the relationship between contemporary strategy practices in Australian business organisations and their sustainable outcomes in financial, social and ecological areas.
Section Three

Business Organisation, Ecology, and Sustainability

2.7 Sustainable Development and Ecology

Sustainable environmental (ecological) development is an important dimension in the field of integrated perspective of sustainable development (Schaltegger, Burritt & Petersen 2003). Jennings and Zandbergen (1995) state that ecological sustainability is achieved when resource extraction from an ecological system remains within the carrying capacity (or sustainable yield) of the resource base, and when waste transfer to the physical component of the ecological system does not exceed the assimilation capacity of the particular eco-system. However, environmental belief and action are dependent upon how we construct our understanding of the state of the nature and our relationship with the environment (Starkey & Crane 2003). But the prevailing perspective within industrial countries is an anthropocentric view rooted in the enlightenment values based on unlimited human progress and “exuberant growth” through exploitation of nature (Buchholz 2004; Gladwin, Kennelly & Krause 1995; Purser, Park & Montuori 1995).

2.8 Ecological Sustainability and Business Organisations

Buchholz (2004) claims that most corporations operate within a system of assumptions, values, and beliefs that gives large importance to profitability and economic growth and, therefore, marginalise the ecology. Business organizations are blamed for destroying our nature and accused of engendering environmental degradation (e.g. Bansal 2002; Starkey & Crane 2003).
But Shrivastava (1995a) claims that pressure from communities and environmental interest groups is building unilaterally on corporations to ‘clean up their act’, and to do more for the environment. However, Stead and Stead (1994) argue that the ecological arena is a contested terrain—a site of competing cultural and social definitions and interests, each with its own narration of science and progress. This view suggests that blaming business organisations entirely for ecological problems may be a tall order. It is not true that business world has totally neglected its environmental responsibilities. In fact, business organisations in general have been careful about environmental impact of their activities (Banerjee 2002). But, implementing their ecological obligations and responsibilities may have become a highly complex task since the field of ecological sustainability is entrenched with numerous conflicting and often competing agendas for business managers and executives. This study is an effort to reduce such complexity and frustration. It aims to develop a set of easy to implement prescriptive strategic guidelines that may enhance the effectiveness of environmental protection measures.

2.9 Morally and Ethically Driven Corporate Environmental Responsibility

A group of scholars argue that ethical and moral grounds provide adequate rationale for business managers to take responsibility for the environment (Bansal 2002; Buchholz 2004; Gladwin, Kennelly & Krause 1995; Purser, Park & Montuori 1995; Shrivastava 1995a, 1995b; Starkey & Crane 2003; Stead & Stead 1994; Ledgerwood & Broadhurst 2000; Willard 2002). However, it is argued in this subsection that moral and ethical obligations alone can not be a strong argument for embracing environmental responsibilities.
Bansal (2002), Buchholz (2004), and Starkey and Crane (2003) squarely blame business organisations for marginalising the environment. But, it may be noted that the existential role of business organisations still remains as providing specific products and services that meet the needs and/or desires of the population (Parsons 1960). This assessment of business organisations is consistent with Hatch’s (1997) non-centrality view. This view states that business organisations are embedded within a set of complex, relational networks, which themselves are embedded in even larger networks. This theoretical framework demonstrates that sustainability of the environment is not only the obligation and responsibility of business organisations and corporate executives, but also of other network entities and actors. Roome (1998) also argues that environmental sustainability must be addressed at all levels—ranging from village to global level. Business executives alone can not solve the environmental problem. Since it is a huge and complex problem, it must be solved with joint and cooperative participation of all national leaders, corporate heads, leading scientists, technocrats, thinkers, and management scholars. Furthermore, the impact of over population and over consumption on environmental degradation must also be taken into consideration in any environmental debate, which may be beyond the influence of business leaders (Bansal 2002; Gladwin, Kennelly & Krause 1995).

Over population, particularly in the third world nations, has had an adverse impact on our ecology. The population growth combined with excessive consumption has pushed the limits of earth’s carrying capacity (Bansal 2002). Let us say that business organisations succeed in reducing the consumption of natural resources and reducing the greenhouse gas emissions. But the success can not be realised, if the governments fail to contain the population growth. In fact, Shrivastava (1995a) warns that by 2030, world population will reach 11 billion—double that of 1991. He estimates that the production of food and energy must be increased 5 to 35 times that of the 1991 level.

Excessive consumption in developed nations has made detrimental effect on the environment. Bansal (2002) reports that, in 1991, 45 per cent of the world’s gross
income was concentrated among the 12 per cent of the world’s population who lived in developed countries. Similarly, Goldie, Douglas and Furnass (2005) report that people in developed countries consume an estimated 80 percent of the world’s resources. As Gladwin, Kennelly and Krause (1995) claim, a reduction in resource consumption in affluent countries is in the hands of their governments. They suggest that it is possible to contain the excessive consumption by appropriate policy instruments and economic incentives that place preemptive constraints on the pursuit of purely market driven consumption.

The above discussion about the harmful effect of over population and over consumption on environment suggests that it is simplistic to assume that moral and ethical beliefs of business managers in relation to ecology alone could protect the environment. Besides, it is unfair to expect a higher level of moral and ethical obligation from business managers, while other social actors are not committed. For example, it seems that we Australians are not willing to put a brake on our unsustainable consumption. Fossil fuel combustion is a major contributor to Australia’s greenhouse gas emissions. Our total consumption of energy over the 1990s grew twice as fast as population growth. We are thus contributing to the global warming that may ultimately devastate our biodiversity. Greenhouse gas emissions rose 17 per cent between 1990 and 1999 despite our signing the Kyoto Protocol (although the Federal Government now refuses to ratify it) in which we committed ourselves to limit emissions to 8 per cent over 1990 levels by 2008-12 (Goldie, Douglas & Furnass 2005). The central plank of the argument is that moral and ethical grounds may not adequately justify the demand that business managers must contribute to protect the environment.
2.10 Environmentally Sustainable Business Practices and Competition Strategies

In this section, it will be demonstrated that the extant theory in corporate sustainability has been inadequately supported by empirical research. Thereby, it shows a possible gap in research in relation to paucity of empirical research. To start with, Starik and Rands (1995) propose that, when dealing with environmental sustainability, managers must address the issue not only within their organisation, but also beyond the boundary at different outside levels and with different interest groups. Although the argument has merit, it fails to explain convincingly how such efforts beyond the boundary can reap organisational values other than protecting the environment.

Hart (1995) proposes a natural-resource-based view of business organisation, in which the ecology is deemed to be a common organisational resource. Hart proposes that the three environmental strategies, i.e. pollution prevention, product stewardship, and sustainable development are linked to sustainable competitive advantage. But, the proposals in the above research paper are not supported by empirical evidence.

Shrivastava (1995b) proposes that ecologically oriented firms are more likely to develop effective competition strategies. Using Porter’s (1980) three generic strategies, he explains how to create ecologically driven strategies such as least-cost, differentiation, and niche strategies. While the above research paper has made a theoretical contribution, its proposals are not supported by empirical evidence.

Gladwin, Kennelly and Krause (1995) and Purser, Park and Montuori (1995) argue that business organisations must shift their organisational paradigm from anthropocentric to ecocentric or sustaincentric paradigm. Although, it is an important argument in the direction of sustainable development, the authors seem to place more
importance on the environment rather than on business competitiveness. It fails to adequately explain how ecocentric businesses can become more competitive in the market place and how they can build organisational value.

In this matter, Bansal (2002) is more specific. She suggests that business organisations can implement the environmental principle through three sub-principles namely environmental protection, eco-efficiency, and product stewardship. However, she also does not explain how sustainable business practices can position the organisation ahead of other competitors. For example, why should a chemical product manufactured by an Australian company that supposedly takes care of the environment be preferred by Australian consumers rather than the same product imported from China whose environmental records are not known? In this scenario, the product manufactured by the Australian company may be more expensive of the two due to the added cost of clean disposal of waste, emissions, and effluents.

The above analysis reveals that current body of research is inadequate to explain how corporations can generate organisational value by engaging in business practices that make least impact on the environment. Although a study by Hart (1995) suggests that competitive advantage and ‘green’ business practices might be positively linked, we do lack satisfactory empirical evidence to explain how to integrate environmental values in our business practices and how to improve the environmental performance outcome.

### 2.11 Corporate Environmental Responsibilities and Stakeholder-Shareholder Debate

The aim of the discussion in this section is to demonstrate why managers are reluctant to take up bigger roles to protect the environment. It is argued that a probable reason for this could be that the managers are more bound to the shareholder principles
rather than the stakeholder principles, although they may subscribe to the stakeholder principles. This argument follows a brief discussion about both Stakeholder Theory (Freeman 1994; Reed 1999; Wei-Skillern 2004) and Shareholder or Stockholder Theory (Friedman 1962, 1980; Moore 1999; Sharplin 2003; Smith 2003).

Smith (2003) states that both stakeholder and shareholder theories are normative theories that have roots in the field of business ethics. A normative theory in business study prescribes how businesses must conduct themselves and what is their correct behaviour in relation to others including the society and the ecology. But, stakeholder and shareholder theories, interestingly, are at odds with each other about what is ‘right’. Furthermore, normative philosophy as opposite to empiricism, argues that the righteousness for business organisations has neither any cause nor any effect. In other words, managers must respect, for example, stakeholders because they deserve their due respect. The demands of a stakeholder group must be listened to not because it may benefit other stakeholder groups or the organisation, but because the stakeholder group has intrinsic value and it deserves to be listened to (Trevino & Weaver 1994). This debate is analysed to arrive at some useful insights on how business managers may approach corporate environmental responsibilities. Stakeholder and shareholder theories are presented in the following paragraphs.

The principle plank of Shareholder Theory is that shareholders advance capital to a company’s managers. The managers are allowed to spend the corporate funds for such activities and reasons that are authorised by the shareholders (Smith 2003). This concept is well articulated by Friedman (1962, 1980) in his claim that the only social responsibility for a corporation is to use its resources and engage in activities designed to increase its profits as long as it engages in open and free competition without deception or fraud. However, the argument of maximisation of shareholder wealth as the singular goal of corporate management is vehemently challenged by the proponents of stakeholder theory (e.g. Freeman 1994; Sharplin 2003). They argue
that the supremacy of the shareholder group is neither defensible on the basis of equity nor necessarily efficient (Sharplin 2003).

Freeman (1994) defines stakeholders as any groups or individuals who can affect, or are affected by, the achievement of the organisation’s objectives. Despite some debate regarding which stakeholders deserve priority considerations, usually shareholders, customers, employees, and suppliers are considered as primary stakeholders, and others groups such as green activists (e.g. Green Peace and Green Cross), and local community groups (e.g. Earth First!) are treated as secondary stakeholders (Schaltegger, Burritt & Petersen 2003; Smith 2003).

Following the earlier argument that Stakeholder Theory is grounded in normative principles, every stakeholder group has intrinsic value and every group deserves consideration from other groups and the managers for its own worth, and not because of its ability to further the interests of some other groups. However, it is a well-published fact that a corporation’s directors and managers have fiduciary duty to run the company in the interests of its shareholders (Freeman 1994). According to Moore (1999), the justification for the highest focus on the interests of shareholders may arise from the following principles and theories:

i) Traditional property rights:
Boatright (1994) argues that the shareholders of a company are its proper owners. Shareholders’ property interests in a corporation are protected by a combination of shareholders’ right to elect the Board of Directors and vote on shareholder resolutions. Furthermore, the protection is provided by the stock market in terms of liquidity, return, and diversification of risk.
ii) Agency Theory:
Sternberg (1997) argues that company directors are in an agency relationship with shareholders, where the latter are the principals. The directors have fiduciary duty to shareholders to ensure that a business corporation pursues the objective of maximising long-term value to shareholders.

ii) Public Policy:
Boatright (1994) argues along the considerations of public policy that an institution in which management is accountable primarily to shareholders provides the most socially beneficial system of economic organisation. Boatright further argues that corporations ought to be run for the benefit of shareholders because all other constituencies are better off as a result.

It is a paradox that in addition to their allegiance to shareholders, the directors and managers have also to be responsible for managing the claims of other stakeholder groups in a corporation (Donaldson & Preston 1995). We can appreciate this ironic situation from a metaphor of an umpire. It is hard to understand how the stakeholder groups can trust the umpire who is biased in favour of a particular stakeholder group—in this case, the shareholders. Therefore, it may be argued that Stakeholder Theory fundamentally fails to convince that managers can resolve conflicts of interest between stakeholder groups, as they are loyal to the shareholders. Reed (1999) also supports these arguments by stating that the principles of Stakeholder Theory may lead managers to difficult waters and may introduce biases in their decisions. They are more likely to favour shareholders as well as themselves as stakeholders, and have prejudice against other stakeholder groups. Drawing from these arguments, it may be concluded that Stakeholder Theory has a number of flaws leading to paradoxical difficulties in its application. In the following paragraphs, a possible
reason for reluctance of managers and executives to invest the corporate resources in comprehensive and ‘deep’ environmental activities is presented.

Friedman (1980) argued that the fundamental responsibility of managers is to return profits to shareholders and not to spend corporate funds in philanthropy when it is likely to reduce the returns to shareholders. Drawing from Agency Theory, Sharplin (2003) argues that only the shareholder—the bearer of residual risk—could be properly vested with company control. As a spin of the above argument, Jensen and Meckling (1976) comment that if this control rests with any stakeholder groups other than the shareholders such as Green Peace and Green Cross, then it is equivalent to allowing the groups to play poker with someone else’s money. This certainly creates inefficiencies that may lead to business failure.

As champions of environmental cause, suppose directors and managers invest corporate funds for ‘deep’ environmental activities, but not linked to business profits, then they are more likely to infringe upon their legal obligation enshrined in the commercial laws under the agent-principal relationship (Sternberg 1997). This argument seems to be consistent with the view expressed by Friedman (1962, 1980) mentioned earlier. Furthermore, the potential illegitimacy may also contravene the moral and ethical values of managers and may be repugnant to the proponents of the Stakeholders Theory, who uphold ethical, moral, and social principles (Freeman 1994; Hasnas 1998; Moore 1999).

From the above arguments, it can be recognised that directors and managers are more likely to focus on shareholder wealth maximisation, while handling stakeholder management pragmatically. In other words, instead of taking bigger responsibilities for preventing environmental degradation, they may restrict themselves to short-term, surface level environmental protection activities. They may only do what is required by the environmental regulations. Implementing Environmental Management System (EMS), which is discussed in the section that follows, seems to provide a convenient
safety valve for business managers who are under institutional pressures to discharge their environmental obligations. Unfortunately, the environment has become the casualty as a result of managers’ incapability to engage in comprehensive, broad-based, extensive, and multi-level activities. Indeed, it may have resulted in a missed opportunity to make significant contributions to environmental sustainability.

2.12 Environmental Management System (EMS) and Corporate Environmental Responsibilities

Environmental protection activities in business organisations can be seen in different degrees of vigour and complexity. Welford (1995) proposes that the ‘greening’ strategy in a corporation may be driven by one of the following five ideologies: Reactive, Proactive, Ethical, Explorative, and Creative. Similarly, Ledgerwood and Broadhurst (2000) identify the following four types of environmental strategies: Complier, Aligner, Expander, and Integrator. A brief explanation of these four environmental strategies is as follow. A business organisation that has Complier strategy is interested only in meeting the regulatory requirements. An Aligner recognises that early and voluntary investments in environmental management systems have future benefits. A Corporation that has Expander strategy goes beyond mandatory programs and proactively seeks improvements in environmental performance. Finally, the Integrator Corporation integrates environmental issues into its corporate plans and decision-making processes.

There is a general consensus that the sustainable development in relation to the environment requires much more actions than controlling pollution and tinkering with environmental regulations. Ideally, business organisations must adopt a comprehensive, broad-based, multi-level, multi-system approach in order to achieve environmental sustainability (Starik & Rands 1995).
The argument that business sector has moral and ethical obligations to protect the environment seems to have not gone too far to get in business leaders to strive for the environmental agendas (Aragon-Correa & Sharma 2003; Bansal 2002; Buchholz 2004; Starik & Rands 1995). Under such external pressures, business organisations seem to either just meet the environmental regulations or recoil into a reporting regime such as Environmental Management System (EMS). Both seem to do little for the environment. Their focus seems to be on environmental related cost control, occupational health, and safety, rather than environmental protection, product stewardship, and eco-efficiency (Schaltegger, Burritt & Petersen 2003; Sullivan & Wyndham 2001; Welford 1995).

Sullivan and Wyndham (2001) have edited seven Australian case studies in order to examine EMS in Australian business organisations. The business organisations in the study are:

i) ACTEW Corporation (Utility),
ii) ABB Engineering Construction (Engineering),
iii) Argyle Diamond Mines (Minerals),
iv) Redland Shire Council (Local Government),
v) Pacific Power (Electricity),
vi) Abigroup (Construction), and
vii) Bonlac Foods (Food).

The study reveals that the above business organisations are focused on one or more of the following:

i) Compliance of regulatory and legislative demands in terms of auditing, accreditation, and certification, particularly, obtaining certification to ISO 14001 standard.
ii) Efforts to reduce liabilities, risks, and exposures from their business activities.

iii) Achieve cost savings on environment licensing, particularly seen in mineral companies.

Sullivan and Wyndham (2001)’s study demonstrates that both public and private sector organisations may benefit from integrating environmental issues with their business practices through cleaner production, life cycle analysis, environmental impact assessment, and public reporting such as the TBL reporting. But, they also comment that most of them have not identified much business value from EMS activities other than appeasing the coercive institutional pressures (Hatch 1997). Bansal (2002) also contends that many business managers in the United States have found little marginal benefit to their business from ISO 14001 certification. It appears that EMS is a façade created by business organisations to shield themselves from coercive institutional pressures. Other alternative for them to avoid the regulatory pressures, if their business model permits, could have been to shift their ‘dirty’ production operations to a third world country. This observation is supported by Bansal (2002) in her statement that firms sometimes choose foreign developing countries as sites for their manufacturing facilities because of their more relaxed pollution control regulations and low labor cost.

The above arguments imply that unless business organisations identify increase in profitability and competitiveness, they continue to be laggards in integrating the interest of the environment into business practices. In this stark reality, this study aims to demonstrate how business organisations can achieve more from their environmental activities while not discounting the financial outcome.
Section Four

Business Organisation, Society, and Sustainability

2.13 Overview

Since business organisations have been the prime movers of economic well being of the society, particularly in market economies, the relationship between business organisation and society is certain to be intricate, diverse, and vital for the welfare and prosperity of both. Building positive and mutually beneficial relationships across organisational boundaries is a growing part of management’s role. Indeed, in an integrated perspective of corporate sustainable development, social dimension is a crucial dimension. Thus, corporate social sustainability has become a major focus for management scholars, consultants, and managers (Lawrence, Weber & Post 2005; Schaltegger, Burritt & Petersen 2003).

2.14 Corporate Social Performance (CSP)

In the discourse on corporate social sustainability, corporate social performance (CSP) appears to be a major strand to grapple with. According to Stanwick and Stanwick (1998), Corporate Social Performance (CSP) comprises of three dimensions. They are:

i) Corporate Social Responsibility (CSR1),
ii) Corporate Social Responsiveness (CSR2), and
Reconciling these three dimensions into an integrated CSP framework appears to be problematic. This may be due to the tension between normative and descriptive approaches to CSP (Swanson 1999). The normative philosophy is centered on moral evaluation, judgement, and prescription of human action. On the other hand, descriptive approach or empiricism seeks explanation, measurement, and prediction. It assumes that a cause and effect relationship exists between variables and, therefore the variables are amenable to influence or intervention (Trevino & Weaver 1994).

2.15 Theoretical Models of CSP

Despite the problems involved, several researchers have developed innovative integrated frameworks for the evaluation of CSP by searching for some common ground between the normative and descriptive approaches. For example, Clarkson (1995) develops a Stakeholder Approach, where he concludes that managers can no longer be held responsible for maximising returns to shareholders at the expense of other primary stakeholder groups. Furthermore, by using ethical judgement and moral principles, managers must resolve the inevitable conflicts between various primary stakeholder groups over the distribution of wealth created by the corporation. This argument seems to suggest that managers are instrumentally ethical and their moral conduct pays off when they balance the conflicting objectives of shareholder wealth maximisation and meeting the social obligations (Wood 1991). It is also known as enlightened self-interest (Lawrence, Weber & Post 2005).

Another approach treading a middle path for seeking an integrated CSP framework is proposed by Hess (2001). He argues that a regulatory system governed by reflexive law may be adopted. In this approach, corporations are encouraged to engage in Corporate Social Accounting, Auditing, and Reporting (SAAR).
Preston’s framework of CSP (Preston 1990) assumes that managers usually go through the following four stages when dealing with corporate social involvement. They are:

i) Awareness or recognition of an issue,
ii) Analysis and planning,
iii) Response in terms of policy development, and
iv) Implementation.

A drawback of Preston’s CSP framework appears to be that it provides no guidance for determining relevant social issues in a corporation (Clarkson 1995).

The two separate models by Carroll (1979) and Wartick and Cochran (1985) attempt to address the deficiency of the Preston’s framework by recognising an underlying and continuous interaction between the three dimensions of CSP mentioned earlier, i.e. corporate social responsibility (CSR1), corporate social responsiveness (CSR2), and management of social issues (Clarkson 1995). They identify corporate social responsibility (CSR1) in terms of economic, legal, ethical, and discretionary categories. Likewise, corporate social responsiveness (CSR2) is identified in terms of reactive, defensive, accommodative, and proactive posture toward social issues (Clarkson 1995). Despite their elegance in redressing the problem, as Clarkson (1995) critics, both models, i.e. Carroll’s model and Wartick and Cochran’s model pose practical difficulties when fitting the field data to various categories because they are not grounded in the realities of corporate practice.

This section has presented four kinds of frameworks and models in order to evaluate CSP. They are Clarkson (1995)’s Stakeholder Framework, Hess (2001)’s Reflective Law Framework, Preston’s CSP framework (Preston 1990), and Carroll (1979)’s and Wartick and Cochran (1985)’s Advanced CSP models.
2.16 Corporate Social Performance and Competitive Advantage

Porter and Kramer (2003) suggest that corporations can use their charitable efforts to improve their competitive context—the quality of the business environment in the locations where they operate. They argue that using philanthropy to enhance competitive context aligns social and economic goals and improves a company’s long-term business prospects. However, an empirical research by Hillman and Keim (2001) concludes that spending corporate resources for social issues, which are not directly related to the benefit of primary stakeholder groups, may not create value for shareholders. Following the two disparate positions mentioned above, it is possible to recognise that for managers there is no easy answer to the following pertinent questions: Which external social issues matter most? How much they can involve themselves in those social issues? Whether their engagement produces any real corporate value? Although this study does not directly answer these questions, it makes an effort to provide adequate guidelines and insights to address the pertinent questions. In the rest of this section, the insights into the relationship between CSP and competitive advantage found in the body of literature are presented.

Albion (1991) argues that socially responsible actions by managers play a critical role in creating competitive advantage, enhancing positive corporate culture, and improving the long-term profitability. Drawing from Stakeholder Management theory, he argues that strategies to strengthen relationships with stakeholders may create sustainable competitive advantage, increase long-term profitability, and improve the position of the business in relation to its costs and benefits. However, it may be noted that the researcher has not supported his theoretical arguments by empirical study.

An empirical study by Greening and Turban (2000) finds that a business organisation’s success in corporate social performance (CSP) may attract talented job
applicants. Social Identity theory (Dutton, Dukerich & Harquail 1994) and Signaling theory (Breaugh & Starke 2000) are used to justify the result. The above study evaluates CSP by a firm’s quality consciousness, treatment of female employees, respect for ecology, and management of diversity. Furthermore, the study argues that a business organisation may gain competitive advantage by attracting and retaining talented people. Gunasekaran (2003) argues that empowerment of workers and effective supply management are crucial in the implementation total quality management aimed at customer satisfaction.

The empirical study by Hillman and Keim (2001) shows that building positive and mutually beneficial relationships with primary stakeholders such as employees, customers, suppliers, and local communities may lead to increased shareholder wealth. Drawing from Resource-Based Theory, they argue that since the relationships are relational, socially complex, and causally ambiguous, they may become sources of sustainable competitive advantage, which in turn may increase the shareholder wealth. This study also demonstrates that Resource-Based View (RBV) theory can be usefully employed to analyse the problems in socially sustainable performance in business organisations.

A search in extant literature apparently indicates that there is a dearth of empirical studies in different settings to support the theoretical claims and proposals made in the areas of corporate social performance (CSP), performance outcome, and strategies for managing social issues. As a result of this, it appears that there is a limited body of defensible knowledge about strategies to implement social issues and obligations. This study is an effort to narrow this gap by examining the variables in Australian business organisations.
2.17 Chapter Summary and Directions for Research

This chapter describes sustainable development as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development is explained in this chapter as the major focus of people, community groups, governments, thinkers, management scholars, and business leaders around the world. A sustainable corporation not only has minimum footprint on the ecology and strives for social equity and welfare, but also is profitable and financially viable. This chapter emphasises that the principles of corporate sustainability integrate financial, social, and environmental factors into business thinking. It explains that, although the task of achieving financial, social, and ecological performance outcomes appears to be full of conflicts, the three outcomes are mutually supportive and related. The chapter points out that the communities around the world are urgently demanding business organisations to embrace the sustainable development principles. But, it also emphasises that business executives are not very clear as to how to meet the community expectations and how to achieve balanced outcomes by not departing too away from the current business practices and processes.

This chapter has examined two important strategic management theories that are useful to analyse competitive advantage in business organisations. The two theories are:

i) Barriers to Entry theory, and

ii) The theory of Resource-Based View (RBV) of the firm.

The insights provided by the above two theories into the sources of competitive advantage and into corporate sustainability are briefly discussed. At the same time, the criticisms leveled against them are also presented. It is followed by an
examination of the empirical research on sustainable development rooted in the above two theories. This research review demonstrates that several business strategies designed for excellent ecological outcomes are discounting financial or social outcomes. Likewise, it shows that many business practices engendering corporate social outcomes are undermining financial outcomes. In other words, many sustainable business practices suggested in the extant literature appear to be lopsided and lacking a balanced or integrated approach.

The chapter visited the ever expanding debate between shareholder theory and the stakeholder theory. Synthesising the diverse opinions from both camps, the chapter identified some stark realities as to why business managers were generally unwilling to invest more resources for sustainable development projects. It identified the possible reasons for this stand by business managers, despite their positive feelings towards environment and society. The argument led to a conclusion that unless corporate sustainable development activities were linked to shareholder or stockholder wealth maximisation, large progress could not be made.

The examination of the extant literature on barriers to entry theory and RBV theory reveals that their insights into generating competitive advantage from business practices can be extended to identify and implement the sustainable business practices. This literature review shows that sustainable business practices need not be some special practices designed for environmental protection or social welfare. The normal business practices can be redesigned to protect the environment and to improve social equity and welfare, while creating products, processes, or services within the scope, expertise, and terrain of business organisations. However, this literature review also shows consistently that there is a lack of empirical evidence to support the theoretical argument that business organisations can enhance their competitive advantage by pursuing corporate sustainability principles. It also points out that there is a lack of Australian empirical research on how to evaluate sustainable business practices. Thus, from this literature review it emerges that there is a research
gap regarding how sustainable business practices in a business organisation can enhance its competitive advantage. The literature review shows that there is a scope for research to examine the nature of the relationships between business practices rooted in barriers to entry theory and corporate sustainable performance outcomes. It also demonstrates that there is a research scope to examine the nature of the relationships between business practices grounded in RBV theory and corporate sustainable performance outcomes. These research directions are expanded further in the Chapter 3 on Research Design, Methodology, and Instrumentation.
CHAPTER 3

Research Design, Methodology, and Instrumentation

This chapter comprises three sections:

i) Research Design,
ii) Research Methodology, and
iii) Instrumentation.
Section One

Research Design

3.1 Purpose of the Study

In this study, two specific strategic organisational practices were considered as latent variables. They were:

   i) Barriers to Entry, and
   ii) Strategic Resources and Capabilities.

