Do Leaders’ Characteristics and Organisational Culture matter while Downsizing? A Study of Publicly Funded Australian Universities

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B. M. Santosh

Place: Brisbane
ABSTRACT

Even after three decades, organisations worldwide have continued the practice of downsizing. Interestingly, the reasons for the differences in leaders’ approaches to downsizing still remain unclear. This study therefore, was primarily driven by the central research question: Why would leaders differ in their approaches to downsizing? Within the downsizing literature, the role of some internal factors (e.g. mutual trust, team composition and structure, managerial ideologies) has been analysed and that of others (e.g. dynamic managerial capabilities) has been alluded to, without being followed up by actual research. However, the systematic links between downsizing strategies, and leaders’ characteristics and organisational culture have not been empirically established to date, and this study applies the initiative to such efforts.

In order to answer the central research question, the present study was conducted under two premises, viz. ideal and practical. Under ideal conditions, the intent was to identify the ideal downsizing strategy types and subsequently the leaders’ characteristics and organisational culture dimensions, so as to determine which leaders’ characteristics and organisational culture dimensions are favourable for which ideal downsizing strategy type. However, under practical conditions, the intent was to identify the practical downsizing strategy types and only organisational culture dimensions, so as to determine which cultural dimension is favourable for which practical downsizing strategy type.

The research data was gathered from 255 mid-level leaders in ten publicly-funded Australian universities through a postal survey, and then analysed using exploratory factor analysis, cluster analyses and one-way ANOVAs. Ideally and practically, three types of downsizing strategies were identified. Based on these, four clusters were derived and analysed methodically across personality, leadership styles, personal values, and organisational culture.

Empirical evidence suggests that leaders who ideally prefer forced downsizing have a higher tendency to make their attitudes clear to the team members - a characteristic of high task-oriented style; leaders who prefer voluntary downsizing have a lower tendency to make their attitudes clear to the team members - a characteristic of low task-oriented style; leaders who prefer student load downsizing have a lower tendency to act with consulting their team - a characteristic of low people-oriented style; leaders who prefer a very limited downsizing have a higher tendency to act with consulting their team - a characteristic of high people-oriented style.
However, personality, personal values, and organisational culture dimensions are not differentiated by the leaders who prefer different ideal downsizing strategies and also those who prefer a very limited downsizing. Furthermore, leaders who use a forced downsizing tend to have a culture that is less likely characterised by a personal freedom; leaders who use voluntary downsizing tend to have a culture that is less likely characterised by sociable and trusting; leaders who use a very limited downsizing tend to have a culture that is more likely characterised by a personal freedom, sociable and trusting. Interestingly, organisational culture dimensions are not differentiated by the leaders who use student load downsizing.

This research makes following three key contributions to the theory and practice of downsizing. First, it has advanced empirical typologies of ideal and practical downsizing; second, it has developed empirical model of differences in approaches to ideal downsizing; third, it has developed empirical model of differences in approaches to practical downsizing. The present research has addressed a gap in the downsizing literature concerning characteristics of leadership styles and organisational culture as explanatory factors for the differences in approaches to downsizing.
DEDICATION

This thesis is dedicated to all those who have directly or indirectly extended their help and support in advancing the knowledge of downsizing theory and practice. These special individuals helped me to realize that great ideas evolve in the mind but the success depends solely on how one pursues them with a true heart, perseverance, tenacity and cogency, and above all what kind of help and support is received from one’s fellow human beings. I earnestly thank the Almighty, who blessed me with this intriguing research idea. To me, it is still an enigma why God led me to this management research venture.
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Way back in the late 1990s, I came across a very interesting essay, “Einstein’s ideas and opinions” (based on Einstein’s “Mein Weltbild”) edited by Carl Seelig (1956). One of the paragraphs in that essay made me reflect on how much we owe to others at each and every stage of our life. As Einstein (1954, p.8) writes, “A hundred times every day I remind myself that my inner and outer life are based on the labors of others, living and dead, and that I must exert myself in order to give in the same measure as I have received and am still receiving.” This quote always reminds me about my gratitude to fellow human beings. The present research would never have been realized without the help and support of such fellow human beings, and it is here with sincere gratitude and great happiness that I acknowledge their efforts.

As a mechanical engineer, I knew that steel could be toughened through a tempering process by which brittle martensite is transformed into a combination of ferrite and cementite. However, I never realized that a PhD scholar also needed tempering through his supervisors’ harsh criticisms! My principal supervisor’s valuable suggestions and harsh critiquing not only contributed much to my thesis but also made me tougher than ever. Therefore, my sincere thanks go to my principal supervisor, A/Prof. Dr Nasir Butrous who guided me all the way in completing my PhD journey, though a few glitches cropped up now and then due to differences in opinions. During the course of this study, there were too many ups and downs. However, his continuous inspiration and advice never allowed me to doubt myself that I am an interdisciplinary researcher. Equally, I would like to express my utmost gratitude to my Assoc. Supervisor, Dr Ann Bramwell (Co-supervisor till 12.02.2010), for her sincere and selfless support, and speedy and useful advice during my thesis work. In the darkest hours, I was sceptical as to whether I had the persistence and tenacity to complete this huge task. However, she gave me an unforgettable memory of her thoughtfulness, true inspiration, fortitude, intelligence, diligence and erudition which I will definitely cherish for rest of my life.

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CHAPTER 1
THE NATURE AND SCOPE OF THE RESEARCH

“The thing that people need to remember is that downsizing may be back on the front pages, but the downsizing never slowed down. Downsizing has been a constant and regular feature of the new working world, and it will continue to be.”
- Bruce L. Tulgan (Founder and Chairman, Rainmaker Thinking Inc., New Haven, Connecticut, US)

1.1 Introduction

More than a quarter of a century has elapsed since downsizing was first introduced as a business practice by the American automotive industry. Despite its negative consequences and inconclusive evidence on objectives in the extant literature (mainly argued as financial and performance), organisations across the world have continued to use different downsizing actions (e.g. use of voluntary early retirements, voluntary redundancy, targeted redundancies, forced layoffs, retrenchments, mergers and closures). Its usage has intensified greatly in recent times. For instance, the worldwide job losses were estimated at 50 million by the end of 2009 (International Labour Organisation, 2009). An estimated 273,000 Australian jobs were lost due to retrenchments between 2008 and 2010 (Australian Bureau of Statistics, 2010). Similarly, in total 382,007 American jobs were lost due to layoffs in the second quarter of 2010 (United States of America Bureau of Labor Statistics, 2010). Research articles on downsizing published annually across the world have demonstrated that it has become so pervasive or omnipresent that no country, no industry, no organisation has been able to isolate itself from its influence. Whether east or west, downsizing has had an impact on organisations to an enormous extent. There is no guarantee of anything in today’s organisational life except downsizing.
Like other industry sectors, universities started downsizing in the mid-1980s. For instance, the University of Michigan was reported to have eliminated some academic programs and departments entirely (Colin, 1983). Publicly funded Australian universities were not immune to this worldwide business practice of downsizing. For example, the Australian National University’s Department of Prehistory was closed in 1997 (Finkel, 1998), and the University of Canberra stopped enrolling students in the Bachelor of Communication (Information) program due to a sudden drop in numbers in 2004 (Information Enterprises Australia, 2005). Subsequently, academic programs such as Master of Library and Information Management and the Graduate Diploma Library and Information Management offered at the same university ceased to admit new students from 2005.

Downsizing in Australian universities is even more prevalent in recent times than it was in the mid-1990s. For example, the La Trobe University offered voluntary redundancy to its 180 staff members in 2008 (Andrew, 2008, 15th October), the University of New South Wales disestablished its School of Risk and Safety Science in 2009 (UNSW website, 2009), and more recently the University of Ballarat offered voluntary redundancy packages to its full-time equivalent staff members (Australian Broadcasting Corporation, 2010, May 13). Although the downsizing trend has fluctuated during the post-Dawkins era in many publicly funded Australian universities, it has not diminished altogether.

These universities are all publicly funded and receive funding from the same Federal and/or respective State Governments, and function under similar economic, social, political and legal conditions, but still differ widely in their downsizing approaches. A limited body of downsizing literature has identified a multitude of internal factors for such
differences in approaches to downsizing. The role of some internal factors (e.g. managerial ideologies, mutual trust between top management team and employees, leaders’ demographics, leaders’ risk aversion and self-centredness) have been analysed, and others have been alluded to in the literature (e.g. leaders’ dynamic managerial capabilities), without being followed up by actual research. However, leaders’ characteristics, mainly personality, leadership styles and personal values, and organisational culture, which are equally crucial for the differences in downsizing strategies, have been given limited attention.

1.2 Challenges of Downsizing

A huge challenge confronting today’s leaders is the number of full-time employees they can afford to keep in order to manage the organisations successfully. Employees’ expenses such as salaries and fringe benefits usually account for a major portion of any organisation’s total operating expenses. Salary costs are the largest component of university operating expenses which range between 45 and 70 per cent (DEST, 2005). ABS statistics indicate that the employee expenses have always been more than 50 per cent of the total educational expenses of the university sector. For example, ABS statistics published in the years 2003-04, 2004-05, 2006-07, and 2007-08 have all indicated that employee expenses account for roughly 54 per cent of total educational expenses of the university sector. Therefore, a reduction in employee costs is expected to decrease operating expenses which usually leads to increased profits (Hooshang & Bures, 2000; Cascio, 1993). Further, reducing employee costs seems to be considerably easier than generating more revenue (Simonetti, 1999).
In the perception of some leaders, downsizing increases the margin of profit or sustains the market competition, whereas from the employees’ perspectives it appears that these leaders have little compassion for those who have given the organisation productive work over the years. Also, leadership becomes an exercise of authoritarianism and is perceived by the employees to have taken on a highly negative role model or exemplar by apparently demonstrating a perceived unwillingness, inability or failure to protect staff, or represent their interests, or to act as a champion in maintaining employment prospects (Morden, 1997). As a result, leaders face a challenge of conflict between downsizing and employees’ welfare interests.

It is a paradoxical situation where leaders claim that downsizing must happen or all employees would lose their jobs, whereas employees view these downsizing actions as failure in leadership and also unethical, though considered to be legal in Australia and many other countries (Bisom-Rapp, Frazer, & Sargeant, 2010; Henry & Jennings, 2004; Strauss, 1998). Further, the expectations of the stakeholders during downsizing are narrowed down to none other than a mid-level leader who in the belief of the top management is capable of taking up full responsibility and fulfilling their expectations. A mid-level leader is only given the authority to deal with the situation and how she/he handles the downsizing is her/his problem. This creates a challenging role for the mid-level leaders while they pursue certain strategies of downsizing over others.

As the empirical setting for this research is the Australian university sector, it is important to understand the development of the university system in Australia. The following section discusses first the development of Australian university sector downsizing and then highlights the relevance of downsizing to Australian universities.
1.3 **Downsizing in Australian universities - Research Context**

The Australian tertiary education system maintained a three-tier system till the late 1980s. However, institutes of technology had moved from their traditional role of undergraduate teaching and industry-consulting towards conducting pure and applied research - they also had the ability to award degrees through to PhD level. Then Federal Minister for Education, John Dawkins (1987-1991) created the unified national system, which reduced the former three-tier tertiary education system into a two-tier system. This required a number of amalgamations and mergers between smaller tertiary institutions, and the option for institutes of technology to become universities. As a result of these reforms, institutes of technology vanished and were replaced by a collection of new universities. A unified National System of tertiary education was in place in Australia by the early 1990s, thus removing the distinction between universities and CAEs (Colleges of Advanced Education). The fundamental problem with moving from just eight research intensive traditional universities (Currently known as Go8 - Group of Eight) in pre-1960 to a collection of 39 new/traditional universities in post-2000 was that there were insufficient high-calibre research academics to sustain the new structure, as previously academics at institutes of technology had focused only on the teaching component rather than research. The DEST (2005) Statistics shows that enrolments in Australian universities had reached 674,092 effective full time students which was more than twelve times the EFTS (Equivalent Full-Time Students) during 1960 when there were 53000 students enrolled (Australian Vice Chancellors Committee, 2007).