Furthermore, it considered sustainable performance outcomes of business organisations in terms of three latent variables. They were:

   i) Corporate Financial Performance Outcome (CFPO),
   ii) Corporate Social Performance Outcome (CSPO), and
   iii) Corporate Environmental Performance Outcome (CEPO).

The above five variables underpinned the platform for the study.

The main purpose of the study was to examine the nature of the relationships between

   i) Barriers to entry and
      a) CFPO,
      b) CSPO,
      c) CEPO
And

ii) Strategic resources and capabilities and
   a) CFPO,
   b) CSPO,
   c) CEPO.

Drawing from the understanding gained from analysing the above relationships, the study suggested practical guidelines for managers and practitioners on how a business organisation could achieve corporate sustainable development integrating financial, social, and environmental values, and also how sustainable business practices could be used to create competitive advantage.

3.2 Specific Objectives and Research Problems

This subsection gives an overview of the specific objectives and the related research problems under each of the objectives.

3.2.1 Specific Objective 1:

To examine the nature of the research variables used in the study, i.e. Barriers to Entry, Strategic Resources and Capabilities, CFPO, CSPO, and CEPO in Australian business organisations.

In order to meet the above objective, the following problems relating to the objective were put together and their solutions were explored:
i) Research Problem 1:
What are the comparative heights of barriers to entry, which may act as deterrence to potential entrants into an industry, across Australian business sectors and business sizes?

ii) Research Problem 2:
What are the comparative amounts of strategic resources and capabilities, which are internal to a business organisation, across Australian business sectors and business sizes?

iii) Research Problem 3:
What are the comparative levels of corporate financial performance outcome (CFPO) across Australian business sectors and business sizes?

iv) Research Problem 4:
What are the comparative levels of corporate social performance outcome (CSPO) across Australian business sectors and business sizes?

v) Research Problem 5:
What are the comparative levels of corporate environmental performance outcome (CEPO) across Australian business sectors and business sizes?

3.2.2 Specific Objective 2:

To examine the relationships between industry level Barriers to Entry and each of the three dimensions of sustainable performance outcomes in Australian business organisations.

The study attempts to fulfil the above research objective by seeking to find answers to the following three research problems. Before stating the research problems, it may
be appropriate and useful to explain briefly the context in which the relationships between the variables are examined.

Barriers to entry postulates how various elements of industry structure can impose disadvantages on entrants relative to incumbents (Karakaya & Stahl 1989). Emerging from Bain’s theory of entry (Bain 1956), the concept is emphasised by Porter (1980) as a strategic measure that can be deployed by a business organisation in order to defend itself against the threat of new entrants and to establish a favourable competitive position in an industry. The historical theory of barriers to entry is used even now for solving different kinds of organisational problems (see, for example, Chang & Tang 2001; Han, Kim & Kim 2001; Robinson & McDougall 2001).

The strategic importance of industry-level barriers to entry is highlighted by linking them to sustainable competitive advantage (Bain 1956; Porter 1980). In particular, drawing from theories of economics, it is argued that reduced entry of potential competitors into an industry as a result of existing and additional deployment of entry barriers may generate monopoly rent to the incumbents in the industry (Mahoney & Pandian 1992; Robinson & McDougall 2001). But, traditionally the rent is associated with above-normal rates of financial returns.

An increased interest in multiple perspectives in organisational theory has culminated in a shift in the performance measurement framework for organisations (Dunphy, Griffiths & Benn 2003). As a result, the singular reliance on financial results, i.e. Return on Investment (ROI), share price etc. are found to be inadequate to measure corporate performance outcomes (Willard 2002). The corporate world seems to be responding to the multiple perspective of measuring and reporting corporate performance. Corporate sustainability discourse argues that business performance must reflect the three pillars of corporate sustainability, which are economic prosperity, environmental stewardship, and social responsibility (Dunphy, Griffiths & Benn 2003). Consistent with these changes in the framework, the study measures
corporate sustainable performance by means of three variables namely Corporate Financial Performance Outcome (CFPO), Corporate Social Performance Outcome (CSPO), and Corporate Environmental Performance Outcome (CEPO). Therefore, the study held a view that it was important to examine the relationships between barriers to entry, whose deployment represents a strategic practice, and the three dimensions of corporate sustainable performance outcomes, i.e. CFPO, CSPO, and CEPO. The questions that arose in the mind are listed here: Do the barriers to entry influence exceptional financial performance outcome only? Do they have any impact on social performance outcome? Or on environmental performance outcome? Further down the trail, several other kinds of questions buzzed in the mind, a sample is given here: Can we create effective barriers to entry by pursuing corporate social responsibilities? Does business philanthropy create barriers to new competition? Can we build barriers to entry by raising the bar for environmental protection in the industry? Does our investment in environment-friendly products create new entry barriers?

The study attempts to meet the above specific objective by raising the following research problems and finding answers to them.

i) Research Problem 6:
What is the nature of the relationship between Barriers to Entry and Corporate Financial Performance Outcome (CFPO) in Australian business organisations?

ii) Research Problem 7:
What is the nature of the relationship between Barriers to Entry and Corporate Social Performance Outcome (CSPO) in Australian business organisations?
iii) Research Problem 8:
What is the nature of the relationship between Barriers to Entry and Corporate Environmental Performance Outcome (CEPO) in Australian business organisations?

3.2.3 Specific Objective 3:

To examine the relationships between Strategic Resources and Capabilities and each of the three dimensions of sustainable organisational performance outcomes in Australian business organisations.

Organisational resources and capabilities are found as heterogeneously distributed across firms. Furthermore, they may also be non-elastic in supply. For example, resources and capabilities earmarked for the study such as leadership, vision and values of the leader, organisational culture, reward structure, and organisational flexibility are more likely to be non-elastic in supply due to their path dependency, causal ambiguity, and socially complex nature. These arguments are mainly rooted in the resource-based view (RBV) of the business organisation (Grant 1991; Penrose 1959; Richardson & Teece 1997; Teece 1984).

When a business organisation owns rare, valuable, imperfectly imitable, and non-substitutable resources and capabilities, it may appropriate Ricardian rents (Barney 1986, 1991; Mahoney & Pandian 1992; Wernerfelt 1984). This argument from economic theories underpins the case for making the resources and capabilities of the firm the foundations for its long-term strategy. However, describing the nature of the rent generated by strategic resources and capabilities only as financial, appears be a narrow approach. The study believes that strategic resources and capabilities, which are created, enhanced, and deployed in a competitive context, may be generating several other valuable outcomes, besides generating above-average financial returns.
Now it appears that the link between strategic resources and capabilities and organisational performance outcomes is complex and multilateral.

Furthermore, business organisations are now under increasing external pressure to operate and work for a sustainable world. In addition to pursuing the traditional business objectives of providing an excellent return to investors, they must also actively promote ecological sustainability by ensuring that their business activities make smallest possible imprint on the environment. They must also make fundamental commitment to facilitate the emergence of a fair and equitable society and human fulfillment including their employees (Dunphy, Griffiths & Benn 2003). Consistent with this view, the study proposes that outcomes from sustainable business practices can be measured in terms of three comprehensive variables, i.e. Corporate Financial Performance Outcome (CFPO), Corporate Social Performance Outcome (CSPO), and Corporate Environmental Performance Outcome (CEPO).

The above objective emphasises a desire to understand the relationships between strategic resources and capabilities and corporate sustainable development. In order to fulfil the objective, the following three research problems were designed and the study made an effort to empirically find the answers to them.

i) Research Problem 9:
What is the nature of the relationship between Strategic Resources and Capabilities in Australian business organisations and Corporate Financial Performance Outcome (CFPO)?

ii) Research Problem 10:
What is the nature of the relationship between Strategic Resources and Capabilities in Australian business organisations and Corporate Social Performance Outcome (CSPO)?
iii) Research Problem 11:

What is the nature of the relationship between Strategic Resources and Capabilities in Australian business organisations and Corporate Environmental Performance Outcome (CEPO)?

3.2.4 Specific Objective 4:

To examine the relationships between the three dimensions of corporate sustainable performance outcomes, i.e. Corporate Financial Performance Outcome (CFPO), Corporate Social Performance Outcome (CSPO), and Corporate Environmental Performance Outcome (CEPO) in Australian business organisations.

This study endeavours to meet the above research objective by seeking solutions to the following three research problems. Before writing the problems, it may be useful to briefly discuss the rationale for measuring and communicating the corporate performance outcomes in terms of the above three dimensions.

Corporate sustainability emphasises that business organisations can improve social and human welfare, and reduce the ecological footprint, while ensuring the effective achievement of organisational objectives. The principles of corporate sustainability are shaped by social and organisational institutional forces (Shrivastava 1995a). A growing interest in multiple perspectives in organisational theory is also influencing the aspirations of corporate sustainability (Dunphy, Griffiths & Benn 2003). Efforts to embed principles of corporate sustainability are reflected by measuring and communicating the organisational performance in multiple dimensions. Triple bottom line is one of the methods of such measurement and disclosure (Willard 2002).

Management researchers have demonstrated that the dimensions are not disjointed. For example, Balabanis, Phillips and Lyall (1998), Hillman and Keim (2001), and
Waddock and Graves (1997) have empirically shown positive links between social performance outcomes and financial performance outcomes in business organisations. Likewise, Menguc and Ozanne (2003) and Shrivastava (1995b) have demonstrated empirically the positive associations between environmental performance outcomes and financial performance outcomes. Boyd (2001), Wilson (2003), and Porter and van der Linde (1995) also argue the presence of a positive relationship between the CEPO and CFPO. Similarly, Connelly and Limpaphayom (2004), Klassen and McLaughlin (1996), and Rennings, Schroder and Ziegler (2003) confirm a positive correlation between a corporation’s environmental protection activities and its stock market performance. However, it appears that we have a limited number of Australian studies conducted at the organisational level examining together the nature of the relationships between CFPO, CSPO, and CEPO.

The study makes an effort to achieve the above objective by raising the following three research problems and finding answers to them.

i) Research Problem 12:
What is the nature of the relationship between CSPO and CFPO in Australian business organisations?

ii) Research Problem 13:
What is the nature of the relationship between CEPO and CFPO in Australian business organisations?

iii) Research Problem 14:
What is the nature of the relationship between CSPO and CEPO in Australian business organisations?

3.3 Important Characteristics of the Study

In this subsection, it will be discussed that the study has the following characteristics:
i) It follows the principles of positivism,

ii) It is a correlation study,

iii) It is both descriptive and exploratory study

3.3.1 Philosophy of Positivism

This research adheres to positivism, which is a philosophy based on real facts that can be experienced and proved, rather than on ideas formed in the mind (Saunders, Lewis & Thornhill 2000). In the path of positivism, a research person must analyse and interpret a survey data objectively and without bias as far as possible. This study made efforts to adhere to the principle of objectivity enshrined in the philosophy of positivism. The objectivity is maintained, for example, by measures such as using a structured and repeatable methodology, collecting quantitative data in a survey, and analysing the data using statistical techniques. Another important principle of positivism, according to Pedhazur and Schmelkin (1991), is that a researcher must neither affect respondents nor be affected. Since the study collected the data by a survey method, it may be asserted that researcher and respondents remained independent of each other. Hence, the above principle of positivism stated by Pedhazur and Schmelkin was observed.

3.3.2 Correlation Study

According to Bryman and Cramer (2001), in a correlation analysis, the strength of relationships between variables is explored. Since this study examines the strength and polarity of relationships between latent variables such as Barriers to Entry, Strategic Resources and Capabilities, CFPO, CSPO, and CEPO, it is described as a correlation study.
However, it must be emphasised here that it is not a causal study. As per Bryman and Cramer (2001) and Pedhazur and Schmelkin (1991), in a causal study, elucidation of cause and effect relationship is unambiguous. For example, an experimental research in science and engineering is a causal study. However, in a business research, where data is collected by a survey method, a causal relationship between variables is difficult to establish, as the researcher has no means to manipulate the variables. The researcher’s ability to impute cause and effect relationship between two variables is restricted. Since this study has collected its data using the survey method, the study can be termed as a correlation study.

3.3.3 Descriptive and Exploratory Research

Both descriptive and exploratory flavour can be seen in this study. Hussey and Hussey (1997) argue that research constructs in a descriptive study must be supported by established theory. Since the study used the extant literature to derive the item statements and to name the latent variables (factors), it can be argued that the study started as a descriptive study. However, after addressing the research problems assisted by the quantitative results, the study moved further to explain in an explorative fashion how Australian business organisations could create effectively organisational value from their sustainable business practices. Therefore, the study can also be described as an exploratory study.

Furthermore, Sekaran (2003) and Hussey and Hussey (1997) remark that a study may be termed as exploratory in nature when extensive knowledge of the specific problems examined in the study was not available before the commencement of the study. Since very little empirical research seems to be done on the research objectives and problems raised in this study in Australian context, it may be called as an exploratory study. Moreover, since the study suggests drawing from its results, how to effectively create organisational value from sustainable business practices and
since these suggestions are apparently innovative and new, it may be asserted that this study is also an exploratory research.

3.4 Pilot Survey

The purpose of conducting a pilot survey was to test the validity and reliability of the scales in the questionnaire (Sekaran 2003). This subsection presents the validity and reliability results for the data collected from the pilot survey conducted in this study.

Copies of the questionnaire were distributed to 60 MBA and MEI students at the Australian Graduate School of Entrepreneurship (AGSE), Swinburne University of Technology. The postgraduate profile of the AGSE students revealed that they had experience in working in business and government organisations. Overseas students enrolled in their postgraduate programs had previous work experience in business in their home countries. Three faculty members handed out the survey questionnaire and provided a brief introduction about the research study. They requested students to complete the questionnaire and return it within a week. Apart from a request by faculty members, no other inducements were provided to the students for their participation. A joint request letter by the researcher and his supervisor was attached. It also explained the purpose of the study and how it may assist Australian businesses to effectively create organisational value from sustainable business practices. Within a week, 35 completed questionnaires were collected. Sekaran (2003) suggests that a sample size of 30 is sufficient to conduct reliability tests. Therefore, no further attempts were made to increase the response. Since 35 completed questionnaires were collected out of total 60 respondents, it indicated a response rate of 58 percent.

The Cronbach’s \( \alpha \) (alpha) for reliability of internal consistency (Pedhazur & Schmelkin 1991; Tabachnick & Fidell 2001) was obtained for the two scales used in the survey questionnaire, i.e. Competition Strategies Scale (CSS) and Corporate
Sustainable Performance Outcomes Scale (CSPOS) with the help of the statistical software namely ‘SPSS Version 12.0 for Windows’. More information about the reliability of a scale, including how the two scales were developed is explained in the later section on ‘Instrumentation’.

The results of the reliability tests performed on the data were as follows: The Cronbach’s $\alpha$ for CSPOS scale was found to be 0.9110 and for CSS Scale was 0.8946. Nunnally (1978) recommends a minimum Cronbach’s $\alpha$ of value 0.7. Caplan, Naidu and Tripathi (1984) state that the value must be at least 0.50. Based on these two recommendations, it was concluded that reliability of the two scales was more than adequate. Pedhazur and Schmelkin (1991) contend that a reliable scale measures the underlying concept consistently.

### 3.5 Sample

The population for this study was made up of Australian business organisations. The forthcoming main section on ‘Research Methodology’ discusses the procedure followed in this study in determining the size and composition of the sample from the population. A total of 102 completed questionnaires were collected back out of 600 that were distributed. Thus, the response rate was 17 percent. According to Hart (1987), response rates in industrial or business surveys vary from 17 percent to 60 percent, with an average of 36 percent. Therefore, the response rate of 17 percent was found to be within the acceptable range of response rates for business surveys.
3.6 Summaries of the Demography of Respondents, Business Sector, Number of Employees, and Business Size

In this section, the summaries of demography of the respondents consisting of the position held, gender, and formal education are presented. They are followed by the summaries of business sectors, number of employees, and business sizes based on annual sales are provided. These data were collected from section 1 (General Information section) of the 3-sections survey questionnaire. (The survey questionnaire is described later in the section 3 on ‘Instrumentation’). It may be noted that since providing answers to many questions in the General Information section was optional, there were few missing responses.

3.6.1 Summary of the Respondents’ Position

Total number of respondents was 102, of which valid responses were 100. Table 3.1 gives the distribution of respondents’ positions in percent. Although executives were requested to respond, it appears that 62% of them had delegated the task to appropriate managers.

Table 3.1 Distribution of Position of the Respondents

<table>
<thead>
<tr>
<th>Position</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO</td>
<td>14</td>
</tr>
<tr>
<td>Managing Director or General Manager</td>
<td>24</td>
</tr>
<tr>
<td>Managers</td>
<td>44</td>
</tr>
<tr>
<td>Other Office Holders</td>
<td>18</td>
</tr>
</tbody>
</table>
3.6.2 Summary of the Respondents’ Gender

Total number of respondents was 102, of which 100 were valid responses. Table 3.2 provides the distribution of gender of the respondents in the survey. The large proportion of male respondents confirms a gender disproportion in senior manager and executive levels in Australian business organisations.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>84</td>
</tr>
<tr>
<td>Female</td>
<td>16</td>
</tr>
</tbody>
</table>

3.6.3 Summary of the Respondents’ Formal Education

Total number of respondents was 102, of which valid responses were 100. Table 3.3 shows the distribution of formal education of the respondents.

<table>
<thead>
<tr>
<th>Formal Education</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>7</td>
</tr>
<tr>
<td>Technical &amp; Further Education Diploma or Certificate</td>
<td>7</td>
</tr>
<tr>
<td>Professional Diploma or Certificate</td>
<td>11</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>38</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>33</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>4</td>
</tr>
</tbody>
</table>
3.6.4 Summary of the Business Sector

The business organisations represented by the respondents were classified under four broad business sectors. This classification is further discussed in section 3 on ‘Instrumentation’. Table 3.4 gives the distribution of business sectors of respondents’ firms.

Table 3.4 Distribution of Business Sectors of the Respondents

<table>
<thead>
<tr>
<th>Business Sector</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>36.3</td>
</tr>
<tr>
<td>Service</td>
<td>46.1</td>
</tr>
<tr>
<td>Resources</td>
<td>10.8</td>
</tr>
<tr>
<td>Unclassified</td>
<td>6.9</td>
</tr>
</tbody>
</table>

3.6.5 Summary of the Number of Employees

Table 3.5 provides the distribution of the six class intervals of number of employees in respondents’ business organisations in percentage. There were 102 valid responses.

Table 3.5 Distribution of the Class Intervals of Number of Employees

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20</td>
<td>11.8</td>
</tr>
<tr>
<td>20 - 99</td>
<td>22.5</td>
</tr>
<tr>
<td>100 - 299</td>
<td>14.7</td>
</tr>
<tr>
<td>300 - 599</td>
<td>14.7</td>
</tr>
<tr>
<td>600 – 899</td>
<td>7.8</td>
</tr>
<tr>
<td>900 or more</td>
<td>28.4</td>
</tr>
</tbody>
</table>
3.6.6 Summary of the Business Size Based on Annual Sales

Table 3.6 provides the distribution of the three class intervals of annual sales in respondents’ business organisations in percentage. In 102 responses, there were 85 valid responses and 17 were missing responses.

Table 3.6 Distribution of the Class Intervals of Business Size Based on Annual Sales

<table>
<thead>
<tr>
<th>Business Size</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (Less than $10 m)</td>
<td>22.4</td>
</tr>
<tr>
<td>Medium ($10 m - $99 m)</td>
<td>24.7</td>
</tr>
<tr>
<td>Large ($100 m or more)</td>
<td>52.9</td>
</tr>
</tbody>
</table>

3.6.7 Distribution of Respondents’ Business Organisation across the Size and the Business Sector

Table 3.7 gives the result of cross-tabulation between the Size and the Business Sector. It shows the number of observations (frequencies) in different common categories and their percentage. Total responses were 102, valid responses were 85 (83.3%) and missing responses were 17 (16.7%).

Table 3.7 Distribution of Respondents across the Size and the Business Sector

<table>
<thead>
<tr>
<th>Size</th>
<th>Manufacturing</th>
<th>Service</th>
<th>Resources</th>
<th>Unclassified</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>9 (10.6%)</td>
<td>10 (11.8%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>19 (22.4%)</td>
</tr>
<tr>
<td>Medium</td>
<td>15 (17.6%)</td>
<td>3 (3.5%)</td>
<td>1 (1.2%)</td>
<td>2 (2.4%)</td>
<td>21 (24.7%)</td>
</tr>
<tr>
<td>Large</td>
<td>11 (2.4%)</td>
<td>23 (27.1%)</td>
<td>9 (10.6%)</td>
<td>2 (2.4%)</td>
<td>45 (52.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>35 (41.2%)</td>
<td>36 (42.4%)</td>
<td>10 (11.8%)</td>
<td>4 (4.7%)</td>
<td>85 (100%)</td>
</tr>
</tbody>
</table>
Section Two

Research Methodology

3.7 Quantitative and Qualitative Methods

Data for this study was collected by means of a survey questionnaire with 38 questions. It was mailed out to 600 small, medium, and large sized Australian businesses. Most questions were designed to collect quantitative data. The survey questionnaire was employed in the study to collect the data because it enabled a systematic collection of predominantly quantitative data (Borg & Gall 1989). Furthermore, it allowed efficient, in-time, and one-off collection of data from respondents who were located all over Australia (Sekaran 2003). Sekaran (2003) also argues that questionnaires were preferred by respondents because questions are likely to be easily understood and answerable in their own pace and time. In addition, following the suggestion by Mouly (1978), the questionnaire used in the study allowed space for open-ended responses or additional comments at several locations in order to collect qualitative observations from the respondents. The above arguments support the choice of using the survey questionnaire in the study.

The questionnaire titled “Developing Sustainable Corporations in Australia” has three sections:

i) General Information,
ii) Competition Strategies Scale (CSS), and
iii) Corporate Sustainable Performance Outcomes Scale (CSPOS).
At the end of sections two and three, respondents were requested to provide additional comments about any questions covered in the section. A copy of the questionnaire is included in Appendix B.

3.8 Ethics Approval

It is a Commonwealth legislative requirement in Australia that all projects involving human subjects must meet certain standards, and have written approval from accredited ethics committees. The Swinburne Human Research Ethics Committee (HREC) or one of its sub-committees has responsibility for ensuring that research within the University has met ethical principles. All research and similar projects within the University are subjected to the requirements of the ‘National Statements on Ethical Conduct in Research Involving Humans’. Hence the researcher had a responsibility to ensure that ethics approval was obtained in writing before commencing the data collection process including the pilot survey. It meant that no data could be collected from any human participants without such an approval.

An important principle to be adhered was ‘disclosure and informed consent’. It required that a written statement must be given to all persons who would be requested to participate, outlining the purpose and nature of the research project. Its objective was to assist those persons to make an informed choice as to whether or not they wished to participate. A statement was prepared and was attached to the approval application. Later, the approved statement became a part of the request letter that accompanied the survey questionnaire.

It was also necessary to provide details of a grievance mechanism. It was proposed to the approval sub-committee that in case a respondent participating in the study had any concern about the participation, or a complaint, he or she could contact either the research supervisor or the researcher in the first instance. If the issues raised could not
be solved, then the Director of the Australian Graduate School of Entrepreneurship (AGSE) or the Chair of the Human Research Ethics Committee must be contacted. An approved grievance resolution procedure was outlined in the initial pages of the survey questionnaire. Included were all relevant contact addresses, telephone numbers, fax numbers, and email addresses.

A completed standard application form together with copies of the cover letter and the survey questionnaire were forwarded to the Human Research Ethics Committee for its approval. The committee gave written approval to conduct the survey after accepting the proposed research protocol. It suggested no changes to the survey questionnaire.

### 3.9 Data Collection Procedure

The population for this study was made up of small, medium, and large sized Australian business organisations. An unbiased sample of 600 businesses was obtained from Kompass, an electronic database of Australian businesses (Kompass 2004). Preparation of the sample from the database is presented later in this section.

Business organisations that had less than ten employees and annual sales of less than one million dollars were excluded from the sample. They may be termed as very small or micro business organisations. The reason for their exclusion was that the issues addressed in the study such as sustainable business practices might not be as much relevant to very small or micro businesses.

#### 3.9.1 Survey

As mentioned before, the composition of the sample was 600 small, medium, and large sized Australian business organisations. Survey packs were mailed out to the
600 firms identified from the Kompass electronic database. The survey pack consisted of the following items:

i) The survey questionnaire titled ‘Strategies for Sustainable Corporations’,

ii) A covering letter, and

iii) A reply paid envelope on which were printed the researcher’s name and office address.

Coloured paper was used to print the questionnaire in order to ensure that it stood out and not got mixed with other papers. Copies of the covering letter and the survey questionnaire are provided in appendices A and B.

The covering letter was addressed to either the chief executive officer or the managing director of the company. An executive was preferred as a key respondent because it was assumed that she or he could be the most informed person having wide-ranging strategic knowledge (Huber & Power 1985). A discussion on the ‘key informant’ approach for obtaining quantitative data on organisational properties is presented further in this chapter. The covering letter mainly explained the purpose of the research, benefits to a participating business organisation, university affiliation of the researcher and his supervisor, the estimated time required to fill out the questionnaire, assurances about confidentiality, issues related to ethics, and a closing date.

The research was conducted in partnership with two not-for-profit, industry organisations. They were TBL Australia (TBL is an abbreviation of Triple Bottom Line) and TiE Melbourne Chapter (TiE is an abbreviation of Talent, Innovation, and Enterprise). These partnerships demonstrated industry and university collaboration. These partnerships were acknowledged in the covering letter. In addition, the Australian Industry InnovationXchange Network (an initiative of the Australian
Industry Group) published a brief article about the research on its web portal (InnovationXchange Network 2004). It appears that the introductory article provided a good and timely publicity for the research.

No material inducements were provided for respondents to participate. An assurance was given to the participating executives that on completion of the examination of the thesis, but before publishing the results in journals or conference proceedings, the findings would be given to them in a round table workshop. In case they were unable to attend, an executive summary would be sent to them. Thus, the participating organisations were assured that they would receive the research findings in advance, i.e. before they would be published in journals or conference proceedings. This was highlighted as an incentive for participation. This value proposition made a positive impact on many executives motivating them to spend some ten minutes on the survey questionnaire.

3.9.1.1 Steps Taken to Increase the Returned Questionnaires

The target was to collect at least 100 completed questionnaires. Initially, on the closing date, only about 25 questionnaires were returned. Reminder letters were mailed to the firms that had not participated. It seems the reminder letters had some impact resulting in 10 more completed questionnaires.

At this stage, it was realised that the number of completed and returned questionnaires was not even half of the target. Therefore, the researcher decided to embark on an intensive approach. Executives representing the business organisations earmarked for the sample were contacted by telephone. A secretary usually answered the call. The secretary was briefed on the purpose of the study and the benefit to the organisation by their participation. The secretaries generally asked the researcher to re-send the questionnaire electronically by providing the name and email address. Some advised that they were not interested to participate. Rejections were taken in a
positive spirit. Although the approach was slow and time-consuming, contacting by telephone was found to be highly effective in securing completed questionnaires.

As weeks progressed, the number of returned questionnaires approached the final target. In the process, the researcher realised that ‘buy in’ of the executive secretary significantly increased his or her willingness to forward the questionnaire to the executive officer. They also provided a one-person contact with the organisation. Over an extended period of about eight months, the researcher contacted via telephone, most of the business organisations nominated in the sample.

3.9.1.2 Reasons for Unwillingness to Participate

Three out of four business executives replied back through emails that they were not interested to participate. The main reasons stated for not willing to take part were as follow:

i) They were too busy and cannot spare time to respond to any research surveys,
ii) They were inundated by similar requests,
iii) It was a company policy not to participate, and
iv) They did not wish to divulge business information.

However, it was heartening to find that one in four executives or senior managers did show requisite enthusiasm in the study by spending an average executive time of 15 minutes. At least two business organisations reported that they convened meetings of general managers to discuss and complete the questionnaire. Some corporations also sent in their Environmental Management System (EMS) Annual Reports. Many executives wrote additional comments that were insightful. Finally, the number of returned questionnaires reached 102.
3.9.2 An Electronic Database of Australian businesses

As mentioned before, ‘Kompass’, the electronic database was used for collecting information about Australian business organisations (Kompass 2004). Access to this online database was available through the library portal of the Swinburne University of Technology. It provided sufficient information about a business such as its name, address, telephone number, fax number, email address (not in all cases), web site address (not in all cases), products and services, names of executives, annual sales, number of employees, export destinations and so on. It provided tools to prepare the list of businesses on several selection criteria such as number of employees and annual sales.

As discussed before, very small or micro businesses were excluded from the study. When asked for a list of Australian businesses that had more than ten employees and annual sales of more than one million dollars, the database provided names of about 3000 businesses. It must be noted that although most of the medium and large businesses were listed in Kompass, it could not be confidently claimed that all small businesses were listed. A reason may be that since Kompass being a fee based database, many small businesses may not be enthused by the cost of subscription.

3.9.3 Population and Sample

The research objectives and the problems addressed in the study related to Australian small, medium, and large business organisations. Therefore, the population in the study was comprised small, medium, and large sized Australian business firms. In order to address the research objectives and the problems, the study was required to collect quantitative, and to a small extent qualitative, data from Australian businesses. But, collecting the data from every Australian business firm that fits the criteria of size would have been highly expensive and inconvenient. In fact, the sampling frame made available by Kompass electronic database was consisting of about 3000
companies. A sampling frame is a list of the population from which sampling units are drawn (Hussey & Hussey 1997). Contacting all the 3000 companies for data would have been beyond the time and resources available for the research.

A more pragmatic approach is suggested by Sampling theory. It suggests reducing the number of companies to a manageable size by selecting a representative sample (Hussey & Hussey 1997). Sampling theory is the study of relationships existing between a population and samples drawn from it. According to positivism, which is discussed earlier, a representative or good sample is one in which the results obtained for the sample can be taken to be true for the whole population. In other words, for conclusions of sampling theory to be valid, the chosen samples must be representative of the population. This may be achieved through random sampling (Hussey & Hussey 1997).

Hussey and Hussey (1997) suggest that a representative sample must be:

i) chosen at random, i.e. every member of the population must have an equal chance of being chosen,

ii) large enough to satisfy the needs of the investigation being undertaken, and

iii) unbiased.

The remainder of this main section explains how the above three suggestions were implemented in the study.

3.9.4 Sample Size

As suggested above by Hussey and Hussey (1997), the size of the sample must be large enough to satisfy the needs of the investigation being undertaken. In fact, a larger sample size lowers the likely error in generalising the results from the sample
to the population (Saunders, Lewis & Thornhill 2000). However, more pragmatic view needs to be taken about how large the sample size should be, considering limited time and resources available to a doctoral researcher. The following guidelines suggested by Saunders, Lewis and Thornhill (2000) seem to be concurring with the pragmatic view:

i) The confidence on the sample data as to what extent it represents the characteristics of the population,

ii) The accuracy with which the sample data estimates various population parameters, and

iii) The nature of statistical analyses undertaken.

The above qualitative guidelines were kept in mind when estimating the sample size. The first lead in estimating the sample size was found in the rule of thumb provided by Saunders, Lewis and Thornhill (2000). They suggest that when conducting inferential statistical analysis, each category must have at least 30 cases. Following this rule of thumb, since the study categorised the business organisations into four groups based on business sector and three groups based on business size for Analysis of Variance (ANOVA), it was estimated that the study required a minimum of 30 × 4 = 120 completed survey questionnaires. Thereafter, the sample size was calculated by taking into account an estimated response rate. Estimating a response rate of 20 percent, the required sample size was calculated as 600 business organisations (Croucher 2002).

3.9.5 Systematic Sampling

According to Pedhazur and Schmelkin (1991), sampling permeates nearly every facet of our lives because in science and human affairs alike, we lack the resources to study more than a fragment of the phenomena that might advance our knowledge. That partial information upon which we act in our daily lives may be non-representative is
an all too familiar experience. Thus, formal sampling is a process aimed at obtaining a representative portion of whole population, thereby affording valid inferences and generalisations to it. Formal sampling mainly involves selecting a representative sample from the sample frame by a random method that provides protection against selection bias. Selecting an unbiased sample from the sample frame ensures that the data from the sample may represent the characteristics of the population (Saunders, Lewis & Thornhill 2000).

The task of formal sampling in the study involved randomly selecting names of 600 business organisations from the sample frame of 3000 business names provided by Kompass, the electronic database. In order to accomplish this, systematic sampling strategy was selected. The primary reasons for using systematic sampling rather than simple random sampling are the convenience and simplicity with which it can be applied (Croucher 2002; Pedhazur & Schmelkin 1991).

The Systematic Sampling refers to a process of sampling in which, following a random start, every business name at regular intervals is selected into the sample from the sampling frame (Croucher 2002; Pedhazur & Schmelkin 1991; Tabachnick & Fidell 2001). Following the Systematic Sampling procedure given in Tabachnick and Fidell (2001), the name list of 3000 small, medium, and large Australian business organisations was obtained from Kompass. It may be noted that Kompass provides a serial number to each of the 3000 business names. A random number under 3000 was obtained. The random number became the serial number of the first business name selected into the sample. Since the sample frame comprising of 3000 business names was about five times larger than the proposed sample size of 600, the second name into the sample was obtained by increasing the previous serial number by five. The third and the subsequent serial numbers and business names were obtained by repeatedly increasing the last serial number by five. When the end of the list was reached, selection process was continued by smoothly scrolling to the beginning of
the list. The systematic sampling process was continued until all the 600 business names were collected into the sample.

### 3.9.6 Key Informant Approach

According to Huber and Power (1985), the ‘key informant’ approach for obtaining quantitative data on organisational properties is widespread in organisational and strategic management research, but they warn that its use requires careful consideration of certain issues to reduce potential measurement error. Table 3.8 summarises the extent to which these guidelines are followed in this study to demonstrate that as far as possible the data was free from informant-specific measurement error. Furthermore, Huber and Power note that if only one informant per organisation is to be questioned, then the researcher should attempt to identify the most knowledgeable person. In this study, nearly all informants were the Chief Executive Officers, Managing Directors, or senior managers who were delegated as informants, thereby, supporting the position that the collected responses relate to the business organisation.
Table 3.8 Key Informant Approach to the Measurement of Organisational Properties

<table>
<thead>
<tr>
<th>Number</th>
<th>Guidelines</th>
<th>How was Reflected in This Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>If only one informant, then attempt to identify the most informative person</td>
<td>Most of the informants were the head of the organizations or the senior managers</td>
</tr>
<tr>
<td>2.</td>
<td>Recognize the role of person’s emotional involvement with the subject.</td>
<td>Informants were involved with strategic issues related to research constructs and therefore have a keen interest with the subject. However, individual level emotional effects were not isolated.</td>
</tr>
<tr>
<td>3.</td>
<td>Attempt to motivate informants to cooperate with the study seriously</td>
<td>All participants were offered a summary of the findings.</td>
</tr>
<tr>
<td>4.</td>
<td>Minimize elapsed time.</td>
<td>Informants were requested to provide data on general and not specific events in designated time frame.</td>
</tr>
<tr>
<td>5.</td>
<td>Assess the impact of alternate framing of questions.</td>
<td>Discussed and resolved at the pilot stage.</td>
</tr>
<tr>
<td>6.</td>
<td>Use pre tested and structured questions.</td>
<td>Followed in the questionnaire development; most were structured questions with valid measurement properties.</td>
</tr>
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</table>

Based on Huber and Power (1985)
Section Three

Research Instrumentation

3.10 The Survey Questionnaire

The questionnaire used in the study for the collection of data titled “Developing Sustainable Corporations in Australia” consists of three sections, each of them was designed to serve a specific purpose.

3.10.1 Section 1—General Information

This section consists of questions related to the selected situational characteristics of the respondents. These are a respondent’s company name and address (both optional), position, gender, formal education, telephone and fax numbers, number of employees (in the company), total sales (in Australian dollars), and industry type. The list of industry types was obtained from the ‘Australian and New Zealand Standard Industrial Classification’ published by the Australian Bureau of Statistics (Castles & Cook 1993).

3.10.2 Section 2—Competition Strategies Scale (CSS)

There are 17 items in this scale. They were constructed from insights gleaned from the extant literature in strategic management research and practice, in particular, Theory of Barriers to New Competition (Bain 1956; Chang & Tang 2001; Han, Kim & Kim 2001; Harrigan 1981; Karakaya & Stahl 1989; Robinson & McDougall 2001), Porter’s Theory of Competitive Forces (Porter 1980; Yamin 1997), and Resource-

A header question was the hub of the scale that read as follows: ‘In your opinion, to what extent do the following elements contribute to your organisation’s competitive advantage?’ Below this header question were presented the items as statements. Five point Likert-type scale was used so that a respondent could chose one of the five points for each item. The scale points were labeled in order to assist a respondent to perceive how much an item did contribute to competitive advantage in his or her organisation (Bryman & Cramer 2001; Hussey & Hussey 1997; Pallant 2001; Pedhazur & Schmelkin 1991; Sekaran 2003). The labels were as follows: 1—least contribution, 2—minimum contribution, 3—moderate contribution, 4—considerable contribution, and, lastly, 5—high contribution. The scale is an interval scale because differences between any two adjacent points are considered to be equal (Sekaran 2003).

Reasons for considering this scale format are as follows. First, it allows the presentation of the statements pertaining to all the items as a concise list. Second, it is easy to go through the statements. Third, this format makes data coding into spreadsheet-like statistical software, more easy and straightforward (Sekaran 2003).

Following the suggestion by Mouly (1978), a respondent was also requested, in addition to rating the statements, to write any comments regarding competitive strategy and sustainable business practices in his or her organisation, in the space provided at the end of the scale.
3.10.3 Section 3—Corporate Sustainable Performance Outcomes Scale (CSPOS)

This scale with 21 items was designed to collect a respondent’s perception of the importance assigned to the various sustainable business practices and aspects in corporate sustainability by his or her organisation. In the next subsection, the development of CSPOS scale is discussed. As in CSS scale, the item statements in CSPOS scale were constructed by consulting the extant literature in corporate environmental management, corporate social performance, Stakeholder Management theory, Shareholder theory, and corporate sustainable development (e.g. Aragon-Correa & Sharma 2003; Banerjee 2002; Bansal 2002; Boatright 1994; Brundtland 1990; Buchholz 2004; Carley & Christie 2000; Carroll 1979; Clarkson 1995; Donaldson & Preston 1995; Dunphy, Griffiths & Benn 2003; Elkington 1998; Freeman 1994; Gladwin, Kennelly & Krause 1995; Sustainability Reporting Guidelines 2002; Greening & Turban 2000; Hart 1995; Hess 2001; Hillman & Keim 2001; Jennings & Zandbergen 1995; Jensen & Meckling 1978; Moore 1999; Purser, Park & Montuori 1995; Reed 1999; Rolston III 1995; Sharplin 2003; Shrivastava 1995; Smith 2003; Stanwick & Stanwick 1998; Starik and Rands 1995; Starkey & Crane 2003; Stead & Stead 1994; Sternberg 1997; Swanson 1999; Wilson 2003; Wood 1991).

The header question in this scale was framed as follows: ‘In your opinion, to what extent the following elements are important to your organisation?’ The labels for the five Likert-like scale points were as follows: 1—least important, 2—minimally important, 3—moderately important, 4—considerably important, and, lastly, 5—very important. Similar to CSS scale, this scale also had an interval scale. A space was provided for respondents to write any additional comments on the items or about sustainability activities in their business.
3.11 Instrument Development

3.11.1 Development of Competition Strategies Scale (CSS)

The item statements (variables) in this scale were drawn from both strategy content research and strategy process research (Mintzberg 1998). The item statements were mostly drawn from the extant literature relating to Barriers to New Competition theory (Bain 1956; Chang & Tang 2001; Han, Kim & Kim 2001; Harrigan 1981; Karakaya & Stahl 1989; Robinson & McDougall 2001), Porter’s Theory of Competitive Advantage (Porter 1980; Yamin 1997), and Resource-Based Theory of Competitive Advantage (Barney 1986; 1991, 2001a, 2001b, 2002; Barney, Wright & Ketchen 2001; Grant 1991; Kogut & Zander 1992; Mahoney & Pandian 1992; Mavondo & Farrell 2003; Prahalad & Hamel 1990; Spender & Grant 1996; Teece 1984; Teece, Pisano & Shuen 1997; Wernerfelt 1984). For example, the item statements namely vision and values of the CEO, and management leadership are considered in RBV literature as firm specific and path dependent strategic resources capable of creating competitive advantage. This study identified and selected them as strategic organisational resources as they were determined to be rare, valuable, difficult to imitate, and non-substitutable (e.g. Barney 1991; Grant 1991; Lockett & Thompson 2001). Similarly, the item statement namely ‘shared values among employees’ was included in the scale as it is recognised as an important strategic resource grounded in organisational culture. In RBV literature, organisational culture is emphasised as a crucial source of competitive advantage (e.g. Barney 1986; Mavondo & Farrell 2003). The item statements such as capital intensive industry, unique management of employee development, difficult-to-know (for competitors) your future strategic move, and limited number of major competitors were written and included in the scale, with a view that they may capture the respondents’ perception of height of barriers in their industry. It was recognised from the guidance received from Theory of Barriers to New Competition and Porter’s Theory of
Competitive Forces that the above strategic business practices have potential to deter new entrants from entering the industry and escalating the competition.

3.11.2 Development of Corporate Sustainable Performance Outcomes Scale (CSPOS)

The theme underpinning this scale is that the notion of corporate sustainability must incorporate financial, social, and environmental values (Dunphy, Griffiths & Benn 2003). The item statements were developed by extensively consulting the triple bottom line reporting guidelines published by the Global Reporting Initiative (GRI) (Sustainability Reporting Guidelines 2002). The extant literature in corporate environmental management, corporate social performance, Stakeholder Management theory, Shareholder theory, and sustainable development were also consulted.

3.12 Validity and Reliability of CSS and CSPOS Scales

In the following subsections, the validity and reliability of CSS scale and CSPOS scale are discussed.

3.12.1 Validity

According to Pedhazur and Schmelkin (1991) validity of scales is an instance of scientific inquiry, with all that entails. It refers to the appropriateness, meaningfulness, and usefulness of the specific inferences made from test scores. Thus, one validates not a test, but an interpretation of data arising from a specified procedure. Taking this position on scale validity, Pedhazur and Schmelkin (1991) make two useful remarks. First, the degree of validity of inferences depends on the purpose, the respondents, and the circumstances for which they are made. Second, in order to minimize ambiguity, it is essential to specify, at the very least, for what, for
whom, and under what circumstances are inferences from a set of scores being made. In this study, both remarks are taken into consideration by clearly specifying its purpose and objectives.

According to Pedhazur and Schmelkin (1991), a widely used tripartite classification related to validation of measures is i) content, ii) criterion, and iii) construct. Content refers to some domain of content (e.g. social studies, vocabulary, and job performance). Criterion refers to some outcome (e.g. graduation from high school, absenteeism, and delinquency). Construct refers to some trait or attribute (e.g. mental ability, attitude, and motivation). Although a classification of the validation process according to major purposes is convenient, Pedhazur and Schmelkin (1991) warn against reification of the classification because the different purposes are interrelated facets of the same purpose. In this study, besides being specific about the purpose and objective of the study, the validity of the scales was established by a pilot test that helped modify each facet of validity in accordance with the requirements of the sample and the nature of the respondents.

### 3.12.2 Reliability

According to Pedhazur and Schmelkin (1991), reliability refers to the degree to which test scores are free from errors of measurement. Broadly, two kinds of errors may occur in the process of measurement: i) systematic errors, and ii) unsystematic errors. Systematic errors are ones that recur upon repeated measurements, whereas unsystematic or random errors are ones that vary in unpredictable ways upon repeated measurements (Pedhazur & Schmelkin 1991).

Different definitions and conceptions of errors have led to different approaches to the estimation of reliability. Pedhazur and Schmelkin (1991) classify the most commonly used approaches to the estimation of reliability under three categories: i) test retest, ii) equivalent forms, and iii) internal consistency. According Pedhazur and Schmelkin
(1991) the test retest and equivalent forms pose practical problems in administering tests. On the other hand, they state that the internal consistency approach to the estimation of reliability, particularly in terms of Cronbach’s $\alpha$ (Alpha) is useful when dealing with measures of phenomena that are derived from a theoretical frame of reference and are of interest on substantive grounds (e.g. traits, characteristics, attributes).

In the case of this study, Cronbach’s $\alpha$ for each scale were established. According to Caplan, Naidu and Tripathi (1984), Cronbach’s $\alpha$ of 0.5 or above are judged as adequate for research purposes. Both CSS and CSPOS scales in the study demonstrated a Cronbach’s $\alpha$ above 0.85.

### 3.13 Summary

The chapter discussed research design, methodology, and development of the survey questionnaire. In section 1 on Research Design, the study’s main purpose, specific objectives, and research problems were presented. The section also described that the study was following the philosophy of positivism and was both descriptive and exploratory in nature. It was termed as a correlation study, in the sense, it explained the degree of relationship between any two latent variables, but would not indicate a cause and effect relationship between those variables. The section explained that the survey questionnaire comprising 38 items was organised into three parts: (i) General Information, (ii) Competition Strategies Scale (CSS), and (iii) Corporate Sustainable Performance Outcomes Scale (CSPOS). The Research Design section also explained the pilot survey, which was primarily conducted in order to test the validity and reliability of CSS and CSPOS scales in the survey questionnaire. In the main survey the data was collected from 102 Australian business organisations by means of the survey questionnaire. Section 1 concluded with summaries of the respondents’
position, gender, formal education, their organisations’ business sector, number of employees, and annual sales.

Section 2 gave explanations on the ethics approval procedure, main survey, Kompass—the electronic database of Australian business organisations, selection of the sample and sample size, systematic sampling, and key informant approach.

Section 3 explained the procedures followed in the development of the survey questionnaire. It was emphasised that the relevant literature was extensively consulted in the preparation of the variables or item statements in the two scales. It gave an overview of validity and reliability of measurement scales, followed by the confirmation that the values of Cronbach’s $\alpha$—a measure of reliability of a scale in terms of its internal consistency—for both CSS and CSPOS scales were adequate.
CHAPTER 4

Analysis of the Competition Strategies and Sustainable Performance Outcomes in Australian Business Organisations

This chapter is organised into two sections. In Section One, the procedure for factor analysis followed in this study, is briefly discussed. Factor analysis is a statistical technique that enables discovering which variables in a data set form coherent and relatively independent subgroups or factors (Tabachnick & Fidell 2001). In Section Two, the results of the factor analysis are discussed. It also has a discussion about naming the factors.
Section One

Procedure for Factor Extraction

4.1 Factor Analysis

Gorsuch (1983) explains that the aim of factor analysis usually is to summarise the interrelationships among a set of variables in a concise but accurate manner as an aid in conceptualisation. This is often achieved by including the maximum amount of information from the original variables in as few derived variables, or factors, as possible to keep the solution understandable. In parsimoniously describing data, factor analysts explicitly recognise that any relationship is limited to a particular area of applicability. Areas qualitatively different, i.e. areas where relatively little generalisation can be made from one area to another, are referred to as separate factors. Each factor represents an area of generalisation that is qualitatively distinct from that represented by any other factor. Within an area where data can be summarised, i.e. within an area where generalisation can occur, factor analysts first represent that area by a factor and then seek to make the degree of generalisation between each variable and the factor explicit (Gorsuch 1983).

A measure of degree of generalisability found between each variable and each factor is calculated and referred to as a factor loading. Factor loadings reflect quantitative relationships. The farther the factor loading is from zero, the more one can generalise from that factor to the variable. Comparing loadings of the same variable on several factors provides information concerning how easy it is to generalise to that variable from each factor (Gorsuch 1983).
Pedhazur and Schmelkin (1991) explain that there are two approaches to factor analysis. They are:

i) Exploratory factor analysis, and
ii) Confirmatory factor analysis.

According to Pedhazur and Schmelkin (1991), exploratory factor analysis is used for concept or construct validation in a scale or an instrument. It mainly deals with discovering the factors in a measurement scale. On the other hand, confirmatory factor analysis confirms the factors that govern the underlying relationships between variables.

Exploratory factor analysis was conducted in this study. Confirmatory factor analysis, which may follow exploratory factor analysis, could not be performed due to a lack of data cases. Pallant (2001) notes that a new set of data must be used in confirmatory factor analysis. As mentioned earlier in chapter 3, the survey took a lot of time and other resources. It was necessary to wholly use the collected data set in the exploratory factor analysis. Since conducting one more survey was realised to be beyond the time frame and resource availability for the study, the factor analysis was limited to an exploratory approach.

4.2 Procedure for Exploratory Factor Analysis

Pallant (2001) explains that exploratory factor analysis comprises three major stages:

i) Assessment of suitability of data for factor analysis,
ii) Factor extraction, and
iii) Factor rotation and interpretation.
4.2.1 Assessment of Suitability of Data for Factor Analysis

Pallant (2001) explains that the suitability of a data for factor analysis can be determined by the following two issues:

i) Sample size, and

ii) Strength of relationships between variables.

4.2.1.1 Sample Size

Catell (1978) recommends a sample size of at least 200 cases. Comrey (1978) argues that factor structure stabilises when sample size reaches 2,000 cases. Nunnally (1978) suggests a sample size that is at least 10 times the number of variables. Cliff (1987) recommends a sample size of 150 cases when there are 40 variables. Thus, these wide ranging rules of thumb suggested by the researchers show that deciding an appropriate sample size is a complex task. However, Wolins (1982) argues that a sample size depends on the specific aims of analysis, the number of factors to be obtained, and the factor loadings. These suggestions by Wolins (1982) were followed in the study when determining the adequacy of the sample size for factor analysis.

As mentioned above, Cliff (1987) recommends a sample size of 150 for 40 variables (item statements) in a scale. Since, CSPOS scale has only 21 item statements and CSS scale has only 17 item statements, the sample size used in the study appears to be adequate.

Pedhazur and Schmelkin (1991) advise researchers not to give too much importance to rules of thumb. Instead of rules of thumb, they argue that, as far as possible, a large sample must be used. In this study the sample size was 102. It may not be as large as that recommended for a sample size in the rules of thumb mentioned in the earlier paragraph. But, the sample size used seems to be adequate in the light of the
suggestions made by Wolins (1982). For example, in the survey questionnaire, the item statements for the two scales, i.e. Competition Strategies Scale (CSS) and Corporate Sustainable Performance Outcomes Scale (CSPOS), were prepared by consulting the extant literature in relevant areas. Selecting an item statement for a scale was based on how the item was relevant to one of the several distinct concepts considered in the scale. Moreover, it was ensured that a scale did not focus on too many concepts. A pilot survey was conducted before the main survey in order to remove or correct any ambiguous item statement. The study took efforts to design the survey instrument that could collect data meeting the needs of the specific research objectives. Therefore, following the suggestions made by Wolins (1982), it can be argued that a good design of the survey questionnaire, as described above, and the data collected from it, may have compensated for any sample size inadequacy.

The sample size used in this study did satisfy the rule of thumb stated by Cliff (1987). It also has met the suggestions made by Wolins (1982). Therefore, it was concluded that a sample size of 102 used in the study was reasonably adequate.

4.2.1.2 Strength of Relationships between Variables

Tabachnick and Fidell (2001) state that the strength of relationship between two variables is demonstrated by the value of their correlation coefficient. They recommend that correlation coefficients in a correlation matrix must be more than 0.3. The strength of relationships between variables determines the factorability of the data (Tabachnick & Fidell 2001). Pallant (2001) refers to two tests in SPSS for Windows, the statistical software used in this study, which provide the assessment of factorability. They are

i) Bartlett’s test of sphericity, and
ii) Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy.
Tabachnick and Fidell (2001) state that data is factorable when Bartlett’s test of sphericity is significant (p-value < 0.05) and KMO index is at least 0.6. In section 2, the assessments of factorability for CSS and CSPOS scales obtained from the above two tests are given.

4.2.2 Factor Extraction

Gorsuch (1983) explain that exploratory factor extraction involves finding the smallest number of factors or latent variables from a set of variables that can summarise the interrelationships between the variables. Important factor extraction methods are Principal Component Analysis (PCA), Principal Factors (PF), Maximum Likelihood Factoring, Image factoring, and Alpha factoring (Gorsuch 1983). Pallant (2001) suggests that PCA and PF are more suitable methods.

In this study PCA method was used for factor extraction. Gorsuch (1983) contends that in PCA method, factors, which are also known as components in the method, are obtained by differentially weighing variables. A factor extracts both common variance and error variance. PCA method was preferred in this study than the other methods as the method has the ability to avoid the problem of ‘factor indeterminacy’ associated with factor analysis and also is mathematically simpler (Stevens 1996). Furthermore, Tabachnick and Fidell (2001) suggest that if a researcher is interested in an empirical summary rather than a theoretical solution, this being the case in this study, PCA is a better choice.

For determining the number of factors to be retained in a scale, Pallant (2001) refers to the following two techniques in SPSS for Windows:

i) Kaiser criterion, and
ii) Cattell’s Scree test.
Kaiser criterion suggests that we must retain only those factors with an eigenvalue of 1.0 or more (Pallant 2001). Cattell’s Scree test, which displays a plot of eigenvalues against factors, recommends keeping all the factors above an elbow of a curve in the plot (Pedhazur & Schmelkin 1991). In Section 2, the details of the number of factors retained in CSS scale and CSPOS scale by applying both techniques are presented.

4.2.3 Factor Rotation and Interpretation

Pallant (2001) explains that once the number of factors to be retained is decided, the next step is their interpretation. Gorsuch (1983) explains that the factors are rotated in order to increase their interpretability. This involves rotating the coordinate system about its origin. During a rotation, the distribution of variables from each other in the space remains the same, but the mapping of a variable on the coordinate axes, which refers to the loadings of the variable on several factors, do change.

The main purpose of a factor rotation is to obtain a simple structure of factors. Gorsuch (1983) explains that the criteria of simple structure were used by Thurstone (1947) to provide a psychologically meaningful solution to the problem of the indeterminacy of the factors. Thurstone hoped that the factor pattern of any given variable would be constant when the variable was included in another factor analysis containing the same common factors. To achieve this goal, Thurstone suggested that the factors be rotated so that each variable loaded on as few factors as possible. Thurstone showed that such rotation leads to a position being identified for each factor that would be independent of the number of variables defining it. Therefore, a simple structure factor should be relatively invariant across studies (Gorsuch 1983).

Bryman and Cramer (2001) explain that factor rotation methods that are available can be classified into two groups. They are:
i) Orthogonal factor rotation, and
ii) Oblique factor rotation.

An orthogonal rotation assumes that the factors are not correlated. But, an oblique rotation allows some correlation to exist between the factors (Bryman & Cramer 2001).

Bryman and Cramer (2001) contend that it is hard to specify which one of the above groups can provide better factor interpretation. The advantage of the orthogonal rotation is that the solution revealed by factors is not redundant. But, the factors are forced to become unrelated, while in fact they could be related. Thus, an orthogonal rotation appears as an artificial method not reflecting the reality. On the other hand, an oblique rotation attempts to address the shortcoming in an orthogonal rotation by allowing for some degree of correlation between factors. However, it must be noted that the original factors in both groups of rotations are orthogonal (Bryman & Cramer 2001).

This study has used both types of factor rotation methods. Pallant (2001) points out that the statistical software SPSS for Windows provides the following orthogonal factor rotation methods: i) Varimax, ii) Quartimax, and iii) Equamax, and the following oblique factor rotation methods: i) Direct Oblimin, and ii) Promax. Gorsuch (1983) makes an interesting comment that if a simple structure is already present, then any of the more popular factor rotation methods can be expected to lead to the same interpretation. This study has used Varimax method for orthogonal factor rotation, and Direct Oblimin method for oblique factor rotation. They were preferred following the suggestion made by Gorsuch (1983) that they would secure a simple structure effectively.
4.2.3.1 Interpretation of Rotated Solution and Simple Structure

In the paragraphs that follow, several criteria for the interpretation of factor loadings are discussed. It may be recalled from an earlier discussion that a factor loading refers to the loading of a variable on a factor. A variable may load on one or more factors (Gorsuch 1983). These criteria were followed in the study for interpreting the factor loadings, including systematically discarding variables, which were not loading substantially on any factor.