It appeared infeasible to scale the fee-per-student provided by the Government to each university in the 1960s, accordingly to the levels required in the new millennium. The
consequences were increased teaching loads, declining staff/student ratios from 1/12 in 1980 to 1/19 in the year 2005 (DEST, 2005), corporate management practices dominating research and scholarship, decline and gradual elimination of traditional disciplines (e.g. physics). Also, universities were not receiving sufficient government funding to pay for the salaries of their full-time equivalent staff (Moritz, 2001). As a result costs had to be reduced either through restructuring and downsizing or income had to be increased through additional fee raising methods.

In 1981, the Malcolm Fraser Government’s amalgamation of CAEs (Colleges of Advanced Education) was catapulted by a cost reduction philosophy. Further, Dawkins’ reforms under Bob Hawke’s government brought an end to the Binary System by introducing the Unified National System of tertiary education in 1987. This process continued till 2004. Some CAEs merged with universities (e.g. Queensland Agricultural College, Gatton with University of Queensland; School of Art & Design within Townsville College of TAFE with James Cook University; Tasmanian State Institute of Technology with University of Tasmania) while other CAEs were granted University status (e.g. Western Australia Institute of Technology - presently, Curtin University of Technology; Canberra College of Advanced Education - presently, University of Canberra). However, universities such as University of Wollongong, University of Western Australia, and Murdoch University continued to function as universities without any mergers.

During the tenure of John Dawkins, Minister of Employment Education and Training (1987 - 1991), all previously existing Colleges of Advanced Education (CAEs) and Institutes of Technology in Australia were amalgamated into the current university system to create a Unified National System of university education. Further due to rapid
internationalisation, the Australian university system was re-designated as an export industry (Lafferty & Fleming, 2000). Currently Australian universities are heavily dependent on public funding. Excluding two private universities, viz. Bond University and University of Notre Dame, all others are publicly funded.

Australian Government funding support for higher education is provided largely through the Commonwealth Grant Scheme which offers a specified number of Commonwealth Supported places each year, the Higher Education Loan Program (HELP) arrangements providing financial assistance to students, the Commonwealth Scholarships, and a range of grants for specific purposes including quality, learning and teaching, research and research training programs.

The above Australian Government funding does come with strings attached to it. For instance, there has been a continuous stress on performance based funding of Australian universities since early 1990s. Not only must Australian universities struggle to maintain their institutional priorities of higher efficiency, better performance and lower costs, but they must also attempt to satisfy the needs of their students, academic staff and non-academic staff for better quality and improved education status. Under these conditions, leaders including individual academics tend to be “prestige maximisers” rather than “profit maximisers” (Leslie, 1993) as the leaders have to balance between “cost cutting and increasing revenues”, “accountability (Yeatman, 1993) and autonomy”. Further, Ramsden (1998) contended that the key to improving motivation and performance in Australian universities lies in more effective leadership. The leaders in Australian universities face a challenge between pressures of performance based funding at one end, and the prestige maximisation for long term aspirations to achieve excellence,
responsibility of securing jobs along with retention of knowledge expertise at the other end.

Taking the discussion further in the light of downsizing, the research findings of Gillespie, Winefield, Mann, and Stough (2001) have indicated that the staff members in Australian universities have experienced insufficient funding and resources, work overload, and job insecurity as a result of downsizing.

Under these conditions, some universities reported to have primarily relied on downsizing, whereas others attempted to protect jobs by focusing on reducing the costs through eliminating research and teaching funds, student resources, and/or support services (Gillespie et al., 2001). Although the prevalence of downsizing in Australian universities may not be considered in equivalence with the commercial business industry sector, the amount of funding cuts, downsizing and restructuring have been at unprecedented levels since 1996 (Gillespie et al., 2001) and have been maintained thereafter, though with fluctuations at times. Thus, it seemed to be of research importance to investigate the strategies that mid-level leaders of Australian universities have adopted in their downsizing endeavours.

1.4 Statement of the Research Problem

Universities have unique organisational characteristics such as decision-making methods, organisational structure and nature of costs, financial philosophy, and organisation culture (Applebaum & Patton, 2002) that make downsizing and dealing with adverse financial conditions difficult. Cyert (1978, p.344) contended that ‘universities by their nature are difficult to manage,’ and described the faculty and students as core assets with ‘faculty members forming a dominant group in a university and the concept of
management is not always a top priority but is still viewed as something that should be kept in the hands of scholars in majority of university functionaries’ (Applebaum & Patton, 2002, p.129). Further, Cyert (1978) questioned the hierarchical structure of universities as being short of elements of authority in comparison to that which exists in the commercial business organisations.

There seems to be role conflicts for a leader in a university. The mid-level leaders such as Heads of schools, Deans, and Directors of administration are often confronted with situations requiring them to play a role that conflicts with their value systems, or to play two or more roles in conflict with each other (Sarros, Gmelch, & Tanewski., 1997). With a role ambiguity of leadership responsibilities, the administrative functions are further being challenged by the funding cuts and downsizing actions.

Although, publicly funded Australian universities function under more or less similar conditions in their business environment, some leaders in universities use downsizing through staff reduction only, while others use downsizing without staff reduction or in other words try to secure the jobs by focusing on downsizing actions such as EFTSU intake reduction and academic program cuts. The leaders who are involved in the entanglement of achieving organisational goals and dealing with the employees’ interests may experience conflicts of interest between various stake-holders including the students of universities. This leads to the possibility that it may not always be necessary for leaders in different universities to pursue only certain downsizing actions under similar conditions in their business environment; rather leaders in different universities use different downsizing actions.
There is extensive research on the subject of downsizing which has produced inconsistent results in terms of external and internal factors that can explain the differences in approaches to downsizing. There is a myriad of perspectives to consider when deciding how to approach a subject like this; is it a set of leaders’ individual characteristics (e.g. personality, leadership styles, and personal values), or intra-organisational factors (e.g. organisational culture), or external factors (e.g. social, technological, legal, economical)?

Further, if the organisations in a given industry (e.g. universities) function under more or less similar business conditions, then why would leaders differ in their approaches to downsizing? In order to answer this central question, the present study explored empirically the links of downsizing strategies with the leaders’ characteristics (personality, leadership styles, and personal values) and organisational culture. Thus, the main interest of the research thesis was in knowing what leadership styles mid-level leaders would use, what kind of unique personality they would possess, what kind of personal values they hold that might distinguish them from mid-level leaders in other organisations, and what kind of culture such mid-level leaders have within their organisations.

After analysing the “selected higher education statistics of staff” (Department of Education, Employment and Workplace Relations, Australia - DEEWR, 2008), specifically the annual movement of FTE staff numbers (by work-contract, current duties, function, current duties term, state higher education provider, gender, and age group) from 1996 to 2008 in Australian universities, a literature survey was conducted on downsizing actions that are used by the universities world-wide in general and Australian universities in particular. This was followed by a review of definitions, theoretical and empirical
perspectives and measurements of downsizing strategies, leaders’ characteristics, and organisational culture.

The existing research literature on downsizing establishes that the internal factors of downsizing have received the due attention of researchers, leaders, and employees. A handful of research studies (e.g. Radcliffe, Campbell, & Fogarty, 2001; Freeman & Cameron, 1993) extant in the downsizing literature have suspected the association between downsizing strategies and organisational culture, whereas others (e.g. Higgs & Rowland, 2005; Dunphy & Stace, 1993) have mainly focused on the association between leaders’ characteristics and organisational change but not specifically on downsizing which is one of the many forms of organisational change. There are several others (e.g. Rust & McKinley, 2002; Budros, 2004) who have empirically established the links between leaders’ characteristics (viz. self-centredness, risk-aversion, managerial ideologies and professional background) and downsizing in a generic way, but not identified systematic links between different downsizing strategies and leaders’ characteristics (viz. personality, leadership styles and personal values).

To date the downsizing literature contains only one empirical study (i.e. Dent, Higgins, & Wharff, 2005) which has focused on links between downsizing strategies and leaders’ characteristics, specifically the personality dimensions (viz. conscientiousness, emotional stability and extroversion). However, DeRue et al.’s (2005) study was conducted in a tightly controlled computer simulated laboratory atmosphere at a team level as a unit of analysis with the upper-level undergraduate students in a large American university. Moreover, the three approaches to downsizing (viz. maintain hierarchy, integrate hierarchy, and eliminate hierarchy) which DeRue et al. (2005) termed structural
alternatives to downsizing in teams were in fact derived from a conceptual base and not empirical methods.

Thus, the literature review conducted failed to discern any significant empirical research focused mainly on differences in leaders’ approaches to downsizing. That which does exist seems to stem from a broader perspective of organisational change, mainly restructuring. So far, no research studies on leaders’ approaches to downsizing in Australian universities have been conducted and documented. Given the dearth of research on internal factors that could explain the differences in approaches to downsizing, the present study identified the leaders’ characteristics and organisational culture and explored their links with the downsizing strategies. More specifically, this research sought to address the differences in mid-level leaders’ approaches to downsizing in terms of their individual characteristics (viz. personality, leadership styles and personal values) and organisational culture. Thus a contingency perspective has been followed which suggests that there is no one best way to manage organisations and that the optimal approach depends on a specific set of factors. The present research is one of the first initiatives to investigate the issue of differences in mid-level leaders’ approaches to downsizing in terms of their individual characteristics (viz. personality, leadership styles, and personal values) and organisational culture in the Australian universities sector.

This research thesis was not aimed at developing a comprehensive explanatory model of downsizing: rather it explored the links of downsizing strategies with the leaders’ characteristics and organisational culture within a university sector, and developed empirical models of ideal and practical downsizing. Nonetheless, it moved beyond describing what downsizing is and what type of downsizing actions are used by leaders.
The main focus is on a specified set of variables of leaders’ characteristics (viz. personality, leadership styles, and personal values) and organisational culture dimensions. Therefore the objective of this research thesis was to investigate whether differences in leaders’ approaches to downsizing could be explained in terms of leaders’ characteristics and organisational culture. Thus, based on the above explanation a basic conceptual framework evolved for this study and is depicted in Figure 1.1.

**Figure 1.1   Basic Conceptual Framework**

The mentioned central research question has theoretical and empirical dimensions that will be explored in more depth in the following chapters of this thesis. Specifically, the theoretical research objectives that will be addressed in the literature review (Chapter 2) will explore the previous and latest research on the key concepts in the study and also on the association between sets of key variables.

**1.5    Significance of the Research**

This research is significant for the following reasons:

1. An important aspect of the research relates to the industry sector. Horn and Jerome (1996), and Dickman, Fuqua, Coombs, and Seals (1996) argued that higher
education has been influenced by private commercial industry sectors, and universities have hopped on the “downsizing bandwagon” (Ryan & Macky, 1998) to follow suit even though the results of downsizing in the corporate world have been ambiguous at best. Most of the research studies on downsizing strategies have been conducted individually in the industrial sectors such as banks (e.g. Gandolfi, 2007), automotive industry (e.g. Cameron, 1994), manufacturing industry (e.g. Filatotchev, Buck, & Zhukov, 2000; McCune, Beatty, & Montagno, 1988), hospitals (e.g. Chadwick, Hunter, & Walston, 2004), and information technology (Outlay, Krishnan, and Ranganathan, 2006; Brynjolfsson, Malone, Gurbaxani, & Kambil, 1994). A literature survey demonstrates that there exists very limited research focus on downsizing in the university sector as such. Thus, the present research was expected to enhance the limited research that exists about leadership and downsizing strategies in the university sector.