Tabachnick and Fidell (2001) state that, if a simple structure is present (and factors are reasonably uncorrelated), several variables correlate highly with each factor and only one factor correlates highly with each variable. Gorsuch (1983) outlines a number of useful criteria for obtaining a simple structure, which were originally developed by Thurstone (1947). They are:

i) Each variable should have at least one zero loading,

ii) Each factor should have a set of linearly independent variables whose factor loadings are zero,

iii) For every pair of factors, there should be several variables whose loadings are zero for one factor but not for the other,

iv) For every pair of factors, a large proportion of the variables should have zero loadings on both factors whenever more than about four factors are extracted, and

v) For every pair of factors, there should be only a small number of variables with nonzero loadings on both.

The following recommendations were also used in the study, which may have been developed following Thurstone’s simple structure criteria (Thurstone 1947). First, Stevens (1996) suggests that any factor loading above 0.51 must be considered as a
salient loading for a sample size of 100. A salient loading is an indicator of a relationship between the variable and the factor. Second, Gorsuch (1983) recommends that we need not interpret the factor loadings below 0.4, for a sample size of 100. Third, Tabachnick and Fidell (2001) recommend that it is usually best to avoid complex variables because their interpretation leads to ambiguity. Tabachnick and Fidell describe a complex variable as the variable that has high correlation on more than one factor.

After tentatively deciding the number of factors to be retained, factor rotations were conducted using both Varimax method, which is an orthogonal factor rotation, and Direct Oblimin method, which is an oblique factor rotation. The factor loadings in a rotated solution were interpreted in order to obtain a simple structure. The interpretation was continued in each scale in an exploratory fashion until obtaining a simple structure (Pallant 2001).

4.3 Naming of Factors

Naming the factors obtained in a rotated solution is also a crucial part of interpreting factors. Pedhazur and Schmelkin (1991) advise that knowledge of the specific domains considered in a scale is immensely valuable in giving appropriate names to the factors. Understanding the underlying concept in the variables of a factor is the key to meaningful and possibly suitable naming. But, researchers consider that naming of factors is not an easy task as it appears. For example, Shulman (1973) satirically remarks that naming a set of factors is not a rational act, but a primary process of thinking, untainted by the reality principle. He calls somewhat cynically the afflictions suffered by a factor analyst as ‘rotation anxiety’ and ‘extraction trauma’.
Section Two

A Discussion on Results of Factor Analysis

4.4 Results of Factor Analysis

This subsection presents the results obtained from the factor analysis performed on the data collected in each of the two measurement scales from the survey. It also presents the analysis of the results. We may recall that the two scales were i) Competition Strategies Scale (CSS), and ii) Corporate Sustainable Performance Outcomes Scale (CSPOS). The analysis was performed using the statistical software SPSS for Windows.

4.4.1 Results of Factor Analysis performed on Competition Strategies Scale (CSS)

The results of the factor analysis conducted on the data collected from the 17 items CSS scale are presented under the following three sub headings:

i) Assessment of the suitability of the data for factor analysis,
ii) Factor extraction, and
iii) Factor rotation and interpretation.
4.4.1.1 Assessment of the Suitability of the Data for Factor Analysis

The correlation matrix had a large number of coefficients larger than 0.3. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.777. Since this value was more than the recommended minimum of 0.6, it was indicating that the data was factorable. Bartlett’s test of sphericity gave the value of approximate $\chi^2$ (Chi-square) as 710.2, with 136 degrees of freedom. The p-value was found to be 0.0005. Since the p-value was less than 0.05, the approximate $\chi^2$ was considered as significant. This result also indicated that the data was suitable for factor extraction.

4.4.1.2 Factor Extraction

Principal component analysis (PCA) was used for factor extraction. Visual examination of the plot obtained in the Cattell’s Scree test revealed that 2 factors were located above the elbow of the curve. But, Kaiser criterion showed that 3 factors had eigenvalues larger than 1.0, explaining a cumulative variance of 62.4%. Kaiser criterion was not clearly informing whether three or two factors must be retained. But, the cumulative variance at the 2nd factor was 55.3%, which was almost close to the cumulative frequency of 62.4% at the 3rd factor. Pedhazur and Schmelkin (1991) argue that PCA is a data reduction method and the aim of its application must be to obtain a relatively small number of factors that will extract most of the variance of a relatively large set of variables. In the light of these arguments, no theoretical rationale was found for keeping the 3rd factor. Therefore, only two factors were extracted.

4.4.1.3 Factor Rotation and Interpretation

Factor rotation of the loading matrix was performed using both Varimax method and Direct Oblimin method. In each method, the factor loadings were examined and
interpreted using the criteria and recommendations, outlined earlier in section 1, in order to obtain a simple structure of factors. In the exploratory process, five variables (item statements) in the scale were discarded, as they were not found to load significantly on any factor. The variables (item statements) that clustered under each of the two factors are given below. The two factors were named tentatively as factor 1 and factor 2. The variables clustering under factor 1 and factor 2 were shown below:

Factor 1 in CSS scale:

- a) Management leadership,
- b) Vision and values of the CEO,
- c) Shared values among employees,
- d) Reward structure, and
- e) Flexible organisational structure.

Factor 2 in CSS scale:

- a) Capital intensive industry,
- b) Low threat of new entrants to the industry,
- c) Competitors hold a small market share,
- d) Entry barriers to competitors created through exclusive contract of raw materials and other inputs,
- e) Difficult-to-copy administrative system, and
- f) Difficult-to-know (for competitors) your future strategic moves.

The subsections that follow show the names given to the above two factors and the explanations for why they were named as such.
4.4.1.3.1 Reasons for Naming Factor 1 in CSS Scale as Strategic Resources and Capabilities

The variables clustering together as factor 1 in CSS scale were management leadership, vision and values of the CEO, shared values among employees, reward structure, and flexible organisational structure. The above variables are distinguished as strategic organisational resources and capabilities in the Resource-Based View (RBV) theory. O’Regan and Ghobadian (2004) define organisational resources as stocks of knowledge, physical assets, human capital, and other tangible and intangible factors that a business owns or controls, which enable it to produce efficiently and effectively market offerings that have value for some market segments. The concept of organisational capabilities is broad in nature with many elements and attributes. Madhok (1997) states capabilities as a combination of resources that creates higher-order competencies. Organisational capabilities are described as the building blocks to develop core competencies, and are a firm’s capacity to deploy its assets—tangible or intangible, to perform a task or activity to improve performance. Capabilities are usually embedded in the firm, and require both time and significant resources to change (Amit & Schoemaker 1993; Grant 1991; O’Regan & Ghobadian 2004; Prahalad & Hamel 1990). Examples of a firm’s capabilities are its capacity to offer excellent customer service, or to develop a new product or service.

Consistent with the RBV perspective, Barney (1991) argues that the resources and capabilities a firm controls become the source of sustainable competitive advantage when they are rare, valuable, imperfectly imitable, and non-substitutable. Following the above views of Barney, management leadership, vision and values of the CEO, shared values among employees, and flexible organisational structure are gaining increasing recognition as rare and valuable organisational assets or capabilities. Their characteristics of rareness and value mainly originate from their non-elastic supply in the factor market. This supply constraint is because possibly they are:
i) developed over long periods of time,

ii) path dependent,

iii) complex,

iv) tacit, and/or


Furthermore, since they are firm specific, tacit, and entrapped in organisational culture, they cannot be easily bought or sold. For example, shared values among employees are grounded in firm specific organisational culture. Therefore, they can be neither easily nor quickly transferred to another organisation (Ahmed 1998). As a result, in addition to their rareness and value, they may also be hard to imitate and substitute. Similarly, the variable namely reward structure is an explicit reflection of how much a business organisation values and fairly rewards its employees or human capital. The extant literature in strategy emphasises that human capital comprising committed and highly skilled employees is critical and valuable for knowledge- and innovation-oriented organisations (Grant 1991). In other words, a well-designed reward structure is an important asset to energise organisational capabilities.

Since the organisational resources and capabilities identified by the variables in factor 1 are described as rare, valuable, imperfectly imitable, and non-substitutable, consistent with the views of RBV theory, they may be qualified as the strategic resources and capabilities. For a firm that owns and controls them, they can be the most effective means of achieving competitive advantage (Barney 1991). Since the underlying concept in these variables was recognised as strategic resources and capabilities, factor 1 in CSS scale was named as Strategic Resources and Capabilities (Pedhazur & Schmelkin 1991).
4.4.1.3.2 Reasons for Naming Factor 2 in CSS Scale as Barriers to Entry

The variables clustering under factor 2 in CSS scale can be identified primarily as various sources of barriers to entry to new competition (Bain 1956; Chang & Tang 2001; Dean & Brown 1995; Han, Kim & Kim 2001; Harrigan 1981; Karakaya & Stahl 1989; Pepperell & Turner 1981; Porter 1980; Robinson & McDougall 2001; Willard & Savara 1988; Yao 1988). The concept of entry barriers or entry deterrence, first introduced by Bain (1956), has its foundation on the general premise that an array of structural characteristics in a given industry may pose conditions adverse to market entry for potential competitors (Han, Kim & Kim 2001). Furthermore, barriers to entry in an industry may decrease the likelihood, scope, or speed with which potential competitors can come into the markets (Karakaya & Stahl 1989). Indeed, Porter (1980) stresses that barriers to entry may give incumbents inherent competitive advantages over potential entrants. Mahoney and Pandian (1992) argue that the presence of barriers to entry may result in fewer entries into an industry and therefore enables incumbents to have above-average profitability. However, it is also reported that entry barriers may be ineffectual in thwarting competitive entry and may even compromise incumbents’ competitiveness by encouraging incumbent inertia (e.g. Han, Kim & Kim 2001; Yip 1982).

Drawing from the earlier discussion in Section 1 about naming of factors, the forthcoming paragraphs present justifications for the naming of factor 2 as Barriers to Entry by analysing each variable in the factor (Pedhazur & Schmelkin 1991).

i) Capital intensive industry:

In a capital-intensive industry, new entrants need to invest large financial resources in order to enter the industry and succeed in the competition (Bain 1956; Harrigan 1981; Porter 1980). New comers are confronted by more challenge if the capital is required for risky or unrecoverable up-front
expenditures such as advertising or research and development (R&D). It may be noted that capital is necessary not only for production facilities, but also for costs such as customer credit, inventories, or covering start-up losses. Even large companies, which have the financial strength to enter almost any industry, may find that entering industry such as digital technology or mineral extraction requires huge capital. As a result, the incumbents may benefit from a limited number of likely entrants. Even though capital is available on the capital markets, de novo entry represents a risky use of that capital. This may attract risk premiums charged to the capital raised by a prospective entrant. This differential treatment also may constitute advantages for incumbent firms. Thus, the above arguments emphasise that a capital-intensive industry has inherent structural entry barriers. As a result of these entry barriers, the incumbents may enjoy the market protection against new competition (Harrigan 1981; Karakaya & Stahl 1989; Porter 1980).

**ii) Competitors hold small market share:**

The variable namely competitors hold small market share may indicate a presence of economies of scale as well as high industry concentration. Economies of scale occur when an increase in production volume of a specific product or service decreases average cost. When there are sunk costs and minimum government regulation, such economies may lead to natural monopolies or oligopolies characterised by non-competitive pricing (Yao 1988). Porter (1980) argues that economies of scale always lead to a cost advantage for a large business (or firm that can share activities) over small sized businesses, when the large business has the most efficient facilities, distribution systems, service organisations, or other functional activities for their size. The cost advantage can be matched only by attaining comparable scale or appropriate diversification to allow cost sharing. The large or diversified firm can spread the fixed costs of operating these efficient facilities
over a large number of units, whereas the smaller firm, even if it has technologically efficient facilities, will not be able to fully utilise them. Furthermore, when competitors hold a small market share, this may in contrast indicate that the incumbent holds a large market share. This may indicate high industry or market concentration, which is characterised by the presence of only few large competitors or oligopolies (Karakaya & Stahl 1989). High industry concentration may also result in economies of scale and the competitive advantage to the existing business operators. In the light of the above arguments, the status of competitors holding a small market share may reflect the existence of economies of scale and high industry concentration, both indicating the likely presence of high entry barriers to potential new competition.

**iii) Entry barriers to competitors created through exclusive contract of raw materials and other inputs:**

Established firms may have locked up the most critical sources of raw materials and/or tied up foreseeable needs early at prices reflecting a lower demand for them than currently exists (Porter 1980). Besides, incumbents can increase the height of barriers to entry by making strategic moves in advance such as filling all niche product or service categories and dominating distribution channels (Chang & Tang 2001). To the extent that logical distribution channels for the product have already been served by established firms, the new firm must persuade the channels to accept its product through price breaks, cooperative advertising allowances, and the like, which reduce profits. The manufacturer of a new product, for example, must persuade a retailer to give shelf space in a fiercely competitive super market via promises of promotion, intense selling efforts to the retailer, or some other means (Porter 1980).
Thus, it may be argued that the more limited the wholesale or retail channels for a product are and more existing competitors have these tied up, entry into the industry will be tougher. Existing competitors may have ties with channels based on long relationships, high-quality service, or even exclusive relationships in which channel is solely identified with a particular manufacturer. Sometimes this barrier to entry is so high that to surmount it a new firm must create an entirely new distribution channel, as Timex did in the watch industry (Porter 1980). These arguments in relation to exclusive contract of raw materials and other inputs indicate that they are strategically important entry barriers to new competition.

iv) Difficult-to-copy administrative system:

Administrative procedures and practices of a business organisation may be hard-to-copy for potential and existing competitors. A reason may be that the proprietary organisational practices may have been underpinned by tacit knowledge (Saint-Onge 1996). As intellectual capital, they are path dependent, idiosyncratic, and firm specific, i.e. they are developed within the firm over a long period of time. Furthermore, organisational routines may be the embodiments of organisational learning, individual experience, and trial and error (Lieberman 1989). Besides, the administrative practices are usually intertwined with organisational culture (Ahmed 1998; Zagorsek, Jaklic & Stough 2004). Thus, since administrative systems have unique characteristics, they may pose difficulties for new entrants to replicate it. For example, by merely hiring a key employee from a successful incumbent business, a new competitor may not be able to implement the administrative system to the same efficiency and effectiveness. These arguments conclude that presence of a complex administrative system driving the success of a business organisation may project as a formidable entry barrier to new entrants and a handicap for existing competitors.
v) Low threat of new entrants to the industry:

According to Porter (1980), new entrants to an industry bring new capacity, the desire to gain market share, and substantial resources. As a result, prices can be bid down or costs of incumbents can be inflated, which reduces profitability. Similarly, companies diversifying through acquisition into the industry from other markets often use their resources to cause a shake-up. Thus acquisition into an industry with intent to build market position should probably be viewed as entry even though no entirely new entity is created. The threat of entry into an industry depends on the barriers to entry that are present, coupled with the reaction from existing competitors that the entrant can expect (Porter 1980). In other words, if barriers are high and/or the newcomer can expect sharp retaliation from entrenched competitors, then potential competitors are deterred from entering the industry. The above variable intends to capture the height of entry barriers in an industry as perceived by an incumbent, i.e. the incumbent’s perception of the threat of new competition.

vi) Difficult-to-know (for competitors) your strategic moves:

Difficult-to-know your strategic moves indicates that both new entrants and current competitors are unable to foretell the first move or retaliatory move by a firm. Porter (1980) claims that information is crucial to both offensive and defensive competitive moves. Indeed, selective disclosure of information or completely hiding information is considered as an integral part of competitive strategy (Chang & Tang 2001). Threat of new competition may become far less when potential new comers are unable to i) procure information of incumbents’ strategic plans, or ii) the magnitude and nature of incumbents’ retaliatory moves upon their entry. Controlling strategic information from
reaching the hands of existing and potential competitors is not only critical, but is of strategic value. The above arguments attempt to demonstrate that strategic information can be a source of barriers to entry (Willard & Savara 1988).

The six variables in factor 2 are discussed in the above paragraphs in the light of the extant literature in barriers to entry theory and practice (e.g. Bain 1956; Chang & Tang 2001; Dean & Brown 1995; Han, Kim & Kim 2001; Harrigan 1981; Karakaya & Stahl 1989; Pepperell & Turner 1981; Porter 1980; Robinson & McDougall 2001; Willard & Savara 1988; Yao 1988). The above analysis justifies how the six variables in factor 2 of CSS scale were recognised as the sources of barriers to entry to new competition and why the factor was given the name of the underlying concept, that is ‘Barriers to Entry’.

4.4.2 Factor Analysis of Corporate Sustainable Performance Outcomes Scale (CSPOS)

The results of the factor analysis conducted on 21 items from CSPOS scale using the statistical software SPSS for Windows are presented under the three subheadings namely:

i) Assessment of the suitability of the data for factor analysis,
ii) Factor extraction, and
iii) Factor rotation and interpretation.

4.4.2.1 Assessment of the Suitability of the Data for Factor Analysis

The correlation matrix had a large number of correlation coefficients greater than 0.3. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.774. Since the value was more than 0.6, the data was assessed as factorable. The Bartlett’s test of
sphericity provided the approximate $\chi^2$ as 1535.2, with 116 degrees of freedom. The p-value was 0.0005. Since the p-value was less than 0.05, the Bartlett’s test of sphericity was recognised as significant, which also demonstrated that the data was suitable for factor extraction.

4.4.2.2 Factor Extraction

Principal component analysis (PCA) method was used for factor extraction. The plot obtained in the Scree test indicated that there were 3 factors above the elbow of the curve. But, Kaiser criterion revealed 4 factors with eigenvalue greater than 1.0, with a cumulative variance of 71.7% at the 4th factor. Thus, the indications from the above two tests for the number of factors to be retained were conflicting by one factor. However, the cumulative variance at the 3rd factor was observed to be 62.3%, which was not far below 71.7%. Since the variance held by the 4th factor was relatively small, it was decided to only retain 3 factors for factor rotation.

4.4.2.3 Factor Rotation and Interpretation

As explained in section 1, the factor rotation was conducted using both Varimax method and Direct Oblimin method in order to obtain a simple structure of factors. In securing a simple structure, the criteria for interpretation of rotated and relevant recommendations outlined earlier in Section 1 were taken into consideration. In the process, four items were discarded from the CSPOS scale. The remaining variables were listed below under the three factors, each in its subgroup.

Factor 1 in CSPOS scale:

a) Recycle, reuse, or waste reduction,
b) EPA regulations on effluents / emissions / waste disposal,
c) Periodic disclosure of environmental impact from business activities,
d) Reduction / replacement of hazardous chemicals or materials (e.g., substituting hazardous chemicals with less hazardous alternatives),
e) Increasing energy efficiency, and
f) Use of renewable energy.

Factor 2 in CSPOS scale

a) Harmonious industrial relationship with employees,
b) Entitlements to workers,
c) Employee retention rates,
d) Employee participation in management decision-making,
e) Monitoring the relationship with stakeholders, and
f) Promotions of women to senior management positions.

Factor 3 in CSPOS scale:

a) Top dividends to shareholders,
b) Business profitability,
c) Return on average capital employed (ROACE),
d) Meeting tax obligations, and
e) Debt / equity ratio.

4.4.2.3.1 Naming of Factor 1 in CSPOS Scale as Corporate Environmental Performance Outcome (CEPO)

The item statements or variables grouped under factor 1 were found to relate to environment-oriented corporate business practices and their outcomes. They are grounded in the literature in corporate environmental sustainability (e.g. Annandale & Taplin 2003; Aragon-Correa & Sharma 2003; Banerjee 2002; Bansal 2002; Buchholz 2004; Burritt 2002; Carley & Christie 2000; Connelly & Limpaphayom 2004; Dean

4.4.2.3.2 Naming of Factor 2 in CSPOS Scale as Corporate Social Performance Outcome (CSPO)

The variables in factor 2 were found to refer to corporate social responsibility, corporate social responsiveness, and employee relationship. They were intended to measure a respondent’s perception of the outcomes from his or her firm’s social performance. The variables have roots in extant literature concerning business and society (e.g. Balabanis, Phillips & Lyall 1998; Boatright 1994; Carroll 1979; Clarkson 1995; Donaldson & Preston 1995; Dunphy, Griffiths & Benn 2003; Fama 1980; Freeman 1994; Graves & Waddock 1994; Greening & Turban 2000; Harrison & Freeman 1999; Hess 2001; Hillman & Keim 2001; Jensen & Meckling 1978; Laszlo 2003; Moore 1999; Porter & Kramer 2003; Reed 1999; Roome 1998; Schaltegger, Burritt & Petersen 2003; Sharma & Starik 2002; Sharplin 2003; Stanwick & Stanwick 1998; Sternberg 1997; Sustainability Reporting Guidelines 2002; Swanson 1999; Waddock & Graves 1997; Wei-Skillern 2004; Wood 1991). Therefore, it was decided to name the factor as ‘Corporate Social Performance Outcome’ (CSPO).
4.4.2.3.3 Naming of Factor 3 in CSPOS Scale as Corporate Financial Performance Outcome (CFPO)

The variables clustered under factor 3 were relating to different indicators of corporate financial profitability (see, for example, Langfield-Smith, Thorne & Hilton 2003; Sustainability Reporting Guidelines 2002). It may be noted that the variables did not collect financial results in dollars or numerical ratios, but they were asking the respondents to rate the importance given to the financial performance indicators by their firms. Thus, the factor was assigned the name of ‘Corporate Financial Performance Outcome’ (CFPO).

4.5 Checking the Reliability of the Factors

After completing the stage of factor rotation and interpretation, reliability of each factor was estimated in terms of internal consistency. Tabachnick and Fidell (2001) explain that estimation of reliability of a factor refers to the degree to which its variables are measuring the same concept. According to Pedhazur and Schmelkin (1991), particularly, reliability based on internal consistency, a concept of reliability relating to a single administration of a measure, provides a practical approach for estimating the reliability of factors. It indicates how much the variables are homogeneous. Measuring the homogeneity of variables is argued to be an intuitively meaningful and useful, when dealing with a factor that has a theoretical frame of reference (Pedhazur & Schmelkin 1991).

Pedhazur and Schmelkin (1991) state that Cronbach’s alpha coefficient ($\alpha$) is an indicator most often used in the estimation of internal consistency. Nunnally (1978) recommends that Cronbach’s $\alpha$ must be at least 0.7 for a factor to be accepted as
reliable. In the study, SPSS for Windows software was used to estimate the Cronbach’s alphas.

Table 4.1 shows the Cronbach’s α for all the factors in CSS and CSPOS scales. They indicated that the factors were reliable in relation to internal consistency, i.e. the variables in a factor would measure the same concept.

**Table 4.1 Estimation of Reliability of the Factors**

<table>
<thead>
<tr>
<th>Name of the Factor</th>
<th>Number of Items</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Competition Strategies Scale (CSS)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Resources and Capabilities</td>
<td>5</td>
<td>0.8566</td>
</tr>
<tr>
<td>Barriers to Entry</td>
<td>6</td>
<td>0.7679</td>
</tr>
<tr>
<td><strong>Corporate Sustainable Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outcomes Scale (CSPOS)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate Environmental Performance Outcome</td>
<td>6</td>
<td>0.9318</td>
</tr>
<tr>
<td>Corporate Social Performance Outcome</td>
<td>6</td>
<td>0.7903</td>
</tr>
<tr>
<td>Corporate Financial Performance Outcome</td>
<td>5</td>
<td>0.8193</td>
</tr>
</tbody>
</table>

**4.6 Summary**

The main purpose of the chapter was to obtain subgroups of variables or factors from CSS scale and CSPOS scale, the two measurement scales used in the survey questionnaire. The variables grouped in a factor were anticipated to measure the same concept. The factors were derived from exploratory factor analysis, comprising the following three stages:

i) Assessment of suitability of data for factor analysis,
  ii) Factor extraction, and
  iii) Factor rotation and interpretation.
After completing the factor analysis, each factor was given a name that would identify the concept underlying the variables in the factor. The naming of the factors was based on the extant literature, which was earlier consulted to prepare the item statements (variables) in the scales.

The factor analysis resulted in the following two factors in CSS scale:

i) Strategic Resources and Capabilities, and
ii) Barriers to Entry.

It identified the following three factors in CSPOS scale:

i) Corporate Environmental Performance Outcome (CEPO),
ii) Corporate Social Performance Outcome (CSPO), and
iii) Corporate Financial Performance Outcome (CFPO).

The reliability of each factor was confirmed by examining the estimation of its internal consistency given by Cronbach’s $\alpha$. Since, in every factor, Cronbach’s $\alpha$ was found to be more that 0.7, meeting the recommendation of Nunnally (1978) for reliability, it was concluded that the variables in a factor were probably reflecting a distinct concept.
CHAPTER 5

Analysis of Impact of Business Sector and Business Size on Competition Strategies and Corporate Sustainable Performance Outcomes in Australia

This chapter examines the impact of business sector and business size on competition strategies and corporate sustainable performance outcomes in Australian business organisations, with a view to gain insights into the research problems outlined earlier in Chapter 3. One-way Analysis of Variance (ANOVA), a statistical technique, was used to examine the issues.

Australian business organisations in the random sample used in the study were arranged into two sets comprising groups, first set determined by business sector, and the second set by business size. In the one-way ANOVA analysis, business size and business sector were considered as independent variables (Tabachnick & Fidell 2001).

Based on business sector, the business organisations in the sample were organised into four groups:

i) Manufacturing,
ii) Service,
iii) Resources, and
iv) Unclassified.
Based on business size, determined by annual sales, the sample was divided into three groups:

i) Small (Less than $10 m),
ii) Medium ($10 m - $99 m), and
iii) Large ($100 m or more).

In the ANOVA analysis, the factors in Competition Strategies Scale (CSS) and Corporate Sustainable Performance Outcomes Scale (CSPOS) became the dependent variables (Tabachnick & Fidell 2001), and are given below:

i) The two factors in CSS scale:
   a) Barriers to Entry, and
   b) Strategic Resources and Capabilities

ii) The three factors in CSPOS scale:
   a) Corporate Environmental Performance Outcome (CEPO),
   b) Corporate Social Performance Outcome (CSPO), and
   c) Corporate Financial Performance Outcome (CFPO).

This chapter is organised into two sections. In *Section One*, an overview of one-way ANOVA analysis is presented. In *Section Two*, the results from the one-way ANOVA analysis is presented. The analysis involved examining whether or not business sector or business size had a significant impact on the factors in CSS and CSPOS scales. One-way ANOVA analysis is based on the mean scores of a factor (dependent variable) in several groups, where the groups are created on the basis of an independent variable (Tabachnick & Fidell 2001). When business sector or business size makes a major impact on a factor, a significant difference between the highest
and the lowest mean scores of the factor can be noted. In the study, the significant
differences were identified by the following between-groups comparison techniques:
i) Post Hoc Comparisons, and ii) Planned Comparisons (Pallant 2001). It was
followed by an explanation for the significant difference in the two groups drawing
from the extant literature.
Section One

Overview of One-way Analysis of Variance (ANOVA)

5.1 Analysis of Variance

Tabachnick and Fidell (2001) state that one-way, between-groups Analysis of Variance (ANOVA) is performed in order to compare the mean scores of a dependent variable in three or more groups. Bryman and Cramer (2001) explain that one-way, between-groups ANOVA is essentially an F test in which an estimate of between-groups variance is compared with an estimate of within-groups variance by dividing the former by the latter. The total amount of variance of a dependent variable originates from two sources. First source of variance is the independent variable. This variance is referred to as explained variance. Second source of variance consists of measurement errors and other influences. The resulting variance is known as error variance or residual variance. It may be noted that the residual variance manifests as within-groups variance. On the other hand, the explained variance manifests as between-groups variance. If the explained variance is considerably higher than the residual variance, then the value of F ratio will also be higher, implying that the difference between the mean scores is unlikely to be due to chance (Bryman & Cramer 2001).

5.2 F Ratio

Tabachnick and Fidell (2001) explain that the between-groups variance is same as the between-groups mean square (MS_{bg}). It is obtained by dividing between-groups sum
of squares (SS_{bg}) by its degrees of freedom (df). Similarly, the within-groups variance is same as the within-groups mean square (MS_{wg}), which is obtained by dividing the within-groups sum of squares (SS_{wg}) by its corresponding degrees of freedom (df). A significant F ratio indicates that we must reject the null hypothesis and accept an alternate hypothesis, which implies that there is a significant difference in mean scores between the groups (Tabachnick & Fidell 2001).

5.3 Post Hoc Comparisons and Planned Comparisons

Tabachnick and Fidell (2001) explain that a significant F ratio may not indicate which particular two groups have a significant difference in their mean scores. Tabachnick and Fidell recommend the following two methods for locating the two groups: i) Post Hoc Comparisons, and ii) Planned Comparisons. Pallant (2001) explains that in Planned Comparisons method, we must specify in advance the two groups that are to be compared. Pallant (2001) warns that the Planned Comparisons method poses increased risk of Type 1 error, which refers to the error of wrongly rejecting the null hypothesis. Therefore, Pallant (2001) recommends Post Hoc Comparisons method as it is designed to guard against the possibility of Type 1 error by setting more stringent criteria for a significance test. In Post Hoc Comparisons method, the most commonly used techniques are Tukey’s Honestly Significant Difference (HSD) test and Scheffe test (Pedhazur & Schmelkin 1991).

5.4 Effect Size

One more aspect often considered in ANOVA analysis is the Effect Size or strength of association. Although ANOVA tools such as F ratio, Post Hoc Comparisons, and Planned Comparisons are designed to indicate the between-groups difference in a dependent variable, they do not directly inform the degree to which the independent
variable and the dependent variable are related. The knowledge of this relationship is essential in order to avoid publicising trivial results of no practical utility (Tabachnick & Fidell 2001). In order to evaluate the strength of relationship between an independent variable and its dependent variable, Pallant (2001) suggests an index namely Effect Size, which indicates the amount of total variance in a dependent variable that is predictable from the knowledge of an independent variable. Since the Effect Size is not provided by SPSS for Windows, the statistical software used in this study, Pallant (2001) explains how to roughly estimate the Effect Size from an index named $\eta^2$ (eta squared). $\eta^2$ is obtained by dividing $SS_{bg}$ by $(SS_{bg} + SS_{wg})$. Cohen (1988) provides rules of thumb to determine the effect size from $\eta^2$ as follows: An independent variable has small effect on groups when $\eta^2$ is around 0.01, has medium effect when $\eta^2$ is around 0.06, and has large effect when $\eta^2$ around 0.14.
Section Two

Analysis of the Impact of Business Sector and Business Size on Competition Strategies and Corporate Sustainable Performance Outcomes

5.5 Analysis of the Impact of Business Sector and Business Size on the Competitive Strategies

This subsection examines whether or not as an independent variable, i) business sector, or ii) business size has an impact on the two factors in Competition Strategies Scale (CSS), i.e. Barriers to Entry and Strategic Resources and Capabilities. In the event of finding an evidence of business sector or business size making the impact on a factor, the two groups were identified that had significant between-groups difference in mean scores. It was then followed by an explanation for the possible reasons for the difference drawing from the extant literature.

5.5.1 Impact of Business Sector on Barriers to Entry and Strategic Resources and Capabilities

It may be recalled that four groups were considered under business sector: i) manufacturing, ii) service, iii) resources, and iv) unclassified. The two subsections that follow present the analysis of the impact of business sector on the two dependent variables, namely barriers to entry and strategic resources and capabilities.
5.5.1.1 Impact of Business Sector on Barriers to Entry

Table 5.1 provides descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing Barriers to Entry across business sectors.

Table 5.1 Descriptive Statistics Comparing Barriers to Entry across Business Sectors

<table>
<thead>
<tr>
<th>Business Sector</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>37</td>
<td>17.24</td>
<td>4.153</td>
<td>0.683</td>
</tr>
<tr>
<td>Service</td>
<td>47</td>
<td>14.30</td>
<td>5.258</td>
<td>0.767</td>
</tr>
<tr>
<td>Resources</td>
<td>10</td>
<td>17.70</td>
<td>3.622</td>
<td>1.146</td>
</tr>
<tr>
<td>Unclassified</td>
<td>7</td>
<td>17.86</td>
<td>4.100</td>
<td>1.550</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>15.96</td>
<td>4.856</td>
<td>0.483</td>
</tr>
</tbody>
</table>

Business sector was found to make an impact on Barriers to Entry. This conclusion was made based on the following results: Test of homogeneity of variances: Levene statistic = 2.612, p – value = 0.056 almost equal to 0.05. Since this indicated a violation of the assumption of homogeneity of variances, Planned Comparisons were conducted instead of Post Hoc tests (Pallant 2001).

Comparing manufacturing sector and service sector gave the following results. Assuming no equal variances, t - score = -2.866, F (1, 82) = 8.214, p – value (2-tailed) = 0.005 < 0.05. The above results showed a significant difference in mean scores between manufacturing sector (Mean = 17.24, Std.Deviation = 4.153) and service sector (Mean = 14.30, Std. Deviation = 5.258).
5.5.1.1 Possible Reasons for Higher Barriers to Entry in Manufacturing Sector than in Service Sector

A significant difference in mean scores between manufacturing sector and service sector indicates that barriers to entry were considerably higher in Australian manufacturing sector than in service sector. These results are similar to the findings of a study by Goddard and Wilson (1996) conducted in the United Kingdom. They also report that barriers to entry are higher in the UK manufacturing sector than in their service sector.

Gans (2000) contends that increasing market deregulation in Australia has mainly contributed to the decimation of several domestic manufacturing industries such as footwear, clothing, and textiles, which were unable to compete with low-price imports. As a result, Australian manufacturing sector went through a difficult phase of industry consolidation characterised by plant closures, offshore production, mergers, and acquisitions. The industry shakeout has led to a high industry concentration, which means that a large market share is held by a few large manufacturing firms (Gans 2000).

Brouthers and Brouthers (2003) argue that the height of barriers to entry may influence the decision of potential new comers to enter the industry or their entry strategies. Since many Australian manufacturing industries are dominated by oligopolies and the product markets are flooded with cheaper imports (Gans 2000), Australian manufacturing sector does not seem to provide much encouragement to new entrants. The respondents of the survey may have correctly perceived this fact.

On the other hand, the results show that the barriers to entry in Australian service sector are relatively lower. The low entry barriers perhaps imply that the service industries are fragmented. In a fragmented industry no firm has a significant market power (Porter 1980).
Consistent with the views of Porter (1980), the following arguments are made to explain why the service sector in Australia is fragmented:

i) The service sector in Australia is traditionally dominated by small and medium sized firms such as personal care, health services, travel, tourism, hospitality, entertainment, real estate, consulting, and so on. Economies of scale seem to be predominantly absent in these industries (Corones 1993), except in some service industries such as banking, finance, television, and publishing.

ii) Many businesses in the service sector are engaged in personal services such as travel, tourism, and hospitality, where small and medium sized firms can be more efficient.

iii) A large number of service industries, for example fashion design, graphic design, and consulting, rely on creative and tacit knowledge. It may often be difficult to manage creative and tacit knowledge of individuals in a large company.

iv) Service sector usually requires local control and supervision, where small businesses have an edge.

v) Demand of customers for variety and personal attention supports fragmentation.

The reasons for the fragmentation of service industries in Australia are given above. Furthermore, unlike the manufacturing industries, the service sector is likely to be less affected by international competition (Fugate & Zimmerman 1996). It is mainly because services need simultaneous production and consumption. This unique characteristic in service provision may provide sufficient intrinsic barriers against overseas service providers. However, growth in information and communications technology (ICT) is disproving this observation in many service industries. For example, Australians have seen gradual outsourcing of jobs in call centers, medical
transcription, banks, and software development to India, Malaysia, and South Africa to achieve cost efficiency and tap into overseas talents.

This sub section provided the explanations for why the study found the mean score in barriers to entry was the highest for Australian manufacturing sector and the lowest for Australian service sector.

5.5.1.2 Impact of Business Sector on Strategic Resources and Capabilities

Table 5.2 provides descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing Strategic Resources and Capabilities across business sectors.

<table>
<thead>
<tr>
<th>Business Sector</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>36</td>
<td>16.25</td>
<td>4.332</td>
<td>0.722</td>
</tr>
<tr>
<td>Service</td>
<td>47</td>
<td>17.89</td>
<td>4.335</td>
<td>0.632</td>
</tr>
<tr>
<td>Resources</td>
<td>11</td>
<td>16.73</td>
<td>4.221</td>
<td>1.273</td>
</tr>
<tr>
<td>Unclassified</td>
<td>7</td>
<td>17.71</td>
<td>5.736</td>
<td>2.168</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>101</strong></td>
<td><strong>17.71</strong></td>
<td><strong>4.423</strong></td>
<td><strong>0.440</strong></td>
</tr>
</tbody>
</table>

Business sector was found to have no impact on Strategic Resources and Capabilities. This conclusion was based on the following results: Test of homogeneity of variances: Levene statistic = 0.452, p – value = 0.717 > 0.05, these results indicate that the assumption of homogeneity of variance was not violated; Between-groups: SS = 59.310, df = 3, MS = 19.770; Within-groups: SS = 1896.828, df = 97, MS = 19.555; F = 1.011; p – value = 0.391 > 0.05.
5.5.2 Impact of Business Size on Barriers to Entry and Strategic Resources and Capabilities

As explained earlier, based on business size (independent variable) the business organisations in the sample were organised into three groups as follows: i) Small, ii) Medium, and iii) Large.

The following two subsections provide the analysis of the impact of business size on barriers to entry and strategic resources and capabilities.

5.5.2.1 Impact of Business Size on Barriers to Entry

Table 5.3 provides descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing Barriers to Entry across business sizes.

<table>
<thead>
<tr>
<th>Business Sector</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>19</td>
<td>15.26</td>
<td>6.615</td>
<td>1.518</td>
</tr>
<tr>
<td>Medium</td>
<td>21</td>
<td>17.24</td>
<td>3.807</td>
<td>0.831</td>
</tr>
<tr>
<td>Large</td>
<td>44</td>
<td>15.70</td>
<td>4.322</td>
<td>0.652</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
<td>15.99</td>
<td>4.818</td>
<td>0.526</td>
</tr>
</tbody>
</table>

Business size was found to have no impact on Barriers to Entry. This conclusion was based on the following results: Test of homogeneity of variances: Levene statistic = 3.279, p – value = 0.063 > 0.05. These results demonstrate that the assumption of homogeneity of variances was not violated; Between-groups: SS = 46.335, df = 2, MS = 23.168; Within-groups: SS = 1880.653, df = 81, MS = 23.218; F = 0.998; p – value = 0.373 > 0.05.
5.5.2.2 Impact of Business Size on Strategic Resources and Capabilities

Table 5.4 displays descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing Strategic Resources and Capabilities across business sizes.

Table 5.4 Descriptive Statistics Comparing Strategic Resources and Capabilities across Business Sizes

<table>
<thead>
<tr>
<th>Business Size</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>19</td>
<td>19.21</td>
<td>4.328</td>
<td>0.993</td>
</tr>
<tr>
<td>Medium</td>
<td>21</td>
<td>16.76</td>
<td>4.657</td>
<td>1.016</td>
</tr>
<tr>
<td>Large</td>
<td>44</td>
<td>16.86</td>
<td>4.273</td>
<td>0.644</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
<td>17.37</td>
<td>4.445</td>
<td>0.485</td>
</tr>
</tbody>
</table>

Business size was found to have no impact on Strategic Resources and Capabilities. This conclusion was made based on the following results: Test of homogeneity of variances: Levene statistic = 0.274, p – value = 0.761 > 0.05. These results show that the assumption of homogeneity of variances was not violated; Between-groups: SS = 83.410, df = 2, MS = 41.705; Within-groups: SS = 1556.149, df = 81, MS = 19.212; F = 2.171; p – value = 0.121 > 0.05.

5.6 Analysis of the Impact of Business Sector and Business Size on Corporate Sustainable Performance Outcomes

This section examines the impact of business sector and business size on the factors in Corporate Sustainable Performance Outcomes Scale (CSPOS), i.e. Corporate Environmental Performance Outcome (CEPO), Corporate Social Performance Outcome (CSPO), and Corporate Financial Performance Outcome (CFPO). Should there be an indication of the impact, the study compares the mean scores of the
groups for a significant difference. The statistical comparisons identify the groups in which the factor had the most and the least impact. Report of the two groups that had the high and low impacts, was followed by an explanation for such a significant difference in mean scores between the two focus groups, mainly drawing from the extant literature.

5.6.1 Impact of Business Sector on the Factors of Corporate Sustainable Performance Outcomes Scale (CSPOS)

In the three subsections that follow, analyses of the impact of business sector as an independent variable on the three dependent variables or factors in CSPOS scale are presented.

5.6.1.1 Impact of Business Sector on Corporate Environmental Performance Outcome (CEPO)

Table 5.5 provides descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing CEPO across business sectors.

<table>
<thead>
<tr>
<th>Business Sector</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>36</td>
<td>18.86</td>
<td>5.982</td>
<td>0.997</td>
</tr>
<tr>
<td>Service</td>
<td>45</td>
<td>15.84</td>
<td>7.023</td>
<td>1.047</td>
</tr>
<tr>
<td>Resources</td>
<td>11</td>
<td>24.27</td>
<td>3.797</td>
<td>1.145</td>
</tr>
<tr>
<td>Unclassified</td>
<td>7</td>
<td>16.57</td>
<td>8.018</td>
<td>3.030</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>17.93</td>
<td>6.877</td>
<td>0.691</td>
</tr>
</tbody>
</table>

Business sector was found to have an impact on corporate environmental performance outcome. This conclusion was based on the following results: Test of homogeneity of variances: Levene statistic = 2.410, p – value = 0.072 > 0.05. This
indicated that the assumption of homogeneity of variances was not violated; Between-groups: SS = 682.392, df = 3, MS = 227.464; Within-groups: SS = 3952.113, df = 95, MS = 41.601; F = 5.468; p – value = 0.002 < 0.05.

Post Hoc comparisons using the Tukey’s HSD test indicated that the mean score for resources sector (Mean = 24.27, Std. Deviation = 3.797) was significantly different from the mean score for service sector (Mean = 15.84, Std.Deviation = 7.023). The value of $\eta^2$ was 0.15, which indicated a large effect of business sector on CEPO.

5.6.1.1 Possible Reasons for Significantly Higher Corporate Environmental Performance Outcome (CEPO) in Resources Sector than in Service Sector

It appears that there are few Australian studies that directly explain the reasons for the high environmental performance outcome in Australian resource sector. Annandale and Taplin (2003) report that internal organisational pressures such as organisational culture, organisational learning, and individual initiatives influence largely the environmental response of Australian mining companies. Raar (2002) reports that in Australia the industry groups that have high environmental impact have a greater propensity to produce environmental report. Tilt (2001) also makes similar observation in her study involving content analysis of the annual reports of the Australian public companies. An Australian empirical study by Banerjee (2002) reports that business executives in resources sector give high importance to public concern for the environment. However, the above studies do not specifically explain the reasons and motives for the Australian resources sector for engaging in environmental protection activities more than required by the environmental regulations.

Rice (2004) examines the positive influence of industry leaders on other businesses in the industry. In particular, he examines the influence of BHP Billiton, a leading,
multibillion-dollar Australian based transnational company, on other resource companies in relation to environmental management. He draws upon the transparency and honesty demonstrated by BHP Billiton in admitting the environmental damage that took place at its Ok Tedi copper mine in Papua New Guinea. Such responsible admission of the corporate mistake might have led to a double loop learning in other Australian mineral companies strongly convincing them of the need for integrating environmental issues into their strategic planning process (Banerjee 2002). This might have led to a strong industry wide environmental focus in the resources sector.

Another angle for analysis is provided by examining the leadership role taken by the Minerals Council of Australia (MCA), an industry body of Australian minerals industry, in fostering environmental responsibilities. The MCA developed the Australian Minerals Industry Code for Environmental Management namely “Enduring Value—the Australian Minerals Industry Framework for Sustainable Development” for providing practical effect to the industry’s commitment to sustainable development (Minerals Council of Australia 2005). The framework provided the platform for the mineral industry’s continual improvement in managing environmental issues since its introduction in 1996. As at 1 January 2002, 39 leading mining companies had committed themselves to the code. On the other hand, industry bodies representing manufacturing or service sectors may not have demonstrated as much proactive leadership as the MCA has in encouraging corporate environmental responsibility.

Since people perceive minerals industry as polluting, it is usually subjected to an intense scrutiny by stakeholders including environmental lobby groups (Burritt 2002; Raar 2002; Sahay 2004). The study argues that the intense scrutiny may generate internal and external organisational pressures. As a result, the minerals sector is forced to become more responsible for protecting the environment from their activities such as mineral extraction and processing (Annandale & Taplin 2003; Schaltegger, Burritt & Petersen 2003; Sullivan & Wyndham 2001). It may also be
one of the reasons for a higher propensity of mining companies to publish environmental reports (Raar 2002; Tilt 2001).

A study by Balabanis, Phillips and Lyall (1998) conducted in the UK appears to contradict the findings discussed here by reporting that the environmental impact of an industry has no relation to the environmental protection activities carried out by a firm in the industry. However, the UK study does not specifically mention that its findings link to their minerals industry.

This study showed that the environmental performance outcome in Australian service sector was the lowest. This may be partly due to the nature of their business activities, which might have provided them fewer opportunities to make a difference to the environment. For example, environmental activities in an accounting firm could be limited to participating in recycling of waste paper, using green energy, or encouraging employees to travel in public transport.

The above paragraphs gave several reasons for the higher environmental performance outcome in the Australian resources sector in contrast to the service sector.

5.6.1.2 Impact of Business Sector on Corporate Social Performance Outcome (CSPO)

Table 5.6 provides descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing CSPO across business sectors.
Table 5.6 Descriptive Statistics Comparing CSPO across Business Sectors

<table>
<thead>
<tr>
<th>Business Sector</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>35</td>
<td>20.57</td>
<td>4.597</td>
<td>0.777</td>
</tr>
<tr>
<td>Service</td>
<td>45</td>
<td>21.18</td>
<td>4.047</td>
<td>0.603</td>
</tr>
<tr>
<td>Resources</td>
<td>10</td>
<td>22.70</td>
<td>3.917</td>
<td>1.239</td>
</tr>
<tr>
<td>Unclassified</td>
<td>6</td>
<td>22.17</td>
<td>2.714</td>
<td>1.108</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>21.18</td>
<td>4.175</td>
<td>0.426</td>
</tr>
</tbody>
</table>

Business sector was found to have no impact on corporate social performance outcome. This conclusion was made based on the following results: Test of homogeneity of variances: Levene statistic = 0.523, p-value = 0.667 > 0.05. The result shows that the assumption of homogeneity of variance was not violated; Between-groups: SS = 41.907, df = 3, MS = 13.969; Within-groups: SS = 1614.083, df = 92, MS = 17.544; F = 0.796; p-value = 0.499 > 0.05.

5.6.1.3 Impact of Business Sector on Corporate Financial Performance Outcome (CFPO)

Table 5.7 provides descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing CFPO across business sectors.

Table 5.7 Descriptive Statistics Comparing CFPO across Business Sectors

<table>
<thead>
<tr>
<th>Business Sector</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>36</td>
<td>18.39</td>
<td>3.580</td>
<td>0.597</td>
</tr>
<tr>
<td>Service</td>
<td>46</td>
<td>17.91</td>
<td>5.270</td>
<td>0.777</td>
</tr>
<tr>
<td>Resources</td>
<td>11</td>
<td>22.00</td>
<td>2.933</td>
<td>0.884</td>
</tr>
<tr>
<td>Unclassified</td>
<td>7</td>
<td>18.43</td>
<td>4.614</td>
<td>1.744</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>18.57</td>
<td>4.564</td>
<td>0.456</td>
</tr>
</tbody>
</table>
Business sector was found to make an impact on corporate financial performance outcome. This conclusion was made based on the following results: Test of homogeneity of variances: Levene statistic = 3.440, p-value = 0.02 < 0.05. These results demonstrated that the assumption of homogeneity of variances had violated. Therefore, Planned Comparisons were performed instead of Post Hoc tests (Pallant 2001).

When resources sector and service sector were compared, the following results were obtained. Assuming no equal variances, t-score = 3.472, F (1, 28) = 12.055, p-value (2-tailed) = 0.002 < 0.05. In the light of the above results, it was determined that a significant difference in the mean scores between resources sector (Mean = 22.00, Std.Deviation = 2.933) and service sector (Mean = 17.91, Std. Deviation = 5.270) was present.

5.6.1.3.1 Possible Reasons for significantly Higher Corporate Financial Performance Outcome (CFPO) in the Resources Sector than in the Service Sector

The following paragraphs discuss several possible reasons for a higher CFPO in the resources sector followed by possible reasons for a lower CFPO in the service sector.

An increase in global demand for minerals and natural gas, which are the main export commodities of Australia, combined with a strong Australian dollar observed in the past several years, might have driven up the financial results of many Australian resource companies.

As mentioned earlier, the Australian resources sector had demonstrated an outstanding progress in environmental performance. Several empirical studies have positively linked a corporation’s environmental performance with its financial performance. For example, Klassen and McLaughlin (1996) report a significant
positive relationship between corporate environmental management and perceived future financial performance measured by stock market performance. A European study by Rennings, Schroder and Ziegler (2003) and a Thailand study by Connelly and Limpaphayom (2004) also present similar results. Porter and van der Linde (1995) argue that stringent environmental regulation presents firms with opportunities for improved efficiency and early-mover advantage in international markets. In an Australian study, Menguc and Ozanne (2005) report that natural-environmental orientation in manufacturing sector (comprising entrepreneurship, corporate social responsibility, and commitment to the natural environment) positively relates to profit after tax and market share, but negatively relates to sales growth. As reported earlier, this study also found that the resources sector was in the forefront in environmental performance outcome. Since a positive relationship between environmental performance outcome and financial performance outcome is mostly established in the literature, a business organisation good at environmental performance may also be good at financial performance and may have excellent financial results.

Furthermore, researchers have attempted to explain how a corporation’s environment-oriented business practices can create competitive advantage leading to its superior financial performance and outcomes. For example, Shrivastava (1995b) suggests that business practices driven by environmental values may result in several economic and other benefits such as waste reduction, energy conservation, material reuse, access to “green” markets, enhancement of corporate image, and reduced risk and liabilities. Drawing from Barriers to Entry theory, Dean and Brown (1995) suggest that strict environmental regulations may deter the entry of newcomers to an industry conferring competitive advantage to incumbents. Stringent environmental regulations may increase the heights of barriers to entry as their compliance may increase capital intensity and business process complexity. High barriers to entry in an industry may confer competitive advantage to incumbent business organisations in the industry (Bain 1956; Dean & Brown 1995; Han, Kim & Kim 2001; Robinson & McDougall 2001). A business that has competitive advantage has the potential to earn above
industry-average financial returns (Barney 1991). Thus, the above argument attempts to provide an explanation for why the study found superior CFPO in Australian resources sector.

On the other hand, the study found that Australian service sector had relatively low financial performance outcome. As mentioned earlier, based on the findings, the study argues that the many service industries in Australia are fragmented. A fragmented industry is usually characterised by fragmented market share, high competition, lack of economies of scale, and low entry barriers (Karakaya & Stahl 1989). These factors may have contributed to competitive disadvantage and an industry-wide lack luster CFPO.

In the above paragraphs, possible reasons for the presence of significantly high CFPO in the resources sector and low CFPO in the service sector were explained.

5.6.2 Impact of Business Size on the Factors of Corporate Sustainable Performance Outcomes Scale (CSPOS)

In the three subsections that follow, the analysis of the impact of Business Size on the three factors in Corporate Sustainable Performance Outcomes Scale (CSPOS) is presented. The three factors in the CSPOS scale are:

i) Corporate Environmental Performance Outcome (CEPO),

ii) Corporate Social Performance Outcome (CSPO), and

iii) Corporate Financial Performance Outcome (CFPO).
5.6.2.1 Impact of Business Size on Corporate Environmental Performance Outcome (CEPO)

Table 5.8 provides descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing CEPO across the business sizes.

<table>
<thead>
<tr>
<th>Business Size</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>18</td>
<td>14.61</td>
<td>7.413</td>
<td>1.747</td>
</tr>
<tr>
<td>Medium</td>
<td>21</td>
<td>17.33</td>
<td>7.045</td>
<td>1.537</td>
</tr>
<tr>
<td>Large</td>
<td>43</td>
<td>19.42</td>
<td>6.219</td>
<td>0.948</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>17.83</td>
<td>6.896</td>
<td>0.762</td>
</tr>
</tbody>
</table>

Business size was found to have an impact on corporate environmental performance outcome. This conclusion was based on the following results: Test of homogeneity of variances: Levene statistic = 0.714, p – value = 0.493 > 0.05. These results indicated that the assumption of homogeneity of variances was not violated; Between-groups: SS = 300.200, df = 2, MS = 150.100; Within-groups: SS = 3551.410, df = 79, MS = 44.955; F = 3.339; p – value = 0.041 < 0.05.

Post Hoc comparisons were made employing the Tukey’s HSD test. The results of the test showed that the mean score for Large Size business (Mean = 19.42, Std. Deviation = 6.219) was significantly higher than the mean score for Small Size business (Mean = 14.61, Std. Deviation = 7.413). The value of $\eta^2$ was 0.07, which indicated a medium effect of business size on CEPO.
5.6.2.1.1 Possible Reasons for Significantly Higher Corporate Environmental Performance Outcome (CEPO) in Large Size Businesses than in Small Size Businesses

The result shows that Corporate Environmental Performance Outcome (CEPO) is significantly higher in large sized Australian businesses than in small sized businesses. However, the findings in the earlier studies conducted in Australia and elsewhere are mixed. For example, an Australian empirical study by Williams, et al. (2000) reports that Australian small and medium enterprises (SMEs) have not shown the same level of commitment to the implementation of their environmental management systems (EMS) as shown by large enterprises. Their findings show that 73 per cent of the SMEs did not have an environmental policy and 86 per cent did not have any environmental plan. These findings by Williams, et al. support the results of this study reported here in this subsection. On the other hand, a 1997 survey on large Australian businesses (100 – 700 employees) conducted by Sullivan and Wyndham (2001) reports that 64 per cent of the respondents did not have an environmental policy during 1997. Although this result appears to contradict the result of this study, it may be noted that Sullivan and Wyndham’s study was conducted in 1997.

A US study conducted by Judge and Douglas (1998) reports that that the firm size as a logarithm of employees has almost no impact on environmental performance. This study also appears to contradict the findings reported here. However, it must be noted that the study took only such businesses into its sample that had environmental officers, which might have biased the sample.

Annandale and Taplin (2003) also report a contrasting finding in an Australian study on Australian mining companies. They find no evidence of a significant relationship between the size of mining companies and their response to environmental approval regulation. According to them, a large minerals firm is just as likely to be reactive,
proactive, or interactive towards environmental approvals regulation as is a small or medium-sized minerals firm. However, before analysing this result, the researchers’ definition of ‘environmental approvals regulation’ must be understood. It is defined as all government environmental regulation that companies need to comply with before they can gain environmental approval for a new or expanded development. However, several corporate environmental activities examined in our study such as recycle, reuse, or waste reduction, increasing energy efficiency, and use of renewable energy are the activities that are beyond regulatory activities. Therefore, it seems there is no surprise in the result shown by Annandale and Taplin (2003), where the mining companies participated in that study must perform the environmental protection practices stipulated by regulatory agencies so that they secure their license to function.

The possible reasons for large sized companies performing significantly better than small sized companies in environmental areas and achieving higher outcomes are outlined below:

i) Large companies can commit large financial and human resources to environmental management in contrast to limited financial resources that are committed by small firms;

ii) A small or medium business may have a perception that its clients would be not willing to pay more for environmentally friendly products and services (Williams, et al. 2000);

iii) It may be possible that small firms are unable to clearly see the link between environmental management and cost savings (Porter & van der Linde 1995).

iv) Regulators seeking to maximise returns on enforcement efforts or negotiated settlements are more likely to focus on large firms, where they may achieve the largest pollution reductions. Environmental protection authorities, which usually have limited technical and human
resources, have a tendency to scrutinise large companies more closely than small companies. This size tiering effect in inspection and enforcement may drive only large companies to become more responsive to environmental issues and practices (Dean & Brown 1995).