2. From 1987 to 2004 Australian Higher Education Institutions experienced mergers and amalgamations (Australian Vice Chancellors Committee, 2004). Sarros et al. (1997, p.11) reported that the major driving forces behind this reorganisation were to streamline the Government’s administration of disparate tertiary institutions, to democratize the nature of this education, and to increase the research profile of Australia. Other reasons were to make universities less reliant on Federal Government assistance, and encourage universities to seek outside sponsorship for many of their teaching programs and research projects. Mergers and amalgamations from 1987 to 1991 created a unified system and few regional universities emerged after 1992 as part of the national system. Additionally, the following operational changes were observed to have taken place between 1994 and 2006: introduction of Fee paying PG courses since 1996,
internationalisation of Australian universities, introduction of fee payment for domestic students, introduction of individual contracts (Australian Workplace Agreements), casualisation of workforce, more focus on research outcomes, community engagement, intense competition locally, nationally and internationally, and quality auditing of universities. Additionally, there has been more focus on efficiency and accountability, online teaching and learning, diversity in staff and student population, and pressures from employers about graduate attributes. During this changing scenario in the Australian University System, leaders found their roles becoming more ambiguous, increasingly political and always demanding (Sarros et al., 1997). Change was inevitable during those years, as it is today, and this is expected to continue in the future. This shifting paradigm (from Pre-Dawkins era to Post-Dawkins era) formed a base for an interesting and challenging empirical research in the field of downsizing strategies, leadership and culture in the Australian university sector.

3. A decrease in the Federal Government funding through a reduction in the tertiary education budget could have resulted in pressurising universities to generate external funding, restructuring and downsizing during the mid-1990s. For instance, statistics indicate that there was an 11 per cent cut in the tertiary education budget in 1996 (Australian Vice Chancellors Committee, 1996). The statistical data presented in the finance publications (year 1996 - year 2009) of the Department of Education, Employment and Workplace Relations (DEEWR, 2010) have indicated that the Australian Federal Government Grants were reduced from 57 per cent of total revenues in 1996 to 42 per cent in 2006 and thereafter fluctuated between 42 per cent and 44 per cent till 2009. However, the income earned from other sources (“Donations and Bequests”, “Royalties, Trademarks
"Licenses" and "Consultancy & Contract Research") by Australian universities was maintained at 17 per cent of total revenues through 1996 - 2003 but steadily dropped from 13 per cent in 2006 to 12 per cent in 2009. Similarly, Australian Government payments towards HECS (Higher Education Contribution Scheme) have fluctuated between 12 per cent and 16 per cent from 1996 to 2009, but with an all-time high of 19 per cent in 1999. Interestingly, revenues from fees and charges increased from 13 per cent of total revenues in 1996 to 24 per cent in 2003, dropped to 22 per cent in 2006 and remained steady till 2009. Also, the revenue from state governments’ assistance has increased from 1 per cent in 1996 to 2 per cent in 2003 and remained steady till 2009. As a result of reduced revenues from Federal Government funding, Australian universities could have been compelled to reduce the salary expenses of their staff. For instance, financial statistics of the Department of Education, Employment and Workplace Relations (year 1996 - year 2009) suggest that the salary and the related expenses of academic staff were reduced from 34 per cent in 1996 to 29 per cent in 2009 with an all-time low of 25 per cent in 2003. Similarly, the salary and the related expenses of non-academic staff were reduced from 29 per cent in 1996 to 26 per cent in 2009 with an all-time low of 24 per cent in 2008. Although as a result of severe substantial cost cuts there has been an exceptional level of downsizing and restructuring undergone by Australian universities since 1996 (DEST, 2000; Winefield, 2000; NTEU, 2000), still there are no signs of a decrease in usage of different downsizing actions by the leaders in these universities as such. Therefore, it appeared to be an interesting opportunity to conduct research in the context of the downsizing climate of Australian universities.
4. Gillespie et al (2001) reported that some universities primarily relied on downsizing, while others attempted to protect jobs by focusing on cost cutting in other areas such as student resources, and / or support services. It remains however, unclear as to why leaders in Australian universities have differed in their approaches to downsizing. Although from time to time scholars have posited different reasons for this divergence of approaches, literature on downsizing reveals few research studies that could support those claims through empirical findings. As the implementers of the downsizing strategies, mid-level leaders are expected to have a greater role during downsizing, so considering the dearth of research in downsizing strategies, and mid-level leaders’ individual characteristics and organisational culture, this study was both challenging and essential.

5. In relation to countries like India, USA and a few others, Australia does not have a strong culture of philanthropy to manage the universities from income sources other than government funding (for example, large donations from rich people and organisations, capitation fees from students). However, Australian universities are continuously facing challenges of Federal Government’s funding cuts. In order to maintain organisational sustainability, many Australian universities (for example, University of Melbourne, University of Queensland, LaTrobe University, Monash University, University of Ballarat) are exploring and realising organisational change that largely includes downsizing. Henceforth, it was hoped that this study would contribute to the on-going research in the area of downsizing.

6. For the mid-level leaders, results of the present research could help to identify new ways of thinking about their approaches to downsizing that affect their professional future and their institutions. Specifically, it may assist them to rethink whether their
practical use of certain downsizing strategies is influenced by the culture of their organisations; and whether their ideal preference of certain downsizing strategies is influenced by their individual characteristics. Thus, mid-level leaders may benefit from greater awareness of the list of options of downsizing strategies that is available to them while learning to pursue more successful downsizing strategies even if they do not have the tendency to do so.

7. For the leaders in the universities’ top management, the results could serve as guidance in order to avoid any irresponsible or unsuccessful pursuit of certain downsizing strategies that would diminish the corporate reputation or any other negatives involved in such endeavours.

8. Finally, it was expected that this research may serve to stimulate further research on downsizing strategies to determine whether the research outcomes are context specific to university sector and country, or common to universities of other countries or other industries such as information technology, health, and manufacturing, and countries as well. Also, this research could pave the path for the scholars who could further examine empirically the other factors (e.g. emotional intelligence, communication, national culture) which could possibly influence the downsizing strategies.

1.6 Research Boundaries

1. This research has used a quantitative approach and cross-sectional design. It is confined to only publicly funded universities in Australia. It has not addressed private Australian universities (viz. Bond University and University of Notre Dame), the overseas campuses operated by publicly funded universities in Australia, and the overseas
universities operating in Australia, viz. campuses of Carnegie Mellon University (USA) and Cranfield University (UK) in Adelaide.

2. The focus of attention of this research is only on leaders who are believed to have significant roles in downsizing implementation. Thus, the sample includes only leaders at the middle management level in publicly funded Australian universities.

3. This research does not take into account the missing population due to difficulties associated with identifying the eligibility of respondents in the sampling frame chosen for the research, though such respondents may have engaged in downsizing: nor does it focus on external factors (e.g. legal, economical, socio-cultural, technological) and internal factors such as organisational politics, leaders’ communication, conceptual, technical, political and time management skills, socioeconomic status, cognition, emotional intelligence, national culture and many others that remain unexplored.

4. The scope of this research is limited to the information and data acquired through survey instruments. Only perceptual measures of downsizing strategies have been used and could be limited to the context of downsizing in publicly funded Australian universities (ref section 2.2.5).

5. The sample’s size and composition is statistically large but reasonably modest in terms of generalisation. The research outcomes may not be generalised to the commercial business sector. Section 5.4 throws more light on this matter.

1.7 Structure of the Thesis

The entire thesis is structured into five chapters around the following three issues: ideal and practical downsizing strategies, leaders’ characteristics (viz. personality, leadership styles, and personal values) and organisational culture.
Chapter One describes the Nature and Scope of the Research highlighting the statement of the research problem and its significance; and enumerates the limitations and delimitations, and practical outcomes. Chapter Two presents the literature review on theoretical and empirical perspectives of downsizing strategies, leaders’ characteristics and organisational culture. It also explains the conceptual models of ideal and practical downsizing and the formulated research questions. Chapter Three provides a detailed description on the research method pursued in this study. Chapter Four describes the data analysis and results, and finally, Chapter Five presents a discussion of key findings in the light of extant literature. It also highlights the implications and limitations of this research and finally, conclusions are presented.
CHAPTER 2

LITERATURE REVIEW

“A lot of companies have chosen to downsize, and may be that was the right thing for them. We chose a different path. Our belief was that if we kept putting great products in front of customers, they would continue to open their wallets.”

- Stephen Gary, Co-founder, Apple Computer Inc.

2.1 Introduction

Since the mid-1980s, the research on organisational downsizing has spanned different countries and industries including universities. Most of the downsizing research has focused on answering why organisations downsize. The three most common explanatory factors that have been identified are economic (e.g. Budros, 2004; McKinley, Schick, Sun, & Tang, 1999; McKinley, Mone & Barker, 1998; Bruton, Keels, & Shook, 1996; De Meuse, Vanderheiden, & Bergmann, 1994; Cameron 1994; Cascio 1993; Freeman & Cameron; 1993), institutional forces (Goins, 2000; Budros, 1997; McKinley, Sanchez, & Schick, 1995; DiMaggio & Powell, 1991), and cognitive limitations (McKinley, Zhao, & Rust, 2000; Rust & McKinley, 2002). However, the existing base of downsizing research establishes that some internal factors are significant but offers very limited guidance on how best to approach implementation of downsizing strategies. Given the prominent role of internal factors such as leaders’ characteristics and organisational culture in the discussions of downsizing, the present study takes an initiative to address the gap by exploring how differences in leaders’ approaches to downsizing could be explained in terms of leaders’ characteristics and organisational culture. More specifically, the present research is contextualized to downsizing in publicly funded Australian universities.
Few articles have appeared in the recent research literature of organisational studies examining downsizing in universities (e.g. Agarwal, 2007; Santiago, Teresa & Meek, 2006; De Pillis & De Pillis, 2006; Fowler, 2005; Pencavel, 2004; Rhodes, Sarah, & Kamery, 2003; Kumar & Sharma, 2003; Tizard & Owen, 2001; Budros, 2001; Cameron & Smart, 1998). However, only a handful of articles have focused on investigating downsizing, specifically, in Australian universities (e.g. Harman & Harman, 2003; Winefield, Gillespie, Stough, Dua, Hapuarachchi, & Boyd, 2003; Gillespie et al., 2001; Gumport, 2000). These studies have acknowledged the significance of downsizing in publicly funded Australian universities.

A synthesis of literature on downsizing was considered important while exploring the links of downsizing strategies, with the leaders’ characteristics and organisational culture. Consequently, the following review examines the theoretical and empirical perspectives of downsizing strategies, leaders’ characteristics and organisational culture, and explores the linkage between these concepts.

Firstly, a brief history of downsizing is presented, followed by a review on downsizing definitions, downsizing in publicly funded Australian universities, theoretical and empirical perspectives of downsizing strategies, and measurement of downsizing strategies. Secondly, the definitions, theoretical and empirical perspectives, and the measurement of leaders’ characteristics are reviewed. Thirdly, a review of various definitions, theoretical and empirical perspectives, and measurement of organisational culture is presented. Fourthly, links of downsizing strategies with the leaders’ characteristics and organisational culture are reviewed. Finally, a conceptual model is
designed and research questions are formulated for furthering the present investigation. The next section briefly highlights the confusion surrounding the meaning of downsizing.

2.2 Downsizing

Downsizing has received much attention in the management literature. However, there is no clear consensus among scholars and practitioners about what constitutes downsizing. A plethora of terms have been used for downsizing. For instance, the literature review (1982 to 2009) conducted for the present research reveals more than fifty terms used for the same term “downsizing”. Some terms for downsizing paint a rosy picture whereas others reveal its dreadful nature. Nevertheless, downsizing in its simplest form involves “dismissal of a significant part of the workforce” (Coucke, Pennings, & Sleuwaegen, 2007) whereas in the broadest sense it refers to “corporate transformation” (Kets de Vries & Balazs, 1997) or even “organisational transition” (Marks, 2007). In order to understand further what constitutes downsizing and how downsizing originated in the business world, a brief discussion on the history of downsizing and its various connotations is found to be helpful and is presented in the following section.

2.2.1 A brief history of Downsizing

An Irish born MIT educated managerial psychologist, Professor Charles Handy is credited for coining the word “downsizing” as early as the mid-1970s. The ideas of shamrock organisations and Portfolio workers were also introduced by Handy in the late-1980s. Post-interview with Professor Handy, Dening (1996, p.2) reported in the Irish Times that ‘the technological revolution would transform the lives of millions of individuals through a process which he termed downsizing.’ Although Professor Handy made prophesy on downsizing in the mid-1970s, the practice of downsizing was
introduced for the first time in business history in the mid-1980s by the American automotive industry under a different context, i.e. as a response to rising fuel prices and the competition of Japanese cars. The term “Down-size” at that time literally meant to reduce the size of cars so as to make them more fuel efficient or economical cars. For example the rear wheel of the car was downsized to 26 inches.

While content analysing the use of the term downsizing in over 4000 American news articles between the years 1975 and 2007, Hollister (2007) suggested that the earliest use of the downsizing term was by the Oxford English Dictionary in 1975. The reduction in size of cars was further extended to a reduction in the size of workforce and appeared for the first time in the college edition of the American Heritage Dictionary in 1982 (Budros, 2002) and the news articles of New York Times and Wall Street Journal in 1982 while precisely referring to staff reductions at the Manville Corporation (Hollister, 2007).

Manville Corporation (now Johns Manville - manufacturer and marketer of commercial roofing and roof insulation products) was an American company based in Denver, and involved in the manufacture of asbestos at that time. The staff reductions at Manville were called a downsizing program that constituted layoffs and early retirements (The New York Times, Aug 11, 1982).

Although, downsizing in the early-1980s was used to connote precisely the staff reduction, it has travelled afar to the usage of different euphemisms (Table 2.1) by various researchers as well as organisational leaders and managers.
<table>
<thead>
<tr>
<th>Source of Reference</th>
<th>Euphemisms for Downsizing</th>
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<tbody>
<tr>
<td>Gumport (1993)</td>
<td>Repositioning, Trim the fat, Trimming deadwood, Belt-tightening, Surgical strikes, Disestablishing</td>
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<tr>
<td>Sibson (1994)</td>
<td>Restructuring</td>
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<tr>
<td>Estok (1996)</td>
<td>Dumbsizing</td>
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<tr>
<td>Lutz (1996)</td>
<td>Release of resources, Involuntary separation from payroll, Career change opportunity, Elimination of employment security</td>
</tr>
<tr>
<td>Allan (1997)</td>
<td>Delayering, Redeploying</td>
</tr>
<tr>
<td>Kets de Vries and Balazs (1997)</td>
<td>Corporate transformation</td>
</tr>
<tr>
<td>Palmer et al. (1997)</td>
<td>Staff reduction, Voluntary redundancy, Retrenchment, Workforce reduction, Job losses, Shedding of jobs, Falling employee numbers and positions, Staff cuts, Staff losses, Personnel reduction, Dropping staff numbers, Downtrend in staff numbers, Lower staffing levels, Attrition (job, staff, personnel), Reduction in manning, Reduction in manpower, Falling staff numbers, Reduction in job numbers, Decline in staff numbers, Laying off staff, Involuntary redundancies, Dismissals, Decline in employee numbers, Decline in workforce, Positions abolished, Staff numbers trimmed</td>
</tr>
<tr>
<td>Vollman and Brazas (1993); Ryan and Macky (1998); Mayfield (2000)</td>
<td>Redundancies, Delayering, Rightsizing, Deselecting, Restructuring through layoffs</td>
</tr>
<tr>
<td>Marks (2007)</td>
<td>Organisational transition</td>
</tr>
<tr>
<td>Gandolfi (2008)</td>
<td>Organisational decimation</td>
</tr>
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</table>

Source: Based on the survey conducted for the present research
Each of these downsizing terms as mentioned above shares at least one common meaning, i.e. a form of organisational change, though all those terms do not necessarily mean the same to all stakeholders of organisations that are affected by downsizing. Some are viewed positively (e.g. revitalising, renewing, career change opportunity, corporate transformation) and others are viewed negatively (reduction-in-force, elimination of employment, derecruiting, redundancies).

Whether the term referring to downsizing is euphemistic or not, in its narrowest sense downsizing refers to a staff reduction and in the broadest expression it is a corporate transformation. As organisations differ in their downsizing programs so do their connotations.

Although downsizing was first introduced by the American automotive industry, it spread like a firestorm across the world to all other industries including universities. For instance, Colin (1983) published an article titled “downsizing at the University of Michigan” in the Science, a peer-reviewed academic Journal. University of Michigan was reported to have eliminated some academic programs and departments entirely (e.g. Geography Department, Institute for the Research of Mental Retardation and Related Disabilities).

Like any other universities, the Australian universities were not immune from this worldwide business practice. Stricter funding norms were imposed due to an economic downturn in the late-1970s, thus stifling their growth and expansion. Further, a planned reduction of Government funding with the Vanstone’s (1996) reforms under the Howard Government in the mid-1990s forced the universities not only to search for other sources of income but also to reduce their full-time equivalent staff numbers through downsizing
actions such as voluntary redundancies, targeted redundancies and early retirements. For example Australian National University’s Department of Prehistory was closed in 1997 (Finkel, 1998), and the University of Canberra decided to stop enrolling students in the Bachelor of Communication (Information) program due to a sharp decline in numbers in 2004 (Information Enterprise Australia, 2004). These downsizing actions are as prevalent even today as they were in the mid-1990s. For example, in 2009 the University of New South Wales disestablished its School of Risk and Safety Science (UNSW website, 2009), and most recently the University of Ballarat offered voluntary redundancy packages to its FTE staff members (Australian Broadcasting Corporation, May 13, 2010).

Regardless of which downsizing action is used or how downsizing is connoted, one thing is clearly evident from history, just as Professor Charles Handy had predicted: the decline of lifelong employment and the rise of downsizing in the mid-1970s which became a reality with the American automotive industry bringing it into business practice in the mid-1980s, and which today is an inseparable part of our organisational lives. Whether we like to embrace or oppose it, the downsizing will continue to stay.

As the context of the research is downsizing in Australian universities, so to have a better understanding of university downsizing the following section reviews the relevant literature in relation to Australian universities.

2.2.2 Downsizing in Australian universities

The literature is filled with innumerable articles on downsizing of commercial business organisations but is found to have a dearth in the university sector. While addressing the issue of maintaining effectiveness amid downsizing and decline, Cameron and Smart (1998) suggested that because organisational downsizing and decline are linked
mainly to competitive pressures in the business world, they have generated less interest in the scholarly higher education literature. The traditional assumption of higher education’s immunity from the market competition and global encroachments typical of private sector business (Cameron & Smart, 1998) is usually attributed as a reason for the lack of research. However, this view has transformed over the last decade in the university sector worldwide in general and with Australian universities in particular.

Australian universities have experienced drastic downsizing since the mid-1990s. For example the statistical data of the Department of Education, Employment and Workplace Relations, Australia (DEEWR, 2009) reveals the decrease of 3.8 per cent in full-time equivalent staff numbers (academic and administrative staff) between 1996 and 1997 though the rate of decrease has fluctuated reasonably thereafter across various academic classifications and functional groups. Similarly, since 1996 the student enrolments have also fluctuated reasonably across different Australian universities. For example DEEWR (2009) statistics suggest that there has been decrease of 8.4 per cent in the Doctorate by Coursework program between 2007 and 2008. Likewise, there has been a decrease of 4.1 per cent in the Master’s by research program in the same period.

Furthermore, the School of Physics at the University of Wollongong was not closed in 1997 but transferred to the Faculty of Engineering. The University of Western Sydney permanently closed the osteopathy and podiatry courses in 2006. The School of Risk and Safety Science at UNSW was closed in 2009 whereas closure of other schools and departments resulted in staff members being absorbed into new structures. In Macquarie University, no disciplines were closed in the year 2000 but some were severely affected. At
the University of New England, the Faculty of Arts had to take the brunt of the cuts in the year 2000.

While examining the role of trust in management during downsizing in universities, Gillespie et al. (2001) suggested that each of the 17 Australian universities surveyed were found to have had significant cuts to their operating grants since 1996 (ranging from 9 to 25 per cent) and one of the ways in which universities differed has been in their dependence on downsizing as a cost-cutting measure. These researchers noted that some universities primarily relied on downsizing while others attempted to protect the jobs by focusing on cost-cutting in areas such as student resources and support services. Interestingly, Gillespie et al. (2001) found that one university had increased its staff strength by 4.8 per cent during the period when there was a percentage cut in government funded operating grants ranging from 9 per cent to 25 per cent in 17 Universities which experienced 33.6 per cent to 0.2 per cent of downsizing in full-time staff. In addition to these revelations, Gillespie et al. (2001) argued that funding cuts and downsizing are unrelated, as the magnitude of downsizing has been more or less independent of the size of funding cuts; and this fact demonstrates that universities have adopted different strategies to deal with cuts in Government funding including a combination of both downsizing and resource cutting strategies. For example some universities implemented downsizing through voluntary and involuntary redundancies and non-renewal of contracts, whereas others focused on specific areas such as closing down whole departments, while completely protecting other departments, and few other universities were found to have taken a more broader approach by spreading the cuts more or less evenly in the various organisational units of the universities. In particular, they found that two universities had
comparative low funding cuts but implemented high levels of downsizing, whereas four universities with comparatively high funding cuts implemented low levels of downsizing. These researchers have attributed the short and long histories of universities as a reason for the inverse relationships of funding cuts and downsizing and they have argued that some universities were struggling for adequate funding prior to funding cuts while others held a tradition that had earned them prestige and wealth.

Although Gillespie et al. (2001) believed that the reason for downsizing being independent of funding cuts, may be due to the geographical or historical advantage of prestige and wealth gained by some universities over others, they left the research discussion open to the scholars. Similarly, McGuire (1999) argued that more established capital city universities are in a position of advantage, able to give students a better education than the newer universities which are disadvantaged by their geography and short histories. Although Gillespie et al. (2001) and McGuire (1999) posited various factors relating to geographical or historical nature for the differences in adopting various downsizing strategies by different universities, their propositions are not supported by empirical findings. Nevertheless, it is understood that different universities have used different downsizing strategies though functioning under more or less the same conditions of business environment.

The downsizing that affected thousands of lives in the Australian universities’ sector post-Dawkin’s era was discussed in this section. Given the importance of downsizing it necessitates further the reviewing of downsizing definitions which is presented in the following section.
2.2.3 Defining Downsizing

Due to its interdisciplinary nature, downsizing literature draws on a range of management and organisational theories (Brockner, 1988; Kozlowski, Chao, Smith, & Hedlund, 1993) from different disciplines. Defining downsizing has always been confounding. In comparison to other forms of organisational change, downsizing is a specialized form of change which can operate on many different aspects of the organisation structure (DeWitt, 1993; in Evans, Gunz, & Jalland, 1997). One of the problems in the downsizing literature is that there is no single definition of downsizing that is commonly agreed among researchers and practitioners. Accordingly different researchers and practitioners have attempted to define downsizing in different ways. This has led to some confusion, and that is why the extant definitions of downsizing were required to be reviewed and precisely defined in the universities context for this research. Following (Table 2.2) are some of the downsizing definitions most commonly cited in the literature.