5.6.2.2 Impact of Business Size on Corporate Social Performance Outcome (CSPO)

Table 5.9 provides descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing CSPO across the business sizes.

<table>
<thead>
<tr>
<th>Business Size</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>18</td>
<td>22.22</td>
<td>4.894</td>
<td>1.153</td>
</tr>
<tr>
<td>Medium</td>
<td>20</td>
<td>20.30</td>
<td>4.485</td>
<td>1.003</td>
</tr>
<tr>
<td>Large</td>
<td>41</td>
<td>21.00</td>
<td>3.735</td>
<td>0.583</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>21.10</td>
<td>4.211</td>
<td>0.474</td>
</tr>
</tbody>
</table>

Business size was found to have no impact on corporate social performance outcome. This conclusion was based on the following results: Test of homogeneity of variances: Levene statistic = 1.736, p – value = 0.183 > 0.05, which indicates that the assumption of homogeneity of variances was not violated; Between-groups: SS = 35.879, df = 2, MS = 17.939; Within-groups: SS = 1347.311, df = 76, MS = 17.728; F = 1.012; p – value = 0.368 > 0.05.
5.6.2.3 Impact of Business Size on Corporate Financial Performance Outcome (CFPO)

Table 5.10 provides descriptive statistics such as Number of Cases, Mean, Standard Deviation, and Standard Error comparing CFPO across the business sizes.

<table>
<thead>
<tr>
<th>Business Size</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>18</td>
<td>18.78</td>
<td>4.124</td>
<td>0.972</td>
</tr>
<tr>
<td>Medium</td>
<td>21</td>
<td>17.38</td>
<td>4.653</td>
<td>1.015</td>
</tr>
<tr>
<td>Large</td>
<td>44</td>
<td>19.55</td>
<td>4.464</td>
<td>0.673</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>18.83</td>
<td><strong>4.480</strong></td>
<td><strong>0.492</strong></td>
</tr>
</tbody>
</table>

Business size was found to have no impact on corporate financial performance outcome. This conclusion was based on the following results: Test of homogeneity of variances: Levene statistic = 0.191, p – value = 0.826 > 0.05. This output confirmed that the assumption of homogeneity of variances was not violated; Between-groups: SS = 66.666, df = 2, MS = 33.333; Within-groups: SS = 1578.973, df = 80, MS = 19.737; F = 1.689; p – value = 0.191 > 0.05.

5.7 Summary

The purpose of this chapter was to analyse the impact of business sector and business size on the competition strategies and the corporate sustainable performance outcomes in Australian business organisations. The analysis was performed by using one-way, between-groups Analysis of Variance (ANOVA) techniques. The chapter was organised into two sections. In Section One, an overview of one-way, between-groups ANOVA analysis was presented, briefly explaining the key terms and
techniques used in the analysis such as F Ratio, Post Hoc Comparisons and Planned Comparisons, and Effect Size. Section Two presented the results of the ANOVA analysis.

In the one-way, between-groups ANOVA analysis, business sector and business size were considered as the two independent variables, and the factors in Competition Strategies Scale (CSS) and Corporate Sustainable Performance Outcomes Scale (CSPOS) were considered as the dependent variables. The two factors in CSS scale were i) Barriers to Entry, and ii) Strategic Resources and Capabilities, and the three factors in CSPOS scale were i) Corporate Environmental Performance Outcome (CEPO), ii) Corporate Social Performance Outcome (CSPO), and iii) Corporate Financial Performance Outcome (CFPO). Based on considering business sector as an independent variable, the business organisations in the study were classified into the following four sectors: i) manufacturing, ii) service, iii) resources, and iv) unclassified. Similarly, considering business size as an independent variable, the business organisations participating in the study were classified into three groups such as i) small, ii) medium, and iii) large.

Table 5.11 shows whether or not business sector or business size was found to make a significant impact on a factor.

**Table 5.11 Status of the Impact of Business Sector and Business Size on the Factors in CSS scale and CSPOS scale**

<table>
<thead>
<tr>
<th></th>
<th>Barriers to Entry</th>
<th>Strategic Resources &amp; Capabilities</th>
<th>CEPO</th>
<th>CSPO</th>
<th>CFPO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Sector</strong></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Business Size</strong></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

When business sector was identified as making an impact on a factor, the study compared statistically the four sectors or groups in order to identify the pair of groups
that had the highest impact and the lowest impact. Similarly the impact made by business size was also analysed. The following paragraphs provide brief details of those findings.

Business sector was found to have a significant impact on barriers to entry—a factor in the CSS scale. After conducting the planned comparisons, it was determined specifically that manufacturing sector had the highest and service sector had the lowest barriers to entry. Possible explanations for these findings were presented drawing the arguments from extant literature, findings from earlier researchers, and the researcher’s observations of Australian business sector. These explanations may be useful to business practitioners and managers in crafting strategy.

Business sector was found to have a significant impact on the following two factors in the CSPOS scale:

i) Corporate Environmental Performance Outcome (CEPO), and
ii) Corporate Financial Performance Outcome (CFPO).

The following comparisons were made:

i) Post Hoc comparisons using the Tukey’s HSD test, in the case of CEPO, and
ii) Planned comparisons, in the case of CFPO,

It was found that the resources sector had the highest CEPO and CFPO. On the other hand, the service sector had the lowest CEPO and CFPO. The possible reasons for these findings were provided grounding the explanation in extant literature, past research findings, and logical analysis.
Lastly, business size was found to have a profound impact on Corporate Environmental Performance Outcome (CEPO)—one of the three factors in CSPOS scale. After completing the Post Hoc comparisons using Tukey’s HSD test, it was determined that the large size businesses had the highest CEPO and the small size businesses had the lowest CEPO. The possible reasons were explained. These findings and explanations may provide further guidance to Australian managers, practitioners, and researchers on how to foster environment-driven business practices, to manage them, and to secure the best value.
CHAPTER 6

Relationships between Competition Strategies and Corporate Sustainable Performance Outcomes

This chapter is organised into the following three sections:

Section 1: Overview of Theory and Application of Bivariate Correlation Analysis.

Section 2: Assessment of Distribution of the Factors (Latent Variables) in Competition Strategies Scale (CSS Scale) and Corporate Sustainable Performance Outcomes Scale (CSPOS Scale) for Normality.

Section 3: Results of the Bivariate Correlation Analyses and Discussion of the Results.
Section One

Overview of Theory and Application of Bivariate Correlation Analysis

6.1 Overview of Theory of Bivariate Correlation Analysis

In this study, bivariate correlation analysis is used to examine the relationship between a competition strategy and a corporate sustainable performance outcome. Tabachnick and Fidell (2001) state that bivariate correlation assesses the degree of relationship between two variables. They contend that in bivariate correlation analysis, it is not necessary to differentiate between the two variables, as one is an independent variable (IV) while the other is a dependent variable (DV). The analysis assumes that the variables are continuous, normally distributed, and linearly related to one another. Under such conditions a coefficient, known as Pearson product-moment correlation coefficient, reflects accurately and completely the relationship between two variables under consideration. However, Tabachnick and Fidell (2001) caution that, in practice, variables do not often conform to the assumptions mentioned above. The result of the analysis can thereby be inflated or deflated. It is hard to find a continuous variable that has a perfect normal distribution, but Tabachnick and Fidell ask researchers to look for at least a distribution approximately normal before proceeding to bivariate correlation analysis. Pallant (2001) suggests that all the variables in a study must be at least assessed for approximate normality by observing the following three plots, which can be displayed by using SPSS for Windows, the statistical software used in this study:
Bryman and Cramer (2001) explain that the Pearson product moment correlation coefficient (Pearson’s $r$), which indicates the strength and polarity of relationship between two continuous variables, is an immensely popular measure as it is deceptively simple to interpret. The value of $r$ ranges between $+1.00$ and $-1.00$, both inclusive. A value of $r = +1.00$ indicates that a perfect positive correlation does exist between two variables. On the other hand, $r = -1.00$ implies a perfect negative correlation. A value of $r = 0$ demonstrates no relationship between the variables. Thus, the closer the value of $r$ to $+1.00$ or $-1.00$, stronger is the relationship between the variables.

Tabachnick and Fidell (2001) explain that $r^2$ is referred to as coefficient of determination. Variance, which provides an estimate of how far variation in one variable is accounted for by the other, can be obtained as a percentage by multiplying a coefficient of determination by 100. It must be emphasised that when we state that certain per cent of variation in a DV is attributable to an IV, it also means the same per cent of the variation in the IV is due to the DV. In other words, bivariate correlation does not indicate a cause and effect relationship between the IV and the DV, rather it shows the shared variance between them (Pedhazur & Schmelkin 1991).

### 6.2 Application of the Bivariate Correlation Analysis in the Study

As explained earlier in chapter 4, Competition Strategies Scale (CSS) had two factors or latent variables. In the bivariate correlation analysis undertaken in this study, the
factors were considered as the IVs, although it was not necessary to take them as such. The two factors were:

i) Strategic Resources and Capabilities, and
ii) Barriers to Entry.

The three factors or latent variables in Corporate Sustainable Performance Outcomes Scale (CSPOS) were considered as the DVs. They were:

i) Corporate Environmental Performance Outcome (CEPO),
ii) Corporate Social Performance Outcome (CSPO), and
iii) Corporate Financial Performance Outcome (CFPO).

As noted earlier in this section, before conducting bivariate correlation analyses, it was made sure that the scores in the above factors were approximately normally distributed.

In Section 2 that follows, the descriptive statistics and the assessment of distribution of the factors in CSS and CSPOS scales for normality are given. In Section 3, the results of the bivariate correlation analysis of the data of the five factors in CSS and CSPOS scales are presented, followed by a discussion of the results.
Section Two

Assessment of the Distributions of the Factors (Latent Variables) in CSS Scale and CSPOS Scale for Normality

6.3 Assessment of the Distributions of Factors in CSS Scale for Normality

Table 6.1 shows the descriptive statistics consisting of statistical measures such as Mean, 5% Trimmed Mean, Variance, Standard Deviation, Minimum, Maximum, Range, Interquartile Range, Skewness, and Kurtosis for the scores of the two factors (IVs) in CSS scale namely Strategic Resources and Capabilities and Barriers to Entry. As mentioned earlier, the statistical software SPSS for Windows was used to process the data.
Table 6.1 Descriptive Statistics on the Distribution of Scores in Strategic Resources and Capabilities and Barriers to Entry.

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>Strategic Resources &amp; Capabilities</th>
<th>Barriers to Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>17.71</td>
<td>15.96</td>
</tr>
<tr>
<td>5% Trimmed Mean</td>
<td>17.26</td>
<td>15.98</td>
</tr>
<tr>
<td>Median</td>
<td>17.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Variance</td>
<td>19.56</td>
<td>23.58</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>4.42</td>
<td>4.86</td>
</tr>
<tr>
<td>Minimum</td>
<td>6.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>25.00</td>
<td>28.00</td>
</tr>
<tr>
<td>Range</td>
<td>19.00</td>
<td>22.00</td>
</tr>
<tr>
<td>Interquartile Range</td>
<td>6.50</td>
<td>7.00</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.286</td>
<td>-0.148</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.583</td>
<td>-0.248</td>
</tr>
</tbody>
</table>

6.3.1 Assessment of the Distribution of Scores in Strategic Resources and Capabilities for Normality

An examination of the Histogram of the scores in Strategic Resources and Capabilities indicated a distribution reasonably close to normal distribution. The examination of the Normal Q-Q Plot showed a straight line. Moreover, the dots in the Detrended Normal Q-Q Plot were collected around the zero line without much clustering. As explained by Pallant (2001), such plots demonstrated that the scores followed an approximately normal distribution. Thus, the variable was found to be suitable for correlation analysis.
6.3.2 Assessment of the Distribution of the Scores in Barriers to Entry for Normality

The observation of the histogram revealed an approximately normal distribution of the scores in Barriers to Entry. An observation of the Normal Q-Q Plot showed an almost straight line. Also, the dots in the Detrended Normal Q-Q Plot were collected around the zero line without much clustering. These observations demonstrated that the scores had approximately normal distribution (Pallant 2001).

6.4 Assessment of the Distributions of the Factors in the CSPOS Scale for Normality

Table 6.2 shows the descriptive statistics comprising statistical measures relating to the distribution of the scores for the three factors (DVs) in CSPOS scale, i.e. corporate environmental performance outcome (CEPO), corporate social performance outcome (CSPO), and corporate financial performance scale (CFPO).
Table 6.2 Descriptive Statistics on the Distribution of Scores in Corporate Environmental Performance Outcome (CEPO), Corporate Social Performance Outcome (CSPO), and Corporate Financial Performance Outcome (CFPO).

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>CEPO</th>
<th>CSPO</th>
<th>CFPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>17.93</td>
<td>21.18</td>
<td>18.57</td>
</tr>
<tr>
<td>5% Trimmed Mean</td>
<td>17.94</td>
<td>21.24</td>
<td>18.81</td>
</tr>
<tr>
<td>Median</td>
<td>18.00</td>
<td>21.00</td>
<td>19.00</td>
</tr>
<tr>
<td>Variance</td>
<td>47.29</td>
<td>17.43</td>
<td>20.83</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>6.88</td>
<td>4.18</td>
<td>4.56</td>
</tr>
<tr>
<td>Minimum</td>
<td>6.00</td>
<td>10.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>30.00</td>
<td>30.00</td>
<td>25.00</td>
</tr>
<tr>
<td>Range</td>
<td>24.00</td>
<td>20.00</td>
<td>20.00</td>
</tr>
<tr>
<td>Interquartile Range</td>
<td>11.00</td>
<td>5.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.090</td>
<td>-0.165</td>
<td>-0.745</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-1.000</td>
<td>-0.111</td>
<td>0.027</td>
</tr>
</tbody>
</table>

6.4.1 Assessment of the Distribution of the Scores in CEPO for Normality

The Histogram of the scores indicated an approximately normal distribution. The Normal Q-Q Plot showed a straight line. In addition, the Detrended Normal Q-Q Plot had most of the dots collected around the zero line with very little clustering. As suggested by Pallant (2001), the above displays confirmed that the scores followed an approximately normal distribution. Since the data met the normality condition, the factor CEPO was considered to be suitable for bivariate correlation analysis.

6.4.2 Assessment of the Distribution of the Scores in CSPO for Normality

The results for the scores in CSPO were similar to the earlier observation in CEPO. Therefore, it was concluded that the scores in CSPO also followed an approximately
normal distribution and the factor CEPO was suitable for bivariate correlation analysis.

6.4.3 Assessment of the Distribution of the Scores in CFPO for Normality

The observations about the Histogram, the Normal Q-Q Plot, and the Detrended Normal Q-Q Plot of scores in CFPO were similar to those made in CEPO and CSPO. Therefore, it was concluded that the scores in CFPO also followed an approximately normal distribution. Since the data met the condition of normality, the factor CFPO was considered as suitable for bivariate correlation analysis.
Section Three

Results of the Bivariate Analyses and the Discussion of the Results

6.5 Results of the Bivariate Correlation Analyses Conducted in the Study

As explained earlier in Section 1, the bivariate correlation analyses were conducted in order to examine the strength and polarity of the relationships between each pair of the five factors in CSS and CSPOS scales.

The two factors (IVs) in Competition Strategies Scale (CSS) were:

i) Strategic Resources and Capabilities, and
ii) Barriers to Entry.

The three factors (DV) in Corporate Sustainable Performance Outcomes Scale (CSPOS) were:

i) Corporate Environmental Performance Outcome (CEPO),
ii) Corporate Social Performance Outcome (CSPO), and
iii) Corporate Financial Performance Outcome (CFPO).

The bivariate correlation analysis was conducted using the statistical software SPSS for Windows, following the guidelines given by Bryman and Cramer (2001) and Pallant (2001).
Table 6.3 gives the correlation matrix resulting from bivariate correlation analysis. It is a 5 x 5 matrix of Pearson’s $r$ coefficients. An element Matrix $[i, j]$ is Pearson’s $r$ value for the relationship between the factor in row $i$ and the factor in column $j$.

Following the interpretation of Pearson’s $r$ suggested by Bryman and Cramer (2001), the following relationships between the factors were identified.

i) Strategic Resources and Capabilities was found to have

   a) A strong and positive relationship with Corporate Social Performance Outcome (CSPO),

   b) A strong and positive relationship with Corporate Financial Performance Outcome (CFPO), and

   c) No relationship with Corporate Environmental Performance Outcome (CEPO).

ii) Barriers to Entry was found to have

   a) No relationship with Corporate Social Performance Outcome (CSPO),

   b) A moderately strong and positive relationship with Corporate Financial Performance Outcome (CFPO), and

   c) A moderately strong and positive relationship with Corporate Environmental Performance Outcome (CEPO).
iii) A moderately strong and positive relationship was found between each possible pair of CEPO, CSPO, and CFPO.

iv) No significant relationship was found between Strategic Resources and Capabilities and Barriers to Entry.

Table 6.3 Bivariate Correlation Matrix (symmetrical about the diagonal)

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Resources &amp; Capabilities</td>
<td>1.000</td>
<td>0.151</td>
<td>0.063</td>
<td>0.562*</td>
<td>0.477*</td>
</tr>
<tr>
<td>Barriers to Entry</td>
<td>1.000</td>
<td>0.254*</td>
<td>0.146</td>
<td>0.367*</td>
<td></td>
</tr>
<tr>
<td>CEPO</td>
<td>1.000</td>
<td>0.351*</td>
<td>0.294*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSPO</td>
<td>1.000</td>
<td>0.348*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFPO</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: * Correlation is significant at the 0.01 level (1-tail).

Column headings: 1=Strategic Resources and Capabilities, 2=Barriers to Entry, 3=CEPO, 4=CSPO, 5=CFPO.

6.6 Discussion of the Results of the Bivariate Correlation Analyses

In this subsection, the results from the bivariate correlation analyses are discussed. The discussion also compares the findings of the earlier studies.

6.6.1 Relationship between Strategic Resources and Capabilities and Corporate Social Performance Outcome (CSPO)

The study found that there was a strong and positive relationship between Strategic Resources and Capabilities and CSPO in Australian business organisations. In the following paragraphs, the above result is examined in the light of the arguments found in the extant literature that are related to the result. At the outset, it may be
emphasised that the organisational resources and capabilities qualify as strategic in nature when they are rare, valuable, hard-to-imitate, and non-substitutable, following the canons of RBV theory (Barney 1991). The above finding can be analysed from different perspectives, each providing a different meaning to the result.

Following the human resources perspective, the result seems to lend support to a sequence of arguments. Greening and Turban (2000) contend that a caring and socially responsible organisation sends signals to talented people to join the company. Such an organisation is usually determined by whether it has put in place workplace policies such as equal employment opportunity, affirmation action, work-life balance, work flexibility, and no tolerance to sexual and racial harassment (Lawrence, Weber & Post 2005). Drawing from Social Identity theory, Greening and Turban (2000) argue also that people with high self-image are keen to work in business organisations that are socially sensitive. Talented employees are less likely to leave a firm that is caring, offers challenging and interesting work, and values social welfare (Lawrence, Weber & Post 2005). As a result, a socially responsible business organisation may accumulate a pool of highly talented people in its workforce. Laszlo (2003) argues that as change agents, talented employees may bring in positive work culture. Dutton, Dukerich and Harquail (1994) argue that strong organisational identification may translate into desirable outcomes such as intraorganisational cooperation and citizenship behaviour. The above arguments emphasise that talented and dedicated employees are strategic assets of a business. The asset is rare as it can be only developed over a long period of time; it is valuable as the success of an organisation rests upon the capabilities and contributions of its employees. Moreover, it may be hard for its competitors to imitate the personnel resource at a short notice. Therefore, the above finding in this study supports diverse arguments scattered in human resources theory and brings them together providing a new and clear understanding.
The above result also supports the Knowledge Management perspective. Kogut and Zander (1992) argue that organisational knowledge is a crucial strategic resource in business organisations operating in knowledge economy. Nonaka, Toyama and Konno (2000) explain that knowledge is created when it undergoes through transformation from tacit to explicit, explicit to tacit, explicit to explicit, and tacit to tacit modes. When knowledge is shared between employees, it not only diffuses across the organisation, but also grows qualitatively and quantitatively. Koskinen (2003) contends that employees who have shared values, mutual trust, and strong commitment to organisational goals are more likely to share their knowledge, particularly tacit knowledge, with other team members. Politis (2003) reports that a business organisation that supports knowledge-oriented social relationships may build a knowledge culture. Saint-Onge (1996) explains organisational culture as the sum of individual opinions, shared mindsets, beliefs, premises, values, and norms within a business organisation. Thus, the above arguments seem to suggest that effective knowledge management practices are not only strategic organisational capabilities, but may act as a socially enacted cultural force that strongly binds the people within the organisation towards common goals. This study’s above finding perhaps has consonance with the above discourse in knowledge management theory.

Stakeholder management perspective may also provide additional insight in understanding the above finding, i.e. the demonstration of a strong and positive relationship between strategic resources and capabilities in a business organisation and its CSPO. Barney (1986) suggests that stakeholder management practices may foster innovation culture. An empirical study conducted by Mavondo and Farell (2003) also supports this view. Grant (1991) states that a positive organisational structure and leadership are critical encouragement to the cooperation and commitment of its employees, who are an important group of stakeholders. In a reflective case study of a medium enterprise, Irani et al. (2002) describe how proactive business managers can contribute towards improving organisational performance through re-engineering the people process. Hillman and Keim (2001)
and Porter and Kramer (2003) argue that building good relationships with primary stakeholders such as employees, suppliers, customers, and community organisations may lead to favourable image, reputation, and legitimacy. Stakeholder engagement may benefit a business organisation in several areas (Lawrence, Weber & Post 2005). Gunasekaran (2003) argues that effective supply chain management (SCM) is a cornerstone of Total Quality Management (TQM). It also provides various opportunities for an organisation to learn. Argyris and Schon (1996) explain that dynamic interaction of an organisation with its stakeholders may result in generative or double-loop learning leading to the organisation changing its long held norms and assumptions. As a result, the organisation may engage in new initiatives and practices. This learning process has the potential to change the organisational culture, making it more sensitive and responsible to societal values and aspirations. The above arguments demonstrate that good stakeholder management practices may influence corporate social performance and outcomes thereby. The finding in the study supports this argument.

In the above paragraphs, the study’s result of a strong and positive relationship between Strategic Resources and Capabilities and CSPO is examined from human resources, knowledge management, and stakeholder management perspectives. The result seems to substantiate large strands of theoretical arguments, but goes beyond that to convey a practical way to achieve extraordinary social performance outcomes. It also shows how to identify, create, and build effective resources and capabilities that can be strategically used to succeed and thrive in a competition. These insights might be useful for business managers and practitioners.

6.6.2 Relationship between Strategic Resources and Capabilities and Corporate Environmental Performance Outcome (CEPO)

This study found that there was no relationship between Strategic Resources and Capabilities and Corporate Environmental Performance Outcome (CEPO) in
Australian business organisations. Possible reasons for the above result can be identified by scrutinising the findings by other Australian researchers on the types of environmental activities that are conducted in Australian business organisations.

In their case study research examining the Environmental Management Systems (EMS) in Australian business organisations, Sullivan and Wyndham (2001) report that the primary focus of environmental auditing in Australia has been ‘end of pipeline’ technical issues instead of implementing robust environmental management practices. Cost control and occupational health and safety had higher priority than the environmental protection. Similar comments are made by several other Australian researchers (e.g. Buritt 2002; Williams, et al. 2000; Zutshi & Sohal 2003). The position also appears to be similar in several other countries. For example, Bansal (2002) reports that compliance to ISO 14001—an international EMS standard has met with resistance by business managers as they do not believe that the economic benefits outweigh its implementation costs. She laments that managers do not see firm-level benefits from subscribing to ecological sustainability. Similar observations can be found in a Malaysian study by Rashid, Sambasivan and Johari (2003) and in an Indian study by Sahay (2004).

Following the observations made by Bansal (2002), Rashid, Sambasivan and Johari (2003), Sahay (2004), Sullivan and Wyndham (2001), and Zutshi and Sohal (2003), it may be argued that ‘end of pipeline’ environmental protection measures or activities, carried out to solely meet regulatory obligations, produce neither strategic capabilities nor organisational learning. For example, emissions control equipment cannot become a strategic asset because the competitors can procure the same equipment within no time from the original equipment suppliers. Although by installing the gadget, the company might have taken a commendable step towards protecting the environment, the asset is of no strategic value. In pursuant of RBV theory, the ‘end of pipe line’ equipment purchased from a supplier has no qualities of rareness, value, imperfect imitability, and non-substitutability (Barney 1991). On the other hand, if
the company had eliminated the emissions by means of one or more of the following strategies and also had communicated this success to its stakeholders including the customers, then the environmental practice would have become a strategic resource. The organisational learning achieved during its design and development would have fostered organisational capabilities. As Willard (2002) suggests, examples of innovative strategies by which an organisation can eliminate emissions in its manufacturing processes are:

i) Redesign,
ii) Reuse,
iii) Recycle,
iv) Use substitute material, or
v) Use another process.

The above measures may contribute to the development of organisational resources and capabilities of strategic value as they are firm specific, path dependent, have causal ambiguity, and socially complex. The innovation and the learning may become sources of competitive advantage (Barney 1991). When a business does not explore eco-oriented opportunities within its products, processes or services, it does not learn much from its environment focused business activities. When it foregoes its opportunities to learn from environmental challenges, opportunities to build eco-centric organisational culture may also slip away (Banerjee 2002; Purser, Park & Montuori 1995).

In the above paragraphs, the finding of this study that there is no relationship between strategic resources and capabilities and CEPO in Australian business organisations is analysed mainly drawing from the extant literature. It also sheds more light on how a business organisation can create strategic value from its corporate environment performance.
6.6.3 Relationship between Strategic Resources and Capabilities and Corporate Financial Performance Outcome (CFPO)

This study reported a strong and positive relationship between strategic resources and capabilities and Corporate Financial Performance Outcome (CFPO) in Australian business organisations. It appears that this finding is consistent with the views of RBV theory, which focuses on the resources and capabilities controlled by an enterprise that underlie persistent performance differentials among firms. Synthesising various arguments in RBV theory, Barney (1991) states that the four empirical indicators of the potential of firm-specific resources and capabilities to generate competitive advantage are value, rareness, inimitability, and non-substitutability.

A firm’s competitive advantage is an indicator of the firm’s potential to best its rivals in terms of rents, profitability, and market share (Peteraf & Barney 2003). Mahoney and Pandian (1992) explain that a firm owning a valuable resource that is scarce may achieve Ricardian rents. Besides, when the resource is firm specific, it may also be able to appropriate quasi-rent.

Thus, the arguments grounded in RBV theory and Rent theory together justify the strong and positive relationship between strategic resources and capabilities and corporate financial performance outcomes.

6.6.4 Relationship between Barriers to Entry and Corporate Financial Performance Outcome (CFPO)

The study reported a moderately strong, positive relationship between Barriers to Entry and CFPO. This finding supports the arguments grounded in Barriers to Entry theory that an industry’s barriers to entry against potential competitors may generate competitive advantage to the industry’s incumbent businesses (Bain 1956; Chang &
Porter (1980) explains that increasing competition in an industry continually works to drive down the rate of return on invested capital. Barriers to entry coupled with perceived retaliation from incumbent competitors may deter new entries into an industry, thereby preventing the escalation of the competition. Mahoney and Pandian (1992) argue that when an industry has high entry barriers, the incumbents may apportion monopoly rents.

Porter (1980) argues that the key for creating competitive advantage is to delve below the surface and analyse the sources of each entry barrier. Knowledge of these underlying sources of competitive pressures highlights the critical strengths and weaknesses of the company, guides its positioning in its industry, clarifies the areas where strategic changes may yield the greatest payoff, and highlights the areas where industry trends promise to hold the greatest significance as either opportunities or threats (Grant 1991; Porter 1980). Han, Kim & Kim (2001) argue that business organisations can craft their competitive strategy to counter the threat of new competition by analysing the barriers to entry that are present now and that are to be built in future. It is a part of the analysis of competitive advantage of the industry. Mahoney and Pandian (1992) link the notion of competitive advantage and profitability. They argue that the focus of an analysis of competitive advantage is the generation of above-normal rates of return, i.e. rents. Thus, the above theoretical arguments emphasise the linkage between barriers to entry and inter-industry profitability difference. These arguments seem to be supported by the result reported in this subsection, i.e. there is a moderately strong and positive correlation between Barriers to entry and CFPO.
6.6.5 Relationship between Barriers to Entry and Corporate Environmental Performance Outcome (CEPO)

The result shows a moderately strong and positive relationship between Barriers to Entry and Corporate Environmental Performance Outcome (CEPO). This finding is similar to the earlier finding in a US study conducted in manufacturing industries by Dean and Brown (1995). The study reports that the environmental regulations inhibited new firm’s entry into the manufacturing sector.