Table 2.2
Downsizing Definitions

<table>
<thead>
<tr>
<th>Researcher(s)</th>
<th>Downsizing Definition</th>
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<tbody>
<tr>
<td>Kozlowski, Chao, Smith, &amp; Hedlund</td>
<td>A deliberate organisational decision to reduce the workforce that is intended to improve organisational performance.</td>
</tr>
<tr>
<td>(1993, p.267)</td>
<td></td>
</tr>
<tr>
<td>Cascio (1993, p.95)</td>
<td>The planned elimination of positions or jobs.</td>
</tr>
<tr>
<td>DeWitt (1993, p.31)</td>
<td>Management’s reduction in their organization's use of human and/or capital resources to correct misalignment and improve performance when organization decline and environmental decline are present.</td>
</tr>
</tbody>
</table>

Source: Based on the survey conducted for the present research
<table>
<thead>
<tr>
<th>Researcher(s)</th>
<th>Downsizing Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameron (1994, p.192)</td>
<td>Constitutes a set of activities, undertaken on the part of the management of an organization, designed to improve organisational efficiency, productivity, and/or competitiveness.</td>
</tr>
<tr>
<td>McKinley, Sanchez, &amp; Schick (1995, p. 32)</td>
<td>Intended reductions of personnel.</td>
</tr>
<tr>
<td>Freeman (1999, p.1507)</td>
<td>Is an intentional reduction in the number of people in an organisation.</td>
</tr>
<tr>
<td>Kets de Vries &amp; Balazs (1997, p. 15)</td>
<td>A complete strategic transformation effort to change the values and attitudes of the company’s corporate culture.</td>
</tr>
<tr>
<td>Shaw and Barrett-Power (1997, p.109)</td>
<td>A constellation of stressor events centering around pressures toward workforce reductions which place demands upon the organisation, work groups, and individual employees, and require a process of coping and adaptation.</td>
</tr>
<tr>
<td>DeWitt (1998, p. 60)</td>
<td>A typical and often essential strategic choice aimed at bringing the firm’s output in line with demand through a permanent decrease in human and physical resources that do not contract the firm’s boundaries by altering market scope and product lines.</td>
</tr>
<tr>
<td>Ryan &amp; Macky (1998, p.30)</td>
<td>Simply represents a reduction in organisation’s size in terms of the number of employees.</td>
</tr>
<tr>
<td>Laabs (1999, p. 31)</td>
<td>A net decrease in the workforce</td>
</tr>
<tr>
<td>Lamsa (1999, p.345)</td>
<td>A management technique that increases the variety of demands put on the managers who are responsible for the reductions in personnel.</td>
</tr>
</tbody>
</table>

Source: Based on the survey conducted for the present research
<table>
<thead>
<tr>
<th>Researcher(s)</th>
<th>Downsizing Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birati &amp; Tziner (2000, p.278)</td>
<td>A business strategy designed to improve financial standing of an organisation by reducing and changing the structure of the workforce in order to improve operational results.</td>
</tr>
<tr>
<td>Budros (2004, p.365)</td>
<td>An organization's conscious use of permanent personnel reductions in an attempt to improve its efficiency and/or effectiveness.</td>
</tr>
<tr>
<td>Cummings &amp; Worley (2005, p. 287)</td>
<td>Reducing the size of the organization through layoffs, attrition, redeployment, or early retirement, or by reducing the number of organizational units or managerial units through divestiture, outsourcing, reorganization, or delayering.</td>
</tr>
<tr>
<td>Mirabal &amp; DeYoung (2005, p.19)</td>
<td>Constitutes a reactive and defensive or proactive and anticipatory strategy that inevitably impacts on a company’s size, costs, and work processes and the organisation’s shape and culture.</td>
</tr>
<tr>
<td>Tsai &amp; Shih (2007, p.159)</td>
<td>A set of managerial actions taken by organisations aiming to adjust to environmental changes, overcome management difficulties, and improve efficiency, increase productivity and competitiveness (which means it includes cost reduction, restructuring and workforce reduction).</td>
</tr>
<tr>
<td>Coucke, Pennings, &amp; Sleuwaegen (2007, p. 162)</td>
<td>A dismissal of a significant part of the workforce.</td>
</tr>
<tr>
<td>Vicente-Lorente &amp; Suarez-Gonzalez (2007)</td>
<td>A significant workforce reduction</td>
</tr>
<tr>
<td>Datta, Guthrie, Basuil, &amp; Pandey (2010, p.282)</td>
<td>A planned set of organisational policies and practices aimed at workforce reduction with the goal of improving organisation performance.</td>
</tr>
</tbody>
</table>

**Source:** Based on the survey conducted for the present research
First and foremost a distinction needs to be made between downsizing and declining (Cameron, 1994; Cameron et al., 1993). Organisations can use downsizing without declining (e.g. downsizing proactively to enhance competitiveness) which is usually associated with the unintentional or involuntary loss of market share, revenue, or personnel (Cameron, 1994). Thus, Kozlowski et al. (1993) emphasised the decisional intentionality while defining downsizing. Similarly, the intentionality associated with the downsizing is also asserted by many other researchers such as Budros (2004), McKinley et al. (1995), Cameron (1994), and Cascio (1993). In contrast, Grimshaw and Kleiner (2002) have taken a different approach by underscoring the involuntary reduction in the workforce instead of intentionality associated with the downsizing.

Among all definitions, Cameron’s (1994) definition of downsizing is the most frequently cited in the literature. According to Cameron (1994), downsizing refers to an organisational strategy implemented by managers that affects workforce size, cost structure and work processes. He identified four major attributes of downsizing, viz. intent, personnel, efficiency, and work processes. First the word “intent” emphasises the strategic nature of downsizing and differentiates it from an operational one such as organisational decline, which is usually associated with the unintentional loss of market share, revenue, or personnel (Cameron, 1994). Second, downsizing entails “personnel” indicating that usually downsizing results in a reduction of personnel, but not always as reductions may occur in one unit of the organisation and not in another unit. Third, downsizing is mainly targeted to achieve “efficiency”, maybe either through reactive or proactive strategies. In either case downsizing is aimed at organisational performance improvement. Fourth, downsizing always affects “work processes” in one way or the other. Whether an organisation
experiences a reduction in personnel, or work redesign or change in culture, work processes are always affected by downsizing activities. Further, (Cameron, 1994) maintains that the level of analysis of his downsizing definition is at the organisation and not the individual or the industry.

Coucke et al. (2007), Vicente-Lorente and Suarez-Gonzalez (2007), and Grimshaw and Kleiner (2002) have all asserted that downsizing is solely a significant reduction in the workforce. Mayfield (2000), Ryan and Macky (1998), Laabs (1999), and McKinley et al. (1995) have also agreed that downsizing refers solely to the reduction of the workforce. However, these researchers did not accentuate the substantiality of such a reduction.

Similarly, Budros (2004) also restricted the downsizing definition to only personnel reduction but emphasised the deliberativeness of such a reduction and efficiency as an objective of downsizing. Similarly, Thornhill and Saunders (1998) adopted a wider approach and considered downsizing as a form of organisational restructuring. However, they too have highlighted the objective of downsizing as efficiency. Additionally, Kets de Vries and Balazs (1997) have also taken a broader view of downsizing by considering it as a complete strategic transformation but did not accentuate explicitly or implicitly the efficiency or performance improvement as the goal of downsizing.

Thus, at one end of the continuum, some definitions of downsizing (e.g. Vicente-Lorente & Suarez-Gonzalez, 2007; Coucke et al., 2007; Laabs, 1999) are of limited span, centring solely on workforce reduction and at the other end there are definitions of downsizings (e.g. Cummings & Worley, 2005; DeWitt, 1998; Kets de Vries & Balazs, 1997) that focus on a broader range, i.e. in addition to workforce reduction, reducing the
A few studies (e.g. De Witt, Trevino, & Mollica, 2003; Folger & Skarlicki, 1998; Kets de Vries & Balazs, 1997) have asserted that implementing downsizing is often professionally demanding. This is asserted by Shaw and Barrett-Power (1997), and Lamsa (1999) who accentuated the varied challenges faced by managers to reduce the personnel. More specifically, Shaw and Barrett-Power (1997, p.109) emphasised the importance of a process of coping and adaptation by the workforce, and they exclusively considered downsizing as “a constellation of stressor events”. However, like many other researchers (Coucke et al., 2007; Grimshaw & Kleiner, 2002; Mayfield, 2000), Shaw and Barrett-Power (1997), and Lamsa (1999) have also emphasised that downsizing is aimed at workforce reduction.

Gandolfi and Neck (2003), and Mirabal and DeYoung (2005) have provided an integrative definition of downsizing while acknowledging that downsizing is a reactive as well as proactive strategy that affects an organisation’s size, shape, culture costs and work processes. Likewise, after reviewing frequently cited downsizing definitions, Datta et al. (2010) considered downsizing as an intentional event involving a series of organisational policies and actions aimed specifically at reducing the workforce. However, like Freeman and Cameron (1993), Datta et al. (2010) also emphasised the goal of organisational policies and actions relating to downsizing as to improve the organisational performance.

Regardless of its varied definitions, downsizing is found to affect the organisation’s structure, size of work-force, work-processes, products and services and culture.
Downsizing may sometimes be reactive and sometimes proactive, depending on the leadership and decision-making nature of organisations.

Although downsizing is carried out in the hope of achieving improved results of operations in future periods which is often a result of reduced costs, the empirical findings on the link between downsizing and organisational performance are inconclusive and unclear. Linking organisation performance with downsizing has provided a mixed response from the researchers worldwide. For example Cascio (1993) argued that in many organisations anticipated economic benefits (lower expense ratios, higher profits, increased return-on-investment and boosted stock prices) fail to materialize, and organisational benefits (lower overheads, smoother communications, greater entrepreneurship, and increases in productivity) do not develop, so downsizing essentially does not necessarily improve organisational performance. Cascio (1993, p.95) completely denigrated the organisation performance, thus reducing the definition of downsizing solely to “planned elimination of positions or jobs”.

Some researchers (e.g. Kozlowski et al., 1993; DeWitt, 1993; Cameron, 1994; Thornhill & Saunders, 1998; Budros, 1999; Tsai & Shih, 2007; Datta et al., 2010) have emphasised the significance of organisational performance improvement, whereas others (e.g. Cascio et al., 1997; Littler, Dunford, Bramble, & Hede, 1997; De Meuse et. al., 1994; Elayan et al., 1998) have denigrated it while defining downsizing. Their research studies have suggested that downsizing efforts either result in deterioration or no change in organisation performance. However, most of the researchers (e.g. Kozlowski et al., 1993; Cameron, 1994; Cameron et al., 1993; Budros, 1999; Kets de Vries & Balazs, 1997; Cascio, 1998, 2005) have conceded that downsizing affects the workforce.
It is noteworthy to mention that downsizing has been associated with terms such as organisational efficiency, effectiveness, productivity and competitiveness as its goals. Such terms have been frequently emphasised by many researchers in their downsizing definitions. However, as discussed in the previous paragraphs there is ample inconclusive empirical evidence on associating downsizing with organisational efficiency, effectiveness, productivity and competitiveness. Therefore, it becomes abhorrent to include the terms such as organisational efficiency, effectiveness, productivity and competitiveness while defining downsizing.

It is argued here that while defining downsizing, the emphasis should be on the methods or actions other than the intentionality but not on the goals (e.g. improvement of organisational performance, competitiveness, effectiveness), because there is adequate inconclusive empirical evidence that delinks downsizing from organisational performance. As mentioned earlier, many researchers such as Coucke et al. (2007), Laabs (1999), Ryan and Macky (1998), and McKinley et al. (1995) have all defined downsizing by accentuating only the reduction of the workforce. One of the leading researchers, Cascio (1993) also argued that whether the cause of downsizing is economic downturn, organisational decline, technological change or reorganization, downsizing involves the elimination of jobs. In other words, focus of defining downsizing needs to be on perceptions of downsizing actions, rather than on the objective occurrence, i.e. through the leaders’ perspective, one could assess the deliberation and differences in various downsizing actions.

The present review suggests that the word “downsizing” is much used in organisational studies’ conversations and has been defined not only through an inductive
approach but also deductively, i.e. at a theoretical level. Downsizing is clearly not an undivided concept as it can be implemented using a variety of actions either in progression or more often simultaneously. Although downsizing could involve a reduction in the workforce and its structure, and/or capital resources, the present research focuses on the reduction of staff and student numbers, academic programs and organisational units in the university context.

For the purpose of this research, downsizing has been defined by reviewing prior definitions (e.g. Cummings & Worley, 2005; Cascio, 1993; Ryan & Macky, 1998; Laabs, 1999) and by identifying and capturing it through a set of actions relevant to the universities sector. These actions affect full-time equivalent staff and student numbers, academic programs and organisational units. The downsizing in the present research therefore, has been defined in the university context which is as follows:

“Downsizing is a university management’s deliberate decision that constitutes a set of actions affecting full-time equivalent staff and student numbers, academic programs and organisational units.”

It is argued that this is a highly conceptual approach that is based more on an analysis of the downsizing phenomenon. This definition identifies two key points of any downsizing activity in a publicly funded university; firstly, the downsizing is considered as a deliberate decision; secondly, the downsizing constitutes a set of actions that affect full-time equivalent staff and student numbers, academic programs and organisational units.

Downsizing is a strategic decision as part of a change management and therefore, downsizing is a deliberate decision made by leaders (Cameron, 1994; Kozlowski et al., 1993). Thus, downsizing in the present research is perceived as an intentional activity.
Regardless of leaders’ contentions, downsizing affects the full-time equivalent staff and student numbers, academic programs and organisational units in a university. This reflects the reduction in organisational size as well as structure. However, these changes need not always be the same for the entire organisation relative to its functional units. For example, changes in structure or size may occur in one academic or administration unit and may not happen in other units of the same university. Structural or size changes made in any sub-unit of an organisation affect the entire organisation as sub-units cannot exist in isolation from the organisation’s functions and downsizing activities.

The salaries of academic staff and non-academic staff form the major portion of operating expenses, so the reduction of major expenses would mean the reduction of full-time equivalent staff numbers. Therefore, reduction through full-time equivalent staff numbers may be one of the key downsizing strategies considered by the universities in order to support their academic and administrative functions when they face funding cuts from the Australian Federal Government. Likewise, some selective academic programs which are not viable to continue are eliminated or phased out slowly during downsizing.

Downsizing in this research has been specifically defined for the following reasons. Firstly, the definitions suggested by most of the researchers are relevant to downsizing in industries such as automotive, manufacturing, healthcare but no single definition exists in the downsizing literature that is relevant to the university sector. Unlike other industries, the university sector has unique characteristics such as “decision-making methods”, “organisational structure”, “organisational culture” (Applebaum & Patton, 2002, p.132), and tangible and intangible resources. Owing to this uniqueness, the challenges associated with the definition of downsizing makes it difficult. Moreover, it needs to be noted that the
organisational characteristics of the university sector and commercial business sector are different.

Secondly, many researchers (e.g. Cameron, 1994; Freeman, 1999) have defined downsizing in a way that reflects only an organisational point of view. However, it needs to be emphasised that downsizing should be analysed not only at the organisational levels but also at the individual levels which include mainly mid-level leaders who play a key role in the implementation of downsizing. This part of the definition emphasises the idea that downsizing is, in essence, a perceptual yet organisational phenomenon which is observed by the individual leaders. The inclusion of a set of actions that affect different entities of a university (viz. staff, students, academic programs and organisational units) does not negate the organisation’s point of view of downsizing. Furthermore, it is argued that capturing the perceptions of a sample of leaders may often not be convenient but nevertheless should be a part of any assessment of an organisation’s downsizing.

Although few researchers (e.g. Cascio, 1993; Shaw & Barrett-Power, 1997) have focused at the employees’ level, downsizing literature has seldom focused on leaders at the mid-level leaders’ level while analysing the downsizing process. The present study therefore, takes this into account and believes that the perceptual notion of downsizing at the mid-level leaders’ level would be unlikely to be the same as at the organisational level, because leaders at the middle management level are not only responsible for implementing downsizing strategies but also they themselves become victims of downsizing at times. For instance, Floyd and Wooldridge (1994) reported that roughly 20 per cent of the losses in jobs in American companies came from middle management positions since 1988.
Similarly, ANZ Bank in Australia has reported to have reduced 500 middle-management jobs in 2008 (Gluyas, 2008).

Mid-level leaders face a paradoxical situation while implementing downsizing strategies. At one hand, the prevalent downsizing strategies are explained to them by the top management leaders. On the other hand mid-level leaders are required to implement the downsizing strategy that suits their organisation’s interests, though they may not be directly involved in devising downsizing strategies, as the decisions associated with downsizing strategies are usually made by the top management leaders. Finally, one of the aims of the present research was to examine what type and to what extent the different types of downsizing actions are being used, as well as ideally preferred by the leaders in the publicly funded Australian universities. Thus, it necessitates reviewing different downsizing actions available for mid-level leaders. Based on the literature available, ten downsizing actions were identified for the present research as most relevant to the Australian universities sector.

1. Voluntary redundancy: Within the last decade there has been an increasing use of voluntary redundancies within publicly funded Australian universities. For example Victoria University reduced its 270 staff members using voluntary redundancy in 2008; La Trobe University reduced 230 staff members in the same year; and the University of Melbourne reduced its staff strength by 220 in 2009. Similarly, Monash University, the University of Ballarat, and the University of Southern Queensland are among the few other universities that have reduced their full-time equivalent staff numbers through voluntary redundancies in the recent times. Normally, Australian universities issue a general offer of
voluntary redundancy to full-time equivalent staff members who are under 65 years of age, if a reduction in staffing is necessitated.

Australian universities have their own enterprise agreements (academic / general staff) which set out terms and conditions of employment. Such agreements are generally negotiated by the National Tertiary Education Industry Union (NTEU) and/or Community Public Sector Union (CPSU), Australian Municipal, Administrative, Clerical and Services Union. Most of these universities’ agreements (e.g. University of Adelaide Enterprise Agreement, University of South Australia Academic and Professional Staff Collective Agreement) define voluntary redundancy as ‘occurs when a staff member holding a position that has been declared redundant separates from the university on a voluntary basis.’

This suggests that voluntary redundancy begins when jobs or work disappear as a result of an organisational change rather than for performance related issues. While emphasising the voluntary aspect of this downsizing action, Clarke (2005, p. 245) defined voluntary redundancy as that which ‘involves the offer of a financial incentive to encourage employees to volunteer for redundancy.’ Therefore, it is a choice by employees by which they volunteer themselves and not a forceful imposition from the management. DeWitt (1998) also suggested that voluntary downsizing allows employees to choose whether to participate or not. However, Clarke (2007) argued that employees may feel pressured into accepting voluntary redundancy. In fact, voluntary redundancy compels management to relocate the employee to a suitable position within the university rather than enforcing redundancy on employees in case that they refuse the redundancy offer. Although it appears plausible, for most of the employees voluntary redundancy provides a
better alternative to forced layoffs, enabling them to have a dignified exit with reduced negative psychological, physical and financial impacts which are normally associated with forced layoffs (Clarke, 2007).

2. Voluntary early retirement incentive program: According to Hayden and Pfadenhauer (2005, p.13), ‘a voluntary early retirement incentive program is a carefully designed program that provides incentives geared toward encouraging employees who are approaching or at retirement age to voluntarily retire earlier than they might have otherwise.’ Hayden and Pfadenhauer (2005) argued that leaders could still achieve their organisational goals such as headcount reduction, employee retention at the lower-end of the salary scale and rewarding the longer-service employees. Allan (1997) suggested the list of inducements or incentives that includes offering credit of additional years of service for calculating pensions, reducing or eliminating penalties for early retirement, giving lump sum cash payments based on years of service, and offering full health insurance benefits. Sometimes a voluntary early retirement may not be categorized as a downsizing action in the strictest sense. It is a voluntary turnover and often considered as an alternative to layoffs (Balkin, 1992). However, a voluntary turnover induced with certain incentives (e.g. ex gratia payments) by the management, could be treated as a voluntary early retirement incentive.

In Australian universities, the voluntary early retirement incentive program is referred to as “Early Retirement Scheme (ERS)”. The voluntary early retirement is generally initiated by a particular university for a specified class of employees (usually, staff members aged under 65 years) with a view to rationalising or reorganising the
operations of the university. ERS is approved by the Australian Taxation Office (ATO) thus entitling such staff members for special ERS tax provisions.

3. Targeted redundancy: According to Lewis (1986), in a targeted redundancy an employee whose job is expected to be abolished is actually targeted by the management with an offer of a redundancy package. Thus, targeted redundancy is a downsizing action in which a staff member’s position targeted by the management will be abolished. Unlike voluntary redundancy where employees volunteer themselves in the downsizing process, the targeted redundancy is a selective means of downsizing in which some staff members (e.g. research inactive staff members) are ‘targeted’ by the management through an offer of a redundancy package and will be given a definite time-frame to take up the offer. If such staff members decline to accept the offer within the given period they would then be subjected to a procedure of targeted redundancies. Thus, targeted redundancy becomes the last resort for the organisations. In Australian universities, the academic or administration positions are targeted for redundancy based on defined principles such as high cost or low enrolments and high or low demand of certain courses.

4. Proportionate staff cuts: In this downsizing action, each functional unit (e.g. faculty or school or student services unit or research centre) of a university is expected to reduce staff numbers by a fixed percentage. Thus, the pain of job cuts is shared among those units proportionately, which maintains the perception of fairness (Greenhalgh Lawrence, & Sutton, 1988). However, Levine (1979) suggests that this downsizing action carries a risk of penalising the efficient organisational units in which there are no excess employees.
5. **Forced layoff:** Inconceivably in day to day reference, the downsizing is equated to layoffs. However, downsizing entails a broader term of which layoff is just a part. In other words, downsizing constitutes different actions and layoff is just one among them. Fundamentally, a layoff aims at staff reduction in large numbers. Unlike in targeted redundancy where selected staff members are targeted with a monetary offer to quit, a forced layoff doesn’t necessarily carry any such incentives. Staff members are given no choice but to quit their organisations as they do not have any control over the decisions taken by the management. This downsizing action is used most often by organisations across the world including universities as it may result in immediate cost savings to organisations.

6. **Delayering:** This downsizing action intends to eliminate one or more management levels in the organisational structure or in other words it aims at flattening the hierarchy and changes the span of control. The objective of downsizing through a delayering is to speed up decision making and communication (Richtner & Ahlstrom, 2006). According to Keuning and Opheij (1994), delayering usually means the planned vertical compression of managerial levels of hierarchy, involving the wholesale removal of one or more layers of managerial or supervisory staff from the organisation’s payroll. Organisations can delayer at the top, i.e. abolishing a divisional layer for example, or delayer at the middle management level, i.e. elimination of management layers at departmental, section or workgroup level (Keuning & Opheij, 1994).