The extant literature provides the link between barriers to entry and corporate environmental performance. For example, Shrivastava (1995b) suggests that environmental issues can offer both competitive opportunities and constraints. Corporations can create competitive advantage by managing ecological variables. Dean and Brown (1995) also suggest that the corporate environmental activities such as

i) Setting a benchmark in implementation of Environmental Management System (EMS) (e.g. ISO 14001),

ii) Supporting stringent environmental regulations, and

iii) Going beyond compliance

may increase the height of barriers to new firm entry by influencing the business variables such as economies of scale, product differentiation, and capital requirements (Bain 1956; Grant 1991; Porter 1980; Robinson & McDougall 2001).

Boyd (2001) argues that proactive environmental strategies may help firms in boosting their corporate image and reputation. Furthermore, a product can be differentiated by its environment-friendly features and image (Porter 1980; Schaltegger, Burritt & Petersen 2003). For example, Venkatesan and Giridhar (1998)
explain how Ciba, a multinational manufacturer of personal hygiene products, engages in raising the heights of entry barriers in its industry by means of environment-oriented product differentiation. Incumbents’ ecology driven image and reputation may create a barrier to entry by forcing new entrants to spend heavily to overcome existing customer loyalties. This effort usually involves start-up losses and often takes an extended period of time. For a new comer, such investments in building a specific image are particularly risky since they have no salvage value if the entry fails.

The finding of this study, i.e. a demonstration of a moderately strong but positive association between barriers to entry and CEPO, seems to support the arguments made in the above extant literature linking barriers to entry and environment-oriented business practices. It also supports the findings in the US study by Dean and Brown (1995) mentioned above.

6.6.6 Relationship between Barriers to Entry and Corporate Social Performance Outcome (CSPO)

The study found that there was no relationship between Barriers to Entry and Corporate Social Performance Outcome (CSPO). The possible reasons for this finding are given as follows.

Business organisations positioned in an industry, which is perceived to have high entry barriers, may apportion monopoly rents (Mahoney & Pandian 1992). The business organisations that have almost monopoly or oligopoly over an extended period of time may become lethargic, brash, and bureaucratic. While they may enjoy extraordinary profitability, they are likely to ignore their social resources and capabilities such as
The above explanation supports this study’s finding that there is no linkage between barriers to entry and CSPO.

6.6.7 Relationship between Barriers to Entry and Strategic Resources and Capabilities

The study found no significant relationship between the two competition strategies considered in this study, namely Barriers to Entry and Strategic Resources and Capabilities. This result was anticipated since the two strategies were based on different assumptions. For example, Barriers to Entry theory, which has its theoretical foundations in neoclassical microeconomics, is developed on the assumption of state of equilibrium. On the other hand, RBV theory, which underpins the concept of strategic resources and capabilities, debunks the equilibrium analysis. Furthermore, Barriers to Entry theory assumes that factors of production are available for purchase to all the competitors in the factor market. In contrast, RBV theory assumes that the factors are inelastic in supply (Barney 1991).

As a theory in strategy, Barriers to Entry theory is largely oriented externally toward new entrants to the industry. But, RBV theory is an efficiency-based theory largely focused on optimising one’s own productive performance rather than hobbling one’s rivals and blunting their competitive forces (Peteraf & Barney 2003). The unit of analysis in Barriers to Entry theory is the industry in which the firm in consideration
operates. On the other hand, in RBV theory, the unit of analysis is the business organisation (Barney 2002).

The above major differences between the two strategic theories lend support to the above finding that there is no relationship between Barriers to Entry and Strategic Resources and Capabilities.

6.6.8 Relationships between Corporate Social Performance Outcome (CSPO), Corporate Environmental Performance Outcome (CEPO), and Corporate Financial Performance Outcome (CFPO)

The study found that there were moderately strong and positive relationships between CSPO, CEPO, and CFPO. These findings support the related postulates and findings reported in the extant literature, which are discussed in the following paragraphs.

Attempts were made in earlier studies to understand the link between CSPO and CFPO. For example, in an empirical study of 56 large UK companies, Balabanis, Phillips and Lyall (1998) found that the past, concurrent, and subsequent economic performances related to their corporate social responsibility (CSR). From an empirical study of 469 US companies, Waddock and Graves (1997) report that corporate social performance (CSP) is positively associated with prior financial performance. They explain that a reason for this high CSP is the availability of slack resources. They also report a positive relationship between CSP and future financial performance. This finding is attributed to good stakeholder management. Waddock and Graves explain that CSP expenditure may result in providing improved attention to key external and internal stakeholders. Investment in stakeholder management may provide benefits beyond their costs, which are eventually reflected in financial performance. An empirical study by Hillman and Keim (2001) also emphasises the association between stakeholder management and profitability. Bansal (2002) highlights the above findings by stating that empowering and engaging stakeholders
including employees contribute to a healthier financial bottom line. Thus, the result of positive and moderate relationship between CSPO and CFPO found in this study supports the arguments made by the earlier researchers that corporate social performance and business profitability are linked. The result also supports the findings reported in the empirical studies mentioned above, which were conducted in other organisational settings.

Researchers have attempted to establish the linkage between CEPO and CFPO. For example, citing 3M Corporation, Shrivastava (1995b) argues that environmental technologies provide opportunities to a business organisation for improving its efficiency and productivity, implementing innovation, reducing waste, and capturing new markets. These opportunities may lead to improved economic performance. Similar arguments explaining the association between environmental performance outcomes and financial performance outcomes are also given by Menguc and Ozanne (2003), Wilson (2003), Boyd (2001), and Porter and van der Linde (1995).

Researchers have examined how an environmentally responsible business organisation can benefit from a high stock market valuation. For example, Connelly and Limpaphayom (2004), Klassen and McLaughlin (1996), and Rennings, Schroder and Ziegler (2003) report a significant positive relationship between environmental performance and stock market performance. Possible reasons are as follows. Menguc and Ozanne (2005) and Klassen and McLaughlin (1996) argue that firms can save by reducing and recycling physical waste. Buchholz (2004) warns that wastes not disposed of properly can come back to haunt a company year later. Effective communication of environmental impact of business activities may contribute to good reputation. A business can reduce cost and increase reputation by using renewable natural resources. A management team that adheres to environmentally safe business operations is highly regarded by investor community. By integrating environmental values in business decisions and business practices, a company may change the validation of investors for its future perceived financial performance. This may
contribute favourably to a higher valuation of its stock. The above explanations that has stock market perspective, also demonstrate that there is a positive relationship between CEPO and CFPO that was supported by this study.

It appears that the extant literature examining the relationship between CSPO and CEPO is very limited. This study found a moderately strong and positive relationship between these two latent variables. This finding is explained by the arguments that follow. Greening and Turban (2000) argue that caring and socially responsible business organisations send positive signals to talented people to join them. They also argue that people with high self-image seek long-term careers in firms that have fair workplace policies and do care for society. Lawrence, Weber and Post (2005) suggest that talented people remain committed to jobs that are challenging and interesting, and provide work-life balance. As a result, kind employers may attract and retain a large pool of talented workers and managers. Dutton, Dukerich and Harquail (1994) contend that dedicated and talented employees become change agents in the organisation, demonstrating excellent intraorganisational cooperation and citizenship behaviour. People, who support social equity and community welfare, may also show respect for the environment. These employees foster a culture of environment consciousness in the organisation. They influence business decisions to incorporate environmental values. Thus, a socially responsible business organisation may also become environmentally responsible. This trail of arguments explains the study’s finding of moderately strong and positive relationship between CSPO and CEPO.

The moderate bivariate correlations between CSPO, CEPO, and CFPO found in the study were examined in the light of the arguments presented by the other researchers. The above results were also found to corroborate the results reported by similar empirical studies conducted in other countries (e.g. Balabanis, Phillips & Lyall 1998; Waddock & Graves 1997) and in the Australian study by Menguc and Ozanne (2005). Particularly, Menguc and Ozanne (2005) report that natural environmental orientation, a construct comprising entrepreneurship, corporate social responsibility,
and commitment to the natural environment, is positively related to profit after tax and market share, and is negatively related to sales growth in Australian manufacturing sector. Thus, results from this study seem to add further to the current understanding that CSPO, CEPO, and CFPO are connected positively.

### 6.7 Summary of the Chapter

The bivariate correlation analysis revealed the following results:

i) Strategic Resources and Capabilities was found to have

   a) A strong and positive relationship with Corporate Social Performance Outcome (CSPO).

   b) A strong and positive relationship with Corporate Financial Performance Outcome (CSFO).

   c) No relationship with Corporate Environmental Performance Outcome (CEPO).

ii) Barriers to Entry was found to have

   a) No relationship with Corporate Social Performance Outcome (CSPO).

   b) A moderately strong and positive relationship with Corporate Financial Performance Outcome (CFPO).
c) A moderately strong and positive relationship with Corporate Environmental Performance Outcome (CEPO).

iii) Between each possible pair of CEPO, CSPO, and CFPO, there was a moderate and positive relationship.

iv) Between Strategic Resources and Capabilities and Barriers to Entry there was no significant relationship.

The above relationships found in Australian business organisations were explained in this chapter. The possible reasons for the relationships were given in the light of the theoretical arguments made in the extant literature. Earlier empirical studies in the related areas were examined. Their findings were compared with the findings in this study.

The above relationships lead to several interpretations that could be useful to business managers and practitioners. They will be discussed in more detail in the chapter that follows. For example, the findings indicate that environment-driven business practices can be effectively employed to create entry barriers to new competition. Business managers may use this strategy to reduce the escalation of competition in their industry. However, the results also convey that environment-driven business practices may not be effective in equipping the business organisation to remain competitive against its current competitors. Instead, it can deploy its internal resources and capabilities originating from socially crafted business practices such as stakeholder management and innovation practices in order to gain the competitive advantage. The results also suggest that a business organisation can achieve sustainable performance outcomes by integrating environmental, social, and economic values in its business model.
CHAPTER 7

Appraisal of the Results, Conclusions, and Recommendations

7.1 Overview of the Chapter

This final chapter, firstly, outlines the purpose of the study. It is followed by brief summary of the research methodology and an overview of the demographic and situational characteristics of the respondents and their business organisations. Then, it provides analyses of the results obtained for the study’s four research objectives and the associated research problems in each objective. At the end of each analysis, it provides the insight into the research problem in the light of the empirical result and the related literature. In addition, it provides useful recommendations useful to business managers based on its insight into the problem. The chapter also presents the revised framework of the research objectives, which illustrates the research findings. Finally, drawing from the study’s findings and the extant literature, the chapter substantiates an important claim that corporations can enhance their competitive advantage when they pursue corporate sustainability principles. It may be recalled that corporate sustainability recognises that while business growth and profitability are important for a business organisation, they should be responsible for environmental protection, and social justice and equity (Wilson 2003). By substantiating the above claim, this study attempts to make a contribution to the field of strategic management.
7.2 Purpose of the Study

This study took into consideration five research variables or factors. Among them, the two variables were strategic organisational practices, namely i) Barriers to Entry, and ii) Strategic Resources and Capabilities and the rest were the corporate sustainable performance outcomes, namely i) Corporate Financial Performance Outcome (CFPO), ii) Corporate Social Performance Outcome (CSPO), and iii) Corporate Environmental Performance Outcome (CEPO).

The main purpose of the study was to examine the nature of the relationships between

i) Barriers to Entry and
   a) CFPO,
   b) CSPO,
   c) CEPO,

And

ii) Strategic Resources and Capabilities and
   a) CFPO,
   b) CSPO,
   c) CEPO,

in Australian business organisations.

In order to gain a better understanding of the above relationships, the study addressed three specific objectives and a number of related research problems under each specific objective, which are analysed in a latter section.
7.3 Brief Summary of the Research Methodology

In this subsection, a brief summary of the research methodology is presented. The survey method was employed to collect the data from a representative sample of Australian business organisations. It used a questionnaire titled “Developing Sustainable Corporations in Australia”. Before the commencement of the survey, the researcher obtained the ethics approval from the Swinburne Human Research Ethics Committee (HREC). It was followed by the pilot survey, in which MBA and MEI (Master of Entrepreneurship and Innovation) students at the Australian Graduate School of Entrepreneurship (AGSE), Swinburne University of Technology participated. It was mainly conducted in order to test the validity and reliability of the two scales, i.e. Competition Strategies Scale (CSS) and Corporate Sustainable Performance Outcomes Scale (CSPOS) that were developed and used in the questionnaire. The two scales were found to have adequate reliability of internal consistency.

The population for this study comprised Australian business organisations. However, business organisations that had less than ten employees and annual sales of less than one million dollars were excluded. Using the Systematic Sampling method, a random sample of 600 businesses was drawn from the sample frame provided by Kompass, an electronic database of Australian businesses (Kompass 2004). Survey packs were mailed out to chief executive officers or the managing directors of the sample’s 600 business organisations. The study was conducted in partnership with the two not-for-profit business associations, i.e. TBL Australia and TiE Melbourne Chapter. In order to increase the response rates, the non-respondents were reminded by letters, emails, and telephone calls. A total of 102 completed questionnaires were collected back from a sample of 600 business organisations that made the response rate as 17 percent.
The factor analysis of CSS scale and CSPOS scale resulted in the extraction of two factors and three factors respectively. The factors in CSS scale were named as follows: i) Strategic Resources and Capabilities, and ii) Barriers to Entry. The factors in CSPOS scale were named as follows: i) Corporate Environmental Performance Outcome Scale (CEPO), ii) Corporate Social Performance Outcome (CSPO), and iii) Corporate Financial Performance Outcome Scale (CFPO). The reliability in terms of internal consistency of each factor in the scales was estimated and was found to be adequate.

7.4 Overview of the Demographic and Situational Characteristics of the Respondents and their Business Organisations

This subsection provides an overview of the demographic and situational characteristics of the respondents and their business organisations.

7.4.1 Summary of the Respondents’ Position

The valid responses were 100 in the total of 102. Table 7.1 gives the distribution of respondents’ positions in per cent. The Table shows that 62 percent of the respondents had delegated the task to appropriate managers.

Table 7.1 Distribution of Position of the Respondents

<table>
<thead>
<tr>
<th>Position</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO</td>
<td>14</td>
</tr>
<tr>
<td>Managing Director or General Manager</td>
<td>24</td>
</tr>
<tr>
<td>Managers</td>
<td>44</td>
</tr>
<tr>
<td>Other Office Holders</td>
<td>18</td>
</tr>
</tbody>
</table>
7.4.2 Summary of the Respondents’ Gender

Total number of respondents was 102, of which 100 were valid responses. Table 7.2 provides the distribution of gender of the respondents in the survey. The large proportion of male respondents confirmed a gender disproportion in senior manager and executive levels in Australian business organisations.

Table 7.2 Distribution of Gender of the Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>84</td>
</tr>
<tr>
<td>Female</td>
<td>16</td>
</tr>
</tbody>
</table>

7.4.3 Summary of the Respondents’ Formal Education

Total number of respondents was 102, of which valid responses were 100. Table 7.3 shows the distribution of formal education of the respondents.

Table 7.3 Distribution of Formal Education of the Respondents

<table>
<thead>
<tr>
<th>Formal Education</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>7</td>
</tr>
<tr>
<td>Technical &amp; Further Education Diploma or Certificate</td>
<td>7</td>
</tr>
<tr>
<td>Professional Diploma or Certificate</td>
<td>11</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>38</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>33</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>4</td>
</tr>
</tbody>
</table>
7.4.4 Summary of the Business Sector

The business organisations were classified under four broad business sectors: i) manufacturing, ii) service, iii) resources, and iv) unclassified. Table 7.4 gives the distribution of business sectors of respondents’ firms. The highest proportion of firms in service sector reflects that in developed countries such as Australia, service industries are the engines of national economy and sources of employment.

<table>
<thead>
<tr>
<th>Business Sector</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>36.3</td>
</tr>
<tr>
<td>Service</td>
<td>46.1</td>
</tr>
<tr>
<td>Resources</td>
<td>10.8</td>
</tr>
<tr>
<td>Unclassified</td>
<td>6.9</td>
</tr>
</tbody>
</table>

7.4.5 Summary of the Number of Employees

Table 7.5 provides the distribution of the six class intervals of number of employees in respondents’ business organisations in percentage. The distribution indicates the nature of the size of Australian firms.
### Table 7.5 Distribution of the Class Intervals of Number of Employees

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20</td>
<td>11.8</td>
</tr>
<tr>
<td>20 - 99</td>
<td>22.5</td>
</tr>
<tr>
<td>100 - 299</td>
<td>14.7</td>
</tr>
<tr>
<td>300 - 599</td>
<td>14.7</td>
</tr>
<tr>
<td>600 – 899</td>
<td>7.8</td>
</tr>
<tr>
<td>900 or more</td>
<td>28.4</td>
</tr>
</tbody>
</table>

#### 7.4.6 Summary of the Business Size Based on Annual Sales

Table 7.6 provides the distribution into three class intervals of annual sales in respondents’ business organisations. In 102 responses, there were 85 valid responses while 17 did not answer this question.

### Table 7.6 Distribution of the Class Intervals of Business Size Based on Annual Sales

<table>
<thead>
<tr>
<th>Business Size</th>
<th>Frequency in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (Less than $10 m)</td>
<td>22.4</td>
</tr>
<tr>
<td>Medium ($10 m - $99 m)</td>
<td>24.7</td>
</tr>
<tr>
<td>Large ($100 m or more)</td>
<td>52.9</td>
</tr>
</tbody>
</table>

#### 7.4.7 Distribution of Respondents’ Business Organisation across the Size and the Business Sector

Table 7.7 gives the result of cross-tabulation between the Size and the Business Sector. It shows the number of observations (frequency) in different categories and
the percentage. Total responses were 102, valid responses were 85 (83.3 percent) and non-responses were 17 (16.7 percent). From the Table, it can be observed that a large proportion of the manufacturing organisations are medium or small in size, while a large proportion of the service organisations are large or small in size. Among resource companies, most were large in size.

**Table 7.7 Distribution of Respondents across the Business Size and the Business Sector**

<table>
<thead>
<tr>
<th>Size</th>
<th>Manufacturing</th>
<th>Business Sector</th>
<th>Resources</th>
<th>Unclassified</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>9 (10.6%)</td>
<td>10 (11.8%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>19 (22.4%)</td>
</tr>
<tr>
<td>Medium</td>
<td>15 (17.6%)</td>
<td>3 (3.5%)</td>
<td>1 (1.2%)</td>
<td>2 (2.4%)</td>
<td>21 (24.7%)</td>
</tr>
<tr>
<td>Large</td>
<td>11 (2.4%)</td>
<td>23 (27.1%)</td>
<td>9 (10.6%)</td>
<td>2 (2.4%)</td>
<td>45 (52.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>35 (41.2%)</td>
<td>36 (42.4%)</td>
<td>10 (11.8%)</td>
<td>4 (4.7%)</td>
<td>85 (100%)</td>
</tr>
</tbody>
</table>

**7.5 Analyses of the Specific Objectives**

**7.5.1 Specific Objective 1:**

*To examine the nature of the research variables used in the study, i.e. Barriers to Entry, Strategic Resources and Capabilities, CFPO, CSPO, and CEPO in Australian business organisations.*

The above research objective was analysed by exploring the solutions to the following five research problems. The following subsections present insight into each problem in the light of the research findings and the extant literature. In addition, the subsections provide useful application guidelines to business managers.
7.5.1.1 Research Problem 1:

What are the comparative heights of barriers to entry, which may act as deterrence to potential entrants into an industry, across Australian business sectors and business sizes?

This study showed that business sector made an impact on barriers to entry. In particular, barriers to entry were the highest in manufacturing sector and the lowest in service sector. The highest level of barriers to entry in Australian manufacturing sector can be explained as follows. When market deregulation was implemented in Australia, low value adding manufacturing industries including footwear, clothing, and textiles were decimated. The shrinking manufacturing base triggered restructuring and consolidations leading to plant closures, offshore productions, mergers, and acquisitions. As a result, Australian manufacturing sector has been characterised by high market concentration (Brouthers & Brouthers 2003; Gans 2000). Porter (1980) argues that a high concentration in an industry results in high entry barriers in the industry. The above explanation shows the reasons for the highest level of barriers to entry in Australian manufacturing sector.

On the other hand, the service sector seems to be not affected as much as manufacturing sector by the introduction and implementation of market deregulation. The two reasons for this are as follows. First, the service industries such as personal care, health services, travel, tourism, hospitality, entertainment, real estate, and consulting have personal, creative, and local components, which present entry barriers to overseas service providers. Second, the service industries are traditionally fragmented and lacking economies of scale. Porter (1980) argues that barriers to entry are low in a fragmented industry. The landscape of Australian service industries may change when overseas service-providers deliver services at low cost through the
Internet aided by advances in information technology and communications (ICT) (Corones 1993).

Interestingly, this study found that business size had no impact on barriers to entry. At the outset, this finding appears to contradict the earlier result of the highest level of barriers to entry seen in manufacturing sector, which is characterised by the presence of large firms. But, the two findings together demonstrate that it is not the presence of large businesses in an industry that contributes to barriers to entry in the industry, but a high market concentration in the industry that contributes. Therefore, this study suggests that a merger or an acquisition not resulting in increased industry concentration may not create competitive advantage originating from increased entry barriers. It is true that companies engage in mergers and acquisitions for meeting different objectives including for complementing competencies. But, this study suggests that mergers and acquisitions can thwart new competition in the industry and create competitive advantage to a company seeking growth through that path, provided its proposed merger or acquisition must result in increased industry concentration.

7.5.1.2 Research Problem 2:

What are the comparative amounts of strategic resources and capabilities, which are internal to a business organisation across Australian business sectors and business sizes?

The study found that business sector and business size had no impact on strategic resources and capabilities. Therefore, this study suggests that any business organisation must be able to create, develop, and deploy strategic resources and capabilities successfully such as knowledge management, stakeholder management, and customer relationship management that are sources of competitive advantage. Business sector or business size is not imposing a constraint or a disadvantage to
engage in the above-mentioned strategic business practices. For example, a strategic business activity such as staff training is not only important to a large multinational corporation, but also important to a small business.

7.5.1.3 Research Problem 3:

What are the comparative levels of corporate financial performance outcome (CFPO) across Australian business sectors and business sizes?

The study found that business sector made an impact on CFPO. The resources sector had the highest mean score and the service sector had the lowest mean score in CFPO. This study provides the following reasons for this significant difference.

The highest CFPO in resources sector may be attributed to the boom in global demand for minerals, oil, and natural gas observed during the period of this study. The increases in prices for iron ore, coal, manganese, uranium, petroleum, and natural gas have favoured the export earnings of Australian minerals companies. Moreover, the resources sector has demonstrated extraordinary environmental performance. Environmentally responsible business practices contribute to savings in energy and raw materials and to reduction in waste and waste management cost, resulting in a positive impact on CFPO.

On the other hand, the lowest CFPO in service sector can be attributed to the following reasons. As mentioned earlier, this study reported that service sector had the lowest level of entry barriers. As a result, service industries face high competition, fragmentation, and a lack of economies of scale. These structural problems lead to lowering of CFPO (Karakaya & Stahl 1989).

The study found that business size made no impact on CFPO. Based on this finding, this study contends that even a small business has no size related disadvantage in
Australia in achieving a healthy bottom line and can look forward to growth as long as its business model meets the needs of its customers.

7.5.1.4 Research Problem 4:

What are the comparative levels of corporate social performance outcome (CSPO) across Australian business sectors and business sizes?

Business sector and business size made no impact on CSPO. In other words, there were no significant differences in CSPO between different business sectors. Similarly, no significant differences were found in CSPO between large, medium, and small Australian firms.

7.5.1.5 Research Problem 5:

What are the comparative levels of corporate environmental performance outcome (CEPO) across Australian business sectors and business sizes?

The study found that business sector made a significant impact on CEPO. Particularly, resources sector recorded the highest CEPO, while the service sector recorded the lowest. This result supported the following observations and arguments outlined below.

i) Rice (2004) contends that the leading resources companies in Australia such as BHP Billiton have demonstrated impeccable roles in discharging their environmental responsibilities influencing industry peers.

ii) Since resources companies are perceived as highly polluting and making adverse impact on the environment, Australian resources companies have gone beyond the regulatory requirements in their
environmental protection activities to erase the above stigma (Banerjee 2002; Raar 2002; Tilt 2001).

iii) Minerals Council of Australia (MCA) has led an enduring cultural change across the sector in relation to environmental management through their policy frameworks and industry codes. Thus, this study upholds the view that an industry association can influence its members to make their industry vibrant and respected.

The study also found that business size made a significant impact on CEPO. In particular, large businesses had the highest mean score, while the small businesses had the lowest mean score in CEPO. This result lends support to the following arguments and views:

i) Large companies can invest a significant amount of financial and human resources into environment-oriented business processes. On the other hand, small businesses may not have the financial resources required to make a large difference;

ii) A small or medium business may perceive that its clients are unwilling to pay more for environment-friendly products and services (Williams, et al. 2000);

iii) Small firms do not appreciate the link between environmental performance and cost savings (Porter & van der Linde 1995).

iv) Regulators seeking to maximise returns on enforcement efforts or negotiated settlements are more likely to focus on large firms, where they can achieve the largest pollution reductions. Environmental protection authorities, which usually have limited technical and human resources, have a tendency to scrutinise large companies more closely rather than small companies. This size tiering effect in inspection and enforcement is more likely to drive only large companies to become
more responsive to environmental issues and practices (Dean & Brown 1995).

7.5.2 Specific Objective 2

To examine the relationships between industry level Barriers to Entry and each of the three dimensions of sustainable performance outcomes in Australian business organisations.

The above research objective was analysed by seeking answers to the following three research problems. The subsections that follow give insight into the research problems that are analysed based on the research findings and the extant literature. Besides, the discussions provide a number of valuable guidelines to business managers.

7.5.2.1 Research Problem 6:

What is the nature of the relationship between Barriers to Entry and Corporate Financial Performance Outcome (CFPO) in Australian business organisations?

A moderately strong and positive correlation was identified between Barriers to Entry and CFPO. This finding reinforces the argument presented in Barriers to Entry theory that barriers to entry in an industry against potential entrants may give a competitive advantage to the incumbents (Bain 1956; Chang & Tang 2001; Han, Kim & Kim 2001; Karakaya & Stahl 1989). It also supports the argument that as a structural characteristic of an industry, the presence of entry barriers influences the intra-industry difference in profitability (Porter 1980). The competitive advantage of the incumbents may contribute to monopoly rent and protected market share. As a result of these market conditions, the incumbent may have a superior CFPO (Mahoney & Pandian 1992).
How this finding can be useful to a small or a medium firm? How can it raise the height of barriers in its industry to new competition using its limited resource? This study suggests that a network or an industry body of small and medium businesses in an industry can protect their competition interests by erecting legally endorsed innovative entry barriers to the industry. For example, Australian local pharmacies are under a threat of extinction by a possible entry of large grocery supermarkets such as Coles and Safeway. Although the local pharmacies have come together to mobilise public petitions to the federal and the state governments to protect their interests, this alone may not be sufficient to frustrate the supermarkets from entering the lucrative pharmacy retail sector. The study suggests that the individual pharmacy businesses must use this opportunity to explore developing innovative entry barriers by joining hands. One such avenue open to them is to become cost leaders and be prepared for future price wars with grocery supermarkets. As a group, they can buy generic drugs in bulk from domestic and overseas pharmaceutical companies at much lower prices and repackaging them here (Porter 1980). Thus, innovative approaches are needed to raise the height of barriers to entry.

7.5.2.2 Research Problem 7:

What is the nature of the relationship between Barriers to Entry and Corporate Social Performance Outcome (CSPO) in Australian business organisations?