7. **Closure of sub-units:** When more students cannot be attracted into a particular school or department, the cost of delivering the courses increases, thus making them financially unsustainable. This could result in the closure of such schools or departments in
universities. Closures have become more common in Australian universities. For example the University of Canberra closed its engineering school in 2003. Similarly, UNSW closed its Singapore campus in 2007 due to financial issues and lower than expected student numbers.

8. **Merger of sub-units:** A merger occurs when two smaller organisational units combine to form a single large unit. In the universities, academic organisational units such as schools or departments functioning under the same faculty are merged to form a single large school or a department. When funding pressures are not great enough to require closure of some schools, then such schools are transferred to other faculties. For example in 1997, the School of Physics was transferred to the Faculty of Engineering at the University of Wollongong.

9. **Elimination of academic programs:** In this downsizing action, one or more academic programs (e.g. bachelor, master, and doctorate) in a specific discipline are eliminated, thus affecting the universities’ academic program structure. For example in 2005 the University of Canberra ceased to admit new students to their academic programs such as Master of Library and Information Management and the Graduate Diploma in Library and Information Management.

10. **Reduction in EFTSU intake:** Student load is expressed in EFTSU (Equivalent Full-time Student Unit) values. According to the Australian Federal Government’s Department of Education, Science and Training (2008), the student load is defined as, ‘a measure which expresses what proportion of a standard annual program for a student undertaking a full year of research in a particular year of a particular course can be attributed to a (part of a) unit, or units, of research.’ EFTSU represents a measure of the
student load, for a year of a student undertaking a program on a full-time basis in Australian universities. It is the basic unit of funding from the Australian Federal Government. Currently, Australian Universities are funded on their student loads, and not on their student enrolments. The load distribution between academic organisational units (AOUs) helps to determine the distribution of the operating budget. The universities have a standard staffing formula of “n” full-time students (EFTSU) per academic staff member. For instance, with a batch of 40 students enrolled in an academic program (e.g. Bachelor of Business) this is equivalent to approximately 2.0 academic staff positions being funded by the universities.

A publicly funded university in Australia is allowed to enrol a certain number of EFTSU each year. EFTSU is computed using the number of courses or units being undertaken in that year and dividing that by the normal program load. Any kind of over enrolment may have a funding consequence. Also, classes become larger as more students undertake courses and staff members’ ability to service the students’ needs and access to staff are diminished. Further, there may be the possibility of additional administrative load and the cost needed to support the students’ experiences as each request must be processed, assessed and recorded. The assessment process may also involve significant interaction with the concerned students and this additional workload impacts on the provision of other student services. Therefore, during downsizing, a considerable reduction in EFTSU will be a viable option which could be used by organisational unit leaders. Reduction in EFTSU will result in a reduced requirement for the human and physical resources of faculties.

The first five downsizing actions discussed above (viz. voluntary redundancy, voluntary early retirement, targeted redundancy, proportionate staff cuts and forced layoff)
could necessarily result in a reduction of full-time equivalent staff numbers. The next three downsizing actions (viz. closure of sub-units, merging of sub-units and delayering) could affect the number of organisational units: and last two downsizing actions (viz. reduction in EFTSU intake and elimination of academic programs) affect student numbers and academic programs. Interestingly, the use of these downsizing actions in a universities sector has intertwining implications. For example if the academic programs are eliminated due to limited or no demand, then course load is reduced, which in turn compels a reduction in staff numbers through downsizing actions such as voluntary redundancy and targeted redundancy. Similarly, if the required number of students cannot be attracted into a particular school or department, then conducting such schools becomes financially unsustainable which could result in the closure of such schools or departments. This is in turn warrants the reduction of staff numbers through voluntary redundancies.

Each downsizing action discussed above is intended to affect a particular university’s entity depending upon its context and goals. Therefore, no hard and fast rule is made available that could guide a particular organisation or industry towards using those downsizing actions either individually or collectively. For instance, Cameron et al. (1991) found that most of the thirty American automotive companies had used downsizing actions such as voluntary redundancies, voluntary early retirements, and layoffs. All these downsizing actions are aimed at a quick reduction in staff numbers. Cameron and his colleagues also found that most successful American automotive companies had used downsizing actions such as delayering and mergers in conjunction with the voluntary redundancies, voluntary early retirements, and layoffs. Similarly, Gandolfi (2007) also found that such downsizing actions were used by the vast majority of Australian banks.
fact the results of Gandolfi’s (2007) study indicated that layoffs were the first preference of
leaders in Australian banks whereas leaders of Swiss banks primarily used delayering and
mergers. Furthermore, the findings of Gillespie et al. (2001) suggested that most Australian
universities pursued downsizing. However, what constitutes downsizing was not explicitly
stated in their research article. Nonetheless, Gillespie et al.’s (2001) presentation of results
indicates that downsizing as one of the cost-cutting measures is mainly intended to reduce
the staff numbers.

The above discussion suggests that the different downsizing actions are based on
the diversity in leaders’ approaches to downsizing (or downsizing strategies). In order to
understand further, the following section presents a review of theoretical and empirical
perspectives of downsizing strategies.

2.2.4 Theoretical and Empirical Perspectives of Downsizing Strategies

The research studies reviewed here have been identified based on a systematic
search of research studies published over the past 28 years (1982-2010). The initial year
1982 was chosen because that was the year when the term “downsize” first appeared in
newspapers (the New York Times & the Wall Street Journal) that reported on staff
reductions at the Manville Corporation (Hollister et al., 2007). The literature on
downsizing reveals a limited number of distinct types of downsizing strategies and the
following are the different typologies (Table 2.3) advanced by prominent downsizing
researchers.
Table 2.3
Typologies of Downsizing

<table>
<thead>
<tr>
<th>Researcher(s)</th>
<th>Typologies of Downsizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhalgh, Lawrence, &amp; Sutton (1988)</td>
<td>Hierarchy of strategies for work force reduction*</td>
</tr>
<tr>
<td>Cameron, Freeman, &amp; Mishra (1991)</td>
<td>Workforce reduction, Organisational redesign, Systemic strategies**</td>
</tr>
<tr>
<td>DeWitt (1993)</td>
<td>Multiple-contingency downsizing model*</td>
</tr>
<tr>
<td>Kozlowski, Chao, Smith, &amp; Hedlund (1993)</td>
<td>Proactive and reactive approaches*</td>
</tr>
<tr>
<td>Freeman (1994)</td>
<td>Convergence and reorientation approaches*</td>
</tr>
<tr>
<td>DeWitt (1998)</td>
<td>Selection resource reduction approaches*</td>
</tr>
<tr>
<td></td>
<td>(retrenchment, downscaling, and down-scoping)</td>
</tr>
<tr>
<td>Golembiewski (1999)</td>
<td>Downsizing by need and downsizing by preference*</td>
</tr>
<tr>
<td>Radcliffe, Campbell, &amp; Fogarty (2001)</td>
<td>Cost-savings or classical downsizing, Strategic downsizing, Merger and Acquisition downsizing*</td>
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<tr>
<td>Dewettinck &amp; Buyens (2002)</td>
<td>Two-dimensional categorization model of time frame</td>
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<td>(reactive to proactive) and reorientation practices</td>
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<td>towards the internal or external labour market**</td>
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<td>Love &amp; Nohria (2005)</td>
<td>Broad scope downsizing and Narrow scope downsizing*</td>
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* Theoretical Typology  
** Empirical Typology

Before proceeding further with the review discussion, it needs to be mentioned here that the terms “downsizing approaches” and “downsizing strategies” are used interchangeably throughout the present thesis. This has been followed by many other researchers in the past. For example Kozlowski et al. (1993), Freeman (1994), DeWitt
(1998), and Dewettinck and Buyens (2002) have used the term downsizing approaches in their studies while others such as Iverson and Zatzick (2007), Mishra and Mishra (1994), and Cameron et al. (1991) have used the term downsizing strategies.

Although not limited to a particular industry or a sector, downsizing researchers have proposed several different ways of categorising downsizing strategies. For example Greenhalgh et al. (1988) introduced five levels of hierarchy of strategies for workforce reduction and seventeen propositions while focusing on organisational and environmental variables that influence the managerial choice of workforce reduction strategies. According to Greenhalgh et al. (1988), workforce reduction options reflect a trade-off between protecting the well-being of employees and saving costs for the organization in the short term. The GLS model (Greenhalgh, Lawrence, Sutton) suggests that the workforce is reduced incrementally and hierarchically in the increasing order of protection of employee well-being or the decreasing order of short term cost savings for the organization. The continuum of workforce reduction options include natural attrition at Level I, induced attrition at Level II, involuntary redeployment at Level III, layoff with outplacement assistance at Level IV and layoff without outplacement assistance at Level V. The GLS model of Greenhalgh et al. (1988) was theoretically developed, and subsequently the propositions were made in the light of organisational decline and not downsizing. Although the predictive validity GLS model was supported through empirical findings of Rosenblatt and Mannheim (1996), its external validity was challenged in the context of Israeli managers’ workforce cutback decisions. One of the most often cited studies in the downsizing literature is that of Cameron et al.’s (1991) seminal research on best practices in white-collar downsizing. Cameron et
al. (1991) conducted extensive and systematic studies for 4 years (between 1987 and 1990) and collected approximately 2500 survey questionnaires from white-collar employees. They also conducted interviews with the heads of 30 organisations from the American automotive industry such as assembly plants, fabricating plants, supplier businesses, and independent corporate marketing and staff units. Three distinctive types of downsizing strategies, viz. workforce reduction, organisation redesign and systemic change strategies emerged from Cameron et al.’s (1991) extensive investigation. The categorization of these strategies was mainly based on time frame. First and foremost, the workforce reduction strategy aimed at a decrease in headcount was usually implemented a short-time frame (e.g. early retirements, transfers and outplacement, buy-out packages, golden parachutes, attrition, job banks, and layoffs or firings); second, the organisation redesign strategy focused on the elimination of work rather than a decrease in headcount and the implementation was on a medium-term basis (e.g. eliminate a function, eliminate management levels, utilize cross-functional teams, merge two subunits, remove products, rearrange processes, redesign tasks); and third, the systemic change which takes a holistic view of organisational change while focusing on changing the intrinsic organisation culture was part of a long-term process (system analysis, organisational culture change, encourage risk-taking, develop continuous improvement philosophy, bottom-up design, co-ordinate with outsiders, cut hidden costs, hold everyone accountable and implement changes in reward and recognition systems). Further, Cameron et al. (1991) noticed that most of the organisations had downsized using a workforce reduction strategy rather than using a set of multiple strategies.
Cameron et al. (1991) grouped these three downsizing strategies into depth and breadth, based on the diversity of strategic choices adopted by different organisations. Cameron et al. (1991) found that organisations which integrated a larger number of actions of the same class of strategy had more depth in their overall downsizing strategy, whereas organisations that used a multiplicity of strategy types had greater breadth in their strategy.

Taking the discussion further, the downsizing literature reveals the presence of four dichotomous typologies of downsizing, viz. Kozlowski et al.’s (1993) reactive and proactive approaches to downsizing, Freeman’s (1994) convergence and reorientation approaches to downsizing, Golembiewski’s (1999) downsizing by need and downsizing by preference, and Love and Nohria’s (2005) broad scope and narrow scope downsizing.

Kozlowski et al. (1993) reflected on the differences between proactive and reactive downsizing approaches. They identified three factors which could be used to find out whether an organisation tends to adopt either of the two approaches. First, the level of an organisation's strategic planning concurrent with its ability to engage in environmental scrutiny; second, strategically-oriented personnel function; and third, the dominance of key organisational cultural values. In contrast to a proactive approach, Kozlowski et al. (1993) argued that a reactive approach aims at downsizing being limited only to a cost reduction and the emphasis is on a workforce reduction strategy.