The study found that there was no relationship between Barriers to Entry and Corporate Social Performance Outcome (CSPO). This result lends support to the following arguments. Business organisations positioned in an industry with high entry barriers may almost have a monopoly or oligopoly. If these market conditions persist over a long period, then they may become lethargic, brash, and bureaucratic. Since they have a protected market and high profitability, they may ignore their corporate social responsibilities including stakeholder management and human
resource management. This indifference towards society and their employees might have given rise to the above null relationship between Barriers to Entry and CSPO.

The result can also be extended to argue that a business organisation’s activities related to corporate social responsibility (CSR) such as philanthropy, support to sports clubs, human resource management, and stakeholder management may be less useful as entry barriers to new competition. A new business, which lacks social and market reputation, can quickly compensate this deficiency by enticing customer loyalty by focusing on providing better value in its product or service. In fact, a new business need not immediately spend on CSR to win market share. This study clearly shows that investment in CSR has least effect in discouraging new competitors from entering their industry. Business managers must identify other ways to create strategic value from their CSR investments.

**7.5.2.3 Research Problem 8:**

What is the nature of the relationship between Barriers to Entry and Corporate Environmental Performance Outcome (CEPO) in Australian business organisations?

The study indicated a moderately strong and positive relationship between Barriers to Entry and CEPO. This result upholds the argument that business organisations in an industry can erect effective entry barriers to new competition by seeking stringent environmental regulations for their industry. It also supports the argument that Environmental Management Systems (EMS) (e.g. ISO 14001) can act as barriers to entry as its implementation is a sunk cost that newcomers must shoulder. Besides, a business organisation can increase the height of the barriers to entry by promoting environment-oriented product design, features, practices, and reputation (Boyd 2001; Dean & Brown 1995; Robinson & McDougall 2001; Venkatesan & Giridhar 1998). Therefore, based on its above finding, this study suggests that business managers
have wide-ranging opportunities available to them in environment-oriented business practices that can be turned effectively into entry barriers.

### 7.5.3 Specific Objective 3:

*To examine the relationship between Strategic Resources and Capabilities and each of the three dimensions of organisational performance outcomes in Australian business organisations.*

The above objective was rearranged into three research problems to gain a better understanding of the objective. The following subsections provide valuable insight into the research problems discussed drawing from the related findings in this study and the extant literature. They suggest a number of useful and practical guidelines to business managers.

#### 7.5.3.1 Research Problem 9:

What is the nature of the relationship between Strategic Resources and Capabilities in Australian business organisations and Corporate Financial Performance Outcome (CFPO)?

This study found a strong and positive relationship between Strategic Resources and Capabilities and CFPO in Australian business organisations. This finding supports the central plank of Resource-Based View (RBV) theory that organisational resources and capabilities that are rare, valuable, hard-to-imitate, and non-substitutable are sources of competitive advantage (Barney 1991). A firm’s competitive advantage is an indicator of its potential to best its competitors in terms of rents, profitability, and market share (Peteraf & Barney 2003). The finding also substantiates the RBV argument that a firm owning scarce and valuable resources and capabilities may earn
Ricardian rents. Furthermore, when the resources are firm specific, it may also earn quasi-rents (Mahoney & Pandian 1992).

7.5.3 2 Research Problem 10:

What is the nature of the relationship Strategic Resources and Capabilities in Australian business organisations and Corporate Social Performance Outcome (CSPO)?

The study found that there was a strong and positive relationship between Strategic Resources and Capabilities and CSPO in Australian business organisations. This result supports a number of arguments grounded in human resources, knowledge management, and stakeholder management perspectives presented in the following paragraphs.

In the extant literature on human resource management, it is claimed that a caring and socially responsible organisation attracts and retains talented people. A caring and socially sensible organisation is one that has implemented workplace policies such as equal employment opportunities, affirmative action, work-life balance, work flexibility, and zero tolerance to sexual and racial harassment. Social Identity theory also suggests that people with high self-image are willing to work for business organisations that care for communities and social issues. In a knowledge economy, the success of a business depends on the talent, knowledge, skills, commitment, and contributions of its employees (Dutton, Dukerich & Harquail 1994; Greening & Turban 2000; Lawrence, Weber & Post 2005). The above result of this study lends support to the arguments found in human resources management literature.

Following knowledge management and organisational learning perspectives, it is argued that knowledge management practices are the critical organisational capabilities for today’s knowledge companies including those in biotechnology,
information technology, nano technology, and education. Organisational learning is facilitated by organisational culture and social relationships. Indeed, organisational culture and organisational learning support each other (Kogut & Zander 1992; Koskinen 2003; Nonaka, Toyama & Konno 2000; Politis 2003; Saint-Onge 1996). Therefore, the finding of a strong and positive relationship between strategic resources and capabilities and CSPO reinforces the theoretical propositions made in knowledge management and organisational learning domains.

In stakeholder management literature, it is argued that stakeholder management practices are important organisational capabilities. It is also argued that building good social relationships with primary stakeholders such as employees, suppliers, customers, and community organisations may enable a firm to build strategic intangible resources such as image, reputation, and legitimacy. A receptive organisation can learn from its stakeholder groups. These resources and capabilities may give a competitive edge against competitors (Barney 1986; Hillman & Keim 2001; Lawrence, Weber & Post 2005; Mavondo & Farell 2003; Porter & Kramer 2003). The findings in this study lend support to the above arguments. This study also supports the arguments by Irani et al. (2002) that organisational capabilities in building self-directed work teams that work together towards common business goals are crucial in implementing and sustaining Total Quality Management (TQM). Gunasekaran (2003) links positively TQM and customer satisfaction, which is a CSPO.

On the strength of the above finding, the study argues that a business organisation can develop a range of strategic resources and capabilities from its social-oriented business practices and engagements such as stakeholder management, knowledge management, philanthropy, and community development. The strategic value of a resource or a capability can be determined by asking whether or not it is i) rare, ii) valuable, iii) hard-to-imitate, and iv) non-substitutable. The study argues that socially
enabled strategic resources and capabilities can become sources of competitive advantage. They may propel a business organisation ahead of its competitors.

**7.5.3.3 Research Problem 11:**

What is the nature of the relationship between Strategic Resources and Capabilities in Australian business organisations and Corporate Environmental Performance Outcome (CEPO)?

The study found that there was no correlation between Strategic Resources and Capabilities and Corporate Environmental Performance Outcome (CEPO) in Australian business organisations. In the light of the observations made by Bansal (2002), Buritt (2002), Sahay (2004); Sullivan and Wyndham (2001), Willard (2002) Williams, et al. (2000), and Zutshi and Sohal 2003, the study identified a possible reason for the above finding that is as follows. Most of the environment protection practices including the implementation of Environmental Management System (EMS) in Australia and elsewhere were ‘end of pipeline’ environment protection measures carried out to meet regulatory obligations. Drawing from RBV perspective, it can be argued that the above practices lack strategic value as they can be easily procured or substituted by one’s competitors. For example, emissions control equipment cannot be termed as a strategic asset in a business organisation because the competitors can also purchase the equipment. Although, a business organisation has made a noteworthy business investment to protect the environment, the emissions control equipment is of minimum strategic value to a company. The above arguments explain why environment protection measures such as EMS in a firm are least effective as strategic resources and capabilities and why they are least effective in leveraging the firm’s competitive position.

On the other hand, based on the strength of the above finding, the study suggests that an environmental dimension must be developed in-house and built into a product,
process, or service. When the dimension is inimitable or non-substitutable, it may have a strategic edge. Besides, the organisational learning achieved in the research, design, and development of the eco-friendly dimension builds unique capabilities that can be exploited to create, develop, and market more environment-oriented products, processes, and services. Then only can the environment-driven internal resources and capabilities become sources of competitive advantage as well as contributing to the health of the environment.

7.5.4 Specific Objective 4:

To examine the relationships between the three dimensions of corporate sustainable performance outcomes, i.e. Corporate Financial Performance Outcome (CFPO), Corporate Social Performance Outcome (CSPO), and Corporate Environmental Performance Outcome (CEPO) in Australian business organisations.

The above research objective was analysed under the three research problems. The analysis under each problem provides insight into the problem in the light of the finding of this study and associated literature. Besides, each solution is interspersed with valuable suggestions to business managers.

7.5.4.1 Research Problem 12:

What is the nature of the relationship between Corporate Social Performance Outcome (CSPO) and Corporate Financial Performance Outcome (CFPO) in Australian business organisations?

This study found a moderate and positive relationship between CSPO and CFPO in Australian business organisations. This finding corroborates the similar observations made in the earlier studies such as Balabanis, Phillips and Lyall (1998), Waddock and Graves (1997) and Hillman and Keim (2001). Since, Australian empirical studies on this relationship seem to be very limited, this finding is particularly noteworthy. An
Australian study by Menguc and Ozanne (2005) is limited to implying a positive relationship between natural environmental orientation, which includes corporate social responsibility and CFPO.

This finding lends support to the arguments that stakeholder management has favourable influence on business profitability. Stakeholder groups can contribute in several ways to the financial success of a business organisation. For example, a business organisation can seek the knowledge and experience of its suppliers in new product development. Similarly, good relationships with business customers can earn loyalty leading to repeat orders. A cordial relationship with trade unions can help timely completion of projects.

7.5.4.2 Research Problem 13:

What is the nature of the relationship between Corporate Environmental Performance Outcome (CEPO) and Corporate Financial Performance Outcome (CFPO) in Australian business organisations?

A moderate and positive relationship between CEPO and CFPO was identified in Australian business organisations by this study. It supports the similar findings reported by the earlier studies. For example, citing 3M Corporation, Shrivastava (1995b) suggested that business organisations could use environment technologies to improve their efficiency and productivity to achieve higher profitability. In an Australian study, Menguc and Ozanne (2003) report a positive association between a firm’s natural environmental orientation and its entrepreneurial rents. The above finding also supports the results of the studies that examined the relationships between a corporation’s environmental management practices and its stock market performance such as Connelly and Limpaphayom (2004), Klassen and McLaughlin (1996), and Rennings, Schroder and Ziegler (2003). This study supports the suggestions that a business that has implemented Environment Management Systems (EMS) is highly regarded by investor groups. By integrating environmental
protection issues in business practices, a company can influence the perception of investors on its future financial performance, which will be reflected by a higher valuation of its stock. In the context of the very few empirical studies conducted in Australian business sector examining the relationship between a firm’s environmental bottom line and financial bottom line, the above result can be valuable to Australian environmental practitioners in business organisations.

7.5.4.3 Research Problem 14:

What is the nature of the relationship between Corporate Social Performance Outcome (CSPO) and Corporate Environmental Performance Outcome (CEPO) in Australian business organisations?

It appears that there is a paucity of studies focusing on the relationship between CSPO and CEPO. This study found that there is a moderate relationship between these two research variables in Australian business organisations. In the following paragraph, arguments in the extant literature are presented to understand the possible reasons for the finding.

Following the human resources perspective, Greening and Turban (2000) argue that caring and socially responsible business organisations send signals to talented people to join their workforce. They also argue, drawing from Social Identity theory, that people with high self-image are keen to work for firms that are interested in social welfare. Furthermore, Lawrence, Weber and Post (2005) suggest that talented people remain committed to their employers who have caring workplace policies, offer challenging and interesting work, and business ethos that respect the society. These arguments lead to a conclusion that a socially responsible business organisation may have a large pool of talented people as employees. Dutton, Dukerich and Harquail (1994) argue that dedicated and talented employees become change agents in the organisation, demonstrating superior intraorganisational cooperation and citizenship behaviour. Their social sensitivity may transform into environmental sensitivity.
They may become live wires in propagating the environmental culture across the organisation. They may influence the integration of environmental values in business practices. They may creatively respond to the impact of business activities of their organisation on the environment. From the above arguments it may be concluded that a business organisation that has scored well in its social performance may also score well in its environmental performance. A moderate relationship between CSPO and CEPO found in this study further strengthens this conclusion.

7.5.5 Additional Result: Relationship between Barriers to Entry and Strategic Resources and Capabilities

The study found no significant relationship between the two competition strategies considered in this study, namely Barriers to Entry and Strategic Resources and Capabilities. Since the two strategies are resting upon different assumptions, this result was anticipated. First, Barriers to Entry theory, which is rooted in neoclassical microeconomics, is crafted on the assumption of state of equilibrium. In contrast, RBV theory, which supports the concept of strategic resources and capabilities, debunks the equilibrium analysis. Second, Barriers to Entry theory assumes that a factor of production is available to all the competitors in the market place for a price. As opposite to this, RBV theory assumes that many factors are inelastic in supply. Third, Barriers to Entry theory is mainly focused on addressing the threat of new competition and thwarting potential entrants from entering the industry. On the other hand, RBV theory is primarily focused on the identification, creation, and harvesting of strategic resources and capabilities, which have potential to generate Ricardian and quasi rents. Fourth, the unit of analysis in Barriers to Entry theory is the industry in which a business organisation competes. But, in RBV theory, the unit of analysis is the business organisation (Bain 1956; Barney 1986, 1991, 2001a, 2001b, 2002; Barney, Wright & Ketchen 2001; Grant 1991; Han, Kim & Kim 2001; Karakaya & Stahl 1989; Mahoney & Pandian 1992; Porter 1980).
The above important differences in the two strategic theories demonstrate that there cannot be any relationship between the two strategy variables namely Barriers to Entry and Strategic Resources and Capabilities. The above finding was as expected.

**7.6 Revised Framework of the Research Objectives**

The tentative framework presented in Chapter 1 is revised based on the findings of this study. Figure 7.1 illustrates the strength and polarity of the relationships between the latent research variables considered in the research objectives. In particular, it shows no relationships between Barriers to Entry and CSPO, Strategic Resources and Capabilities and CEPO, and Barriers to Entry and Strategic Resources and Capabilities in relation to Australian business organisations.

**Figure 7.1 Revised Conceptual Framework of the Research Objectives**
7.7 Conclusions

Drawing from its findings and the arguments presented in the extant literature, this study intends to make the following contribution to the field of strategic management. It makes a substantiated claim that corporations can enhance their competitive advantage by pursuing corporate sustainability principles. This claim is important in the face of the criticism leveled against corporate sustainability. The critics argue that the only social responsibility for a corporation is to maximise its profits and shouldering social and environmental responsibilities additionally undermines the founding principle of corporations (Friedman 1980). Against this argument, the conclusion of this study that corporations have enlightened self-interest in pursuing corporate sustainability is crucial.

The justification for the above claim that the corporations can enhance competitive advantage when they follow sustainability principles is given in the paragraphs that follow. As a part of its conclusion, it will be shown that the ability of a business organisation to integrate social and environmental values into its business practices can increase competitive advantage of the business organisation.

This study found that corporate sustainable performance outcome (CSPO) and strategic resources and capabilities are related positively and strongly. On the one hand, a good CSPO in a business organisation indicates that the business organisation has the ability to integrate social values into its business practices. It shows that it cares for its employees and other stakeholders, and it understands the value of CSR, social equity, and corporate citizenship. On the other hand, the creation, development, and deployment of strategic resources and capabilities in a business organisation also depend on its ability to integrate social values in strategic business practices. This preceding argument can be supported as follows: Pursuing the canons of RBV theory, the concept of strategic resources and capabilities implies that organisational
resources and capabilities must be rare, valuable, hard-to-imitate, and non-substitutable, should they be strategic (Barney 1991). Extant literature in RBV theory suggests that business practices such as knowledge management, customer relationship management, and stakeholder management have potential to create, develop, and deploy strategic resources and capabilities. Examination of the above strategic business practices reveal that the foremost success factor in those business practices is the ability of a business organisation to establish good social values across the business organisation. For example, knowledge management theory and organisational learning theory argue that social interactions and organisational culture are critical in creating and diffusing knowledge resources and capabilities. Indeed, organisational knowledge gains strategic value as it is held by employees, organisational routines, and social relationships that makes the knowledge rare, valuable, hard-to-imitate, and non-substitutable. Similar arguments can be presented in relation to customer relationship management and stakeholder management, where it can be seen that the above-mentioned ability to integrate social values is a crucial building block in strategically managing customers and stakeholder groups. Thus, the above arguments demonstrate that the ability to integrate social values into business practices is the common thread binding both strategic resources and capabilities and CSPO.

The extant literature in RBV theory argues that strategic resources and capabilities are the sources of competitive advantage (Barney 1991). Furthermore, rent theory argues that a business organisation’s competitive advantage engenders above-average profitability to the business organisation (Mahoney & Pandian 1992). The above claims are supported by this study as it found a strong and positive relationship between strategic resources and capabilities and corporate financial performance outcome (CFPO). This study showed that strategic resources and capabilities influence CFPO strongly and positively, as illustrated in the revised conceptual framework of the research objectives given in Figure 7.1. Therefore, since the ability of a business organisation to integrate social values often underpins its strategic
resources and capabilities, and its strategic resources and capabilities are the sources of competitive advantage, it can be claimed that the business organisation can enhance its competitive advantage when it integrates social values into its business model.

In the following paragraphs, this study will argue that the ability of a business organisation to integrate environmental values into its business model can enhance competitive advantage of the business organisation. This study found a positive and moderately strong relationship between Corporate Environmental Performance Outcome (CEPO) and Barriers to Entry. Based on this finding the study suggested that environment-oriented practices could provide a number of opportunities for a business organisation to create entry barriers to thwart the entry of new businesses and to reduce the escalation of competition in its industry. For example, this study argued that by raising environmental performance benchmark in their industry, incumbent businesses could increase the industry’s height of entry barriers. It also suggested that a firm could increase the height of entry barriers by incorporating environment-oriented designs and features in its products, processes, or services, and communicating them to its customers. While establishing the effectiveness of entry barriers driven by the concerns for the environment, this study argues that the ability of a business organisation to integrate environmental values into its business practices is essential to marshal the above-mentioned the environment-driven entry barriers.

Barriers to Entry theory and Rent theory argue that the presence of barriers to entry in an industry may provide competitive advantage and above-average profitability to the industry incumbents (Han, Kim & Kim 2001; Mahoney & Pandian 1992). These views were supported by the findings of this study. As shown in Figure 7.1 named the revised conceptual framework of the research objectives, barriers to entry was found to have a positive and moderately strong relationship with CFPO. In the preceding paragraph, it was concluded that the ability of a business organisation to integrate environmental values into its business practices is essential to succeed in erecting the
environment-focused entry barriers. In this paragraph, it is shown that the presence of barriers to entry in an industry has positive and moderately strong influence on the competitive advantage of an incumbent firm in the industry. Drawing from these arguments and supported by the findings mentioned therein, this study claims that a business organisation can enhance its competitive advantage when it has the ability to integrate environmental values into its business practices.

In the above paragraphs, this study presented justification for the following combined claim, i.e. the ability of a business organisation to integrate both social values and environmental values in its business practices has significantly positive influence on its competitive advantage. A business organisation attains the ability to integrate social and environmental values into its business practices by pursuing conscientiously the principles of corporate sustainability. Therefore, the study claims that corporations can enhance their competitive advantage by pursuing corporate sustainability principles.

The above conclusion made in the study has several implications. First, the competitive position of a business can be improved by pursuing corporate sustainability principles. It is an enlightened self-interest. Second, business managers need not seek moral and ethical reasons for spending their corporate dollars on CSR and environmental protection activities. Integrating social and environmental values into business decisions and business practices influences positively a firm’s profitability, market share, and share value. Third, it clearly indicates that the singular pursuit of shareholder wealth maximisation needs further scrutiny. Fourth, the study supports the usefulness of measuring organisational performance of a business in terms of social, environmental, and financial outcomes.
7.8 Directions for Future Research

In this section, a number of directions for future research are suggested. First, similar studies can be conducted in developed and developing countries to further confirm its findings. Second, research variables such as knowledge management, innovation, and customer relationship management can be incorporated in the conceptual framework used in this study. Third, conducting case studies can enrich its findings. Fourth, the scales used in the survey questionnaire can be improved. Thus, by exploring the new directions mentioned above, the usefulness of this study’s conceptual framework can be extended further.

7.9 Concluding Remarks

Corporate sustainability is no more an option, but a beacon to business managers, when they have to manoeuvre their business organisations on rough seas of competition. Shortsighted business managers may consider corporate social responsibility and environment protection engagements as unwanted activities. But, this study shows that Australian business organisations can enhance their competitive advantage by engaging in sustainable business activities. Many Australian business managers have been unsure of the strategic value of corporate sustainability due to a lack of empirical studies, particularly Australian studies, in this area. This study has reduced this deficiency to some degree by confirming the strategic value of corporate sustainability.

In the light of its findings, this study provides a number of guidelines to Australian business managers on how to evaluate sustainable business practices so that they can increase their organisation’s competitiveness. It explains with empirical support why
the environment-oriented business activities can increase the barriers to entry to new competitors, who are intending to enter an industry and why standard Environmental Management Systems are least effective as strategic resources. The findings of this study support the view that a business organisation’s social engagements with its stakeholders are strategically important. In other words, it demonstrates that socially crafted business processes such as customer relationship management, knowledge management, stakeholder management, and building reputation are definitely the sources of competitive advantage. These strategic guidelines suggested by this study are valuable to Australian business managers, who are reeling from increasing competition.

This study upholds the strategic importance of sustainable business practices, where social, environmental, and financial values are respected equally. It emphasises that formulation of business strategy must be guided by corporate sustainability principles.
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Appendix A
Covering Letter

<Date>

<Title> <First name> <Last name>
<Job title>
<Company>
<Address>
<City> <State> <Post code>

Dear <Title> <First name> <Last name>

Subject: Research on Developing Sustainable Corporations in Australia

In recent times, like many global corporations Australian companies have invested in environmental management systems, triple bottom line reporting, and environmental technologies. However, research seems to indicate limited evidence of holistic assessment of value generated by these investments. Furthermore, it is not clear as to what extent these investments have contributed towards competitive advantage and competitiveness.

A research project designed to address these pertinent issues has been undertaken by the Australian Graduate School of Entrepreneurship (AGSE), Swinburne University of Technology in partnership with TBL Australia and TiE Melbourne Chapter.

Your participation in this project would result in the following benefits to your organisation:

- An exclusive invitation to a hands-on workshop where the advance releases of the findings of the study would be provided.
• Discussion on how your organisation can gain competitive advantage by implementing sustainable business practices.
• You will be provided with a copy of the aggregate results and the findings for future reference.

To ensure absolute confidentiality, the university ethical committee has approved the project. We would like to emphasise that only aggregate results would be published and absolute anonymity of participants is guaranteed in the future.

If you are interested to participate in the above workshop, you may either supply your contact details in the optional section of the survey or alternatively you may wish to send your business card via a separate mail.

Yours sincerely

Raveendra Nayak
Ph.D. Student
Room AGSE 338
Email: Rnayak@swin.edu.au

Dr Shahid Yamin
Senior Lecturer in Strategy
and Ph.D. Supervisor (AGSE)
Like many innovation and knowledge management investments the return on Triple Bottom Line initiatives in Australian companies appears poor because it is being implemented at a lowest common denominator way (e.g. reporting only), incompletely across the business and with limited understanding of the way it can transform the business model.

European companies are showing us that greater ROI is achieved through the integration of innovation, knowledge management and technology initiatives at the heart of the business model and in business processes, not as an add-on.

TBL Australia, a not-for-profit company supporting the uptake of high-end triple bottom line strategy, is very pleased to be a partner with the AGSE in this research project. It will provide valuable baseline data on value generation in Australia of these initiatives. I urge you to take part in the research and reap the resulting benefits of this leading edge research.

Andrew Donovan
Director
TBL Australia Ltd
Appendix B  Survey Questionnaire

Swinburne University of Technology

Australian Graduate School of Entrepreneurship (AGSE)

In partnership with

TBL Australia
and
TiE Melbourne Chapter

Developing Sustainable Corporations in Australia

SURVEY

August 2003
Developing Sustainable Corporations in Australia

This survey consists of three main parts:

I  General Information
II  Competition Strategies Scale (CSS)
III  Corporate Sustainable Performance Outcomes Scale (CSPOS)

Please answer all the questions as frankly as possible. Circle the appropriate number OR fill in the blank where required.

This survey has the ethics approval given by the Swinburne Human Research Ethics Committee (HREC). The data collected will be held in the strict confidence. A summary report of the research findings will be made available on request to all participants.

If you have any concern in participating in the survey, you are requested to contact, in the first contact, the researchers, whose names and contact details are provided in the cover letter. If your concern is not still resolved, then you may contact

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OR

The Chair
Human Research Ethics Committee
Swinburne University of Technology
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Hawthorn Victoria 3122
Telephone: 03 9214 5223
KEY DEFINITION

• COMPETITIVE ADVANTAGE

It refers to the ability of a firm to earn higher than industry-average profit (or rent).

Developing Sustainable Corporations in Australia

I GENERAL INFORMATION

Company (optional)

Address (optional)

Position

1. CEO □
2. MD/GM □
3. Manager □
4. Other (specify) _______

Gender

1. Male □
2. Female □

Formal Education

1. High School
2. TAFE Diploma or Certificate
3. Professional Diploma/Certificate
4. Bachelor’s degree
5. Master’s degree
6. Ph.D.

Telephone __________________________ Fax __________________________

Number of Employees

1. Less than 10 □
2. 20 – 99 □
3. 100 – 299 □
4. 300 – 599 □
5. 600 – 899 □
6. 900 or above □
Total Sales (AUD)  

**Industry Type:** Please *tick appropriate box that best describes your business.*

1. Agriculture, Forestry, and Fishing
2. Mining
3. Manufacturing
4. Electricity, Gas, and Water Supply
5. Construction
6. Wholesale Trade
7. Retail Trade
8. Accommodation, Cafes, and Restaurants
9. Transport and Storage
10. Communication Services
11. Finance and Insurance
12. Property and Business Services
13. Government Administration and Defence
14. Education
15. Health and Community Services
16. Cultural and Recreational Services
17. Personal and Other Services
18. Unclassified
II COMPETITION STRATEGIES SCALE (CSS)

In your opinion

- To what extent do the following elements contribute to your organisation’s competitive advantage?

Please circle the appropriate number.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least Contribution</td>
<td>Minimum Contribution</td>
<td>Moderate Contribution</td>
<td>Considerable Contribution</td>
<td>High Contribution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>CONTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Proprietary (or unique) product, technology, process or service</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Price Difference (e.g. competitive price structure)</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Customer service</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Ability to quickly respond to customer or market demands</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5. Flexible organisational structure</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6. Management Leadership</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7. Reward Structure</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8. Shared values among employees</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9. Vision and values of the CEO</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10. Entry barriers for competitors created through exclusive contract of raw materials and other inputs</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11. Unique management of employee development</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12. Difficult-to-copy administrative system</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>13. Threat of new entrants to the industry</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>14. Capital intensive industry</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>15. Difficult- to- know (for competitors) your future strategic move</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>16. Limited number of major competitors in the industry</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>17. Competitors hold small market share</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

*Please write here any comments that you wish to add:*
III CORPORATE SUSTAINABLE PERFORMANCE OUTCOMES SCALE (CSPOS)

In your opinion

- To what extent the following elements are important to your organisation?

Please circle the appropriate number.

<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>IMPORTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use of renewable energy</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Increasing energy efficiency</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Reduction/replacement of hazardous chemicals or materials</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>(e.g. substituting hazardous chemicals with less hazardous alternatives)</td>
<td></td>
</tr>
<tr>
<td>4. EPA regulations on effluents/emissions/waste disposal</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5. Recycling, reuse, or waste reduction</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6. Periodic disclosure of environmental impact from business activities</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7. Return on average capital employed (ROACE)</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8. Top dividends to shareholders</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9. Business Profitability</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10. Debt/equity ratio</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11. Meeting tax obligations</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12. Community development (e.g. philanthropy/charitable donations)</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>13. Honoring contracts with suppliers (e.g. meeting payment schedules)</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>14. Employee retention rates</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>15. Employee participation in management decision making</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>16. Occupation Health &amp; Safety</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>17. Entitlements to workers</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>18. Promotion of women to senior management positions</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>19. Harmonious industrial relationship with employees</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>20. Policy Decisions to engage the stakeholder</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>21. Monitoring the relationship with stakeholders</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

Please write here any comments that you wish to add:

_________________________________________________________________________