Consistent with Kozlowski et al.’s (1993) approaches to downsizing, Golembiewski (1999) differentiated between downsizing by need and downsizing by preference. The former is similar to Kozlowski et al.’s (1993) reactive approach whereas the latter is a proactive approach to downsizing.
Freeman (1994) developed two distinctive approaches to downsizing and termed them as convergence and reorientation approaches. Freeman (1994) argued that the convergence approach is evolutionary, incremental and gradual change, whereas the reorientation approach is revolutionary, metamorphic and discontinuous change. According to Freeman (1994), organisations will implement moderate downsizing strategies (e.g. decreasing size without restructuring or the elimination of individual tasks) aimed at reinforcing the organization's current mission, strategy, and systems during convergent periods. However, organisations will undertake more severe downsizing strategies during reorientation periods (e.g. merging departments or eliminating entire organisational subunits) aimed at fundamentally changing the organization's mission, strategy, and systems.

Love and Nohria (2005) assessed the scope of downsizing dichotomously and classified it into two types, viz. broad scope and narrow scope. According to Love and Nohria (2005), broad scope downsizing is reflected when employment reductions are linked with structural or process changes such as restructuring, reorganization, and redesign, as well as delayering, reducing the number of functions and divisions in an organisation. This also included changes in the firm’s strategic domain, such as focusing on the core business, or narrowing the product line. However, when the focus is only on workforce reduction, then it is considered as narrow scope downsizing. Thus, Love and Nohria’s (2005) narrow scope downsizing and broad scope downsizing are consistent with Cameron et al.’s (1991) workforce reduction strategy and organisational redesign, respectively. Also, Love and Nohria’s (2005) broad scope downsizing could be identified
with the convergent approaches to downsizing, whereas reorientation approaches lie with that of narrow scope downsizing.

While examining the impact of downsizing strategy on dimensions and types of organisational structure, DeWitt (1993) advanced a theoretical typology known as the multiple-contingency downsizing strategy model. DeWitt (1993) identified four downsizing strategies, viz. domain and structural re-orientation, domain and structural retrenchment, domain re-orientation and structural retrenchment, and domain retrenchment and structural re-orientation that could provide managers with a wide range of alternatives to improve organization performance. Later on, DeWitt (1998) honed the downsizing concept further by identifying three broad downsizing approaches (transposed with the meaning of selective resource reduction approaches - a term referred to reducing of human and physical resources) as retrenchment, downscaling, and down-scoping. According to DeWitt (1998), retrenchment maintains the organisation’s scope while preserving or even supplementing its output, whereas downscaling means the use of permanent cuts in human and physical resources with the intent to maintain product line and market scope while reducing output to bring supply in line with demand. In contrast to downscaling, down-scoping merges physical and human resource reductions but with simplification of organisational systems or processes or in other words, the overall output may get reduced when organisations shrink their boundaries (DeWitt, 1998).

While emphasising the cultural dynamics’ role in inducing a crisis in organisations, Radcliffe et al. (2001) used a multiple case study research approach and identified three types of downsizing, viz. cost-saving downsizing, strategic downsizing and merger-acquisition downsizing. According to Radcliffe et al. (2001), the cost-saving downsizing
mainly aims at cost reduction whereas strategic downsizing involves a deliberate managerial refocusing on some operations of the firm at the expense of others. Merger-acquisition downsizing brings new businesses and operations under the corporate tent and the resources are directed in favour of businesses with greatest promise. Strategic downsizing and merger-acquisition downsizing are similar to that of Cameron et al.’s (1991) organisational redesign strategy of downsizing. Although cost-saving is the primary motive of any type of downsizing, previous studies failed to explicitly identify a downsizing approach in terms of cost reduction. Thus, Radcliffe et al.’s (2001) cost-saving downsizing stands unique among all other approaches identified by research scholars.

Using a multiple-case research approach in nineteen Belgian companies, Dewettinck and Buyens (2002) focused on employment practices rather than employees, and developed a two-dimensional model with the time frame (reactive to proactive) and labour market (external labour market to internal labour market) as two dimensions. The first dimension focused on a time frame perspective and suggested a continuum with a reactive approach at one end and a proactive approach at the other. This is consistent with the Kozlowski et al.’s (1993) dichotomous approaches to downsizing. The second dimension of the Dewettinck and Buyens’s (2002) two-dimensional model focused on labour market reorientation practices and suggested a continuum with internal practices and external practices at the two extremities. Thus, four downsizing approaches were identified by Dewettinck and Buyens (2002) as reactive external, reactive internal, proactive external, and proactive internal. The reactive external approach was aimed at a reduction in head count through transferring employees to the external labour market or to inactivity such as pension plans. In contrast to the reactive external approach, the reactive
internal approach (e.g. reduction of headcount because of closure of organisational units) focused on reduction of headcount through finding new jobs within the internal labour market, i.e., within the organisation itself). The proactive external approach emphasised the use of temporary or interim work, and lastly, the proactive internal approach focused on enhancing the employability of the workforce. Similarly to Cameron’s (1994) workforce reduction downsizing strategy, the reactive external approach and reactive internal approach focus on headcount reduction with the former transferring employees to the external labour market, whereas the latter tries to find new jobs for employees within the internal labour market (intra-organisational). In the case of the proactive external approach, the strategies are developed to anticipate environmental changes by employing people in less sustainable forms, whereas the proactive internal approach aims at enhancing the employability of the workforce, which is similar to Cameron’s (1994) systemic change strategy.

While examining how organisational units adapt to downsizing, DeRue et al. (2005) introduced three structural approaches to downsizing in teams, viz. maintain hierarchy, integrate hierarchy, and eliminate hierarchy. According to DeRue et al. (2005), the formal team leader position is maintained while one of the team members is eliminated in the maintain hierarchy approach, whereas in the integrate hierarchy approach the team leader assumes the roles and responsibilities of the displaced team member, and in the eliminate hierarchy approach, the team takes the form of a highly autonomous, self-directed work team (Cohen & Bailey, 1997). Thus, DeRue et al.’s (2005) three structural approaches to downsizing are mainly focused on redesigning the strategy of downsizing which is as identified by Cameron et al. (1991). However, DeRue et al. (2005) have
viewed downsizing at the team level in contrast to Cameron et al.’s (1991) notion of downsizing at the organisational level.

Most recently, Iverson and Zatzick (2007) proposed the “downsizing harshness continuum” with less harsh strategies such as natural attrition and redeployment at a low harshness end and more harsh strategies such as voluntary layoffs (including early retirement) and compulsory layoffs at a high harshness end. Iverson and Zatzick (2007), grouped downsizing strategies into five ordered categories in terms of downsizing harshness viz., “no downsizing” at Level I, only alternative strategies such as attrition and redeployment at Level II, voluntary layoffs or early retirement with or without the use of alternate strategies at Level III, a combination of both voluntary and compulsory layoffs at Level IV, and lastly only compulsory layoffs at Level V. The model of downsizing harshness continuum by Iverson and Zatzick (2007) was theoretically developed and used to examine the relationship between high-commitment work practices and downsizing strategies. However, this model is a replica of the GLS model (Greenhalgh, Lawrence, & Sutton, 1988) with minor changes. For example Iverson and Zatzick’s (2007) Level V denoting compulsory layoffs could be identified with the layoff strategies as identified by the GLS model. Similarly, Levels II (attrition and redeployment) and III (voluntary layoffs or early retirement with or without the use of alternate strategies) are identical to the redeployment strategies of the GLS model. Furthermore, Greenhalgh, Lawrence, and Sutton (1988) identified a wide range of workforce reduction strategies and broadly divided them into layoff strategies and redeployment strategies while arranging them in a hierarchical structure with layoff strategies at one end of the continuum and redeployment strategies at the other. Similarly, Iverson and Zatzick (2007) suggested five ordered
categories of downsizing strategies on a continuum and broadly divided them into layoffs and alternatives to layoffs. The only distinction that could be made between the two models is that Iverson and Zatzick (2007) introduced “no downsizing” as an alternative to layoff whereas that was not identified by Greenhalgh, Lawrence, and Sutton (1988).

In summary, Cameron et al. (1991, 1993) focused on employees, work redesign, and culture change, whereas Freeman (1994) emphasised the type of organisational change. Koslowzki et al. (1993) laid much emphasis on cost reduction and workforce reduction in terms of the reactive and proactive nature of downsizing. DeWitt (1993) introduced the multiple-contingency downsizing model whose main focus was on a broad range of alternatives to performance through a dual combination of strategies. Conversely, Dewettinck and Buyens (2002) advanced a two-dimensional model while laying greater emphasis on employment practices instead of employees. Furthermore, Iverson and Zatzick (2007) categorized downsizing strategies into two broad classes, viz. layoffs and alternatives to layoffs. The alternatives to layoffs don’t have immediate effects on the workforce (Greenhalgh et al., 1988). However, they are downsizing strategies per se. In essence the theoretical perspectives and empirical research on downsizing strategies emphasise the complexity of the topic with some replications as well as uniqueness of various approaches to downsizing.

Theoretical typologies and testable propositions as suggested by most researchers will be of little use unless they are subjected to rigorous empirical investigations, and those empirical studies that have been conducted have resulted in no clear consensus on the common underlying structure of downsizing. Furthermore, most of the studies have been conducted mainly in American, Belgian, and Australian companies. There has been no
research in the literature that could suggest a specific typology of downsizing relevant to the universities sector. Therefore, the present research moved beyond describing what downsizing is, and identified what type of downsizing strategies are practically used as well as ideally preferred by the mid-level leaders in Australian universities. The present research was intended to fill the research gap existing in the area of downsizing by advancing the empirical typologies of ideal and practical downsizing that could be specifically applied to the university sector. Nonetheless, the central focus was to use the empirically developed typologies of ideal and practical downsizing to explain the differences in leaders’ approaches to downsizing in terms of internal factors (viz. leaders’ characteristics and organisational culture) which are discussed later in this chapter. The next section presents a review of the measurement of downsizing strategies and discusses the rationale for selecting an appropriate measure for the present study.

2.2.5 Measurement of Downsizing Strategies

The literature to date reveals that downsizing could be measured in two ways, objective and perceptual measures, depending on whether the level of downsizing or downsizing strategies is the object of measure. Measuring the extent of downsizing strategies uses a perceptual measure, whereas measuring the level of downsizing uses an objective measure. For example Freeman and Cameron (1993), Bethel and Liebeskind (1993), Mentzer (1996), Cascio et al. (1997), and Filatotchev, Buck, and Zhukov (2000) operationalised downsizing as a change in an organization's employee numbers between time periods 1 and 2. However, for measuring the extent of downsizing strategies a perceptual measure through Likert-style questions has been used by many researchers in the past (e.g. Mishra & Mishra, 1994; Farrell & Mavondo, 2005).
Most of the researchers (e.g. Freeman & Cameron, 1993; Budros, 1997; Rust, 1999) have used the annual change in employment levels as an objective measure to determine the level of downsizing. Freeman and Cameron (1993) suggested two rules for determining the level of downsizing.

The first rule insists on making a comparison between employment levels at two consecutive years over the periods of interest. Thus, downsizing has been said to have occurred if the employment level for a particular year of interest is less than the employment level of the preceding year. However, if the total size of the workforce of an organisation is reduced significantly in a particular year of research interest and the same size of the workforce again is added up at the end of the following year, then the downsizing measure would fail to capture the difference, though technically speaking downsizing has occurred in the first instance. Moreover, in the case of a significant rate of natural attrition, that rule would possibly fail to reflect the measure as a level of downsizing. This is because ‘downsizing is not something that happens to an organization, it is something that organization members undertake purposively’ (Cameron & Freeman, 1994, p.4) and therefore, natural attrition is not considered as downsizing. Nevertheless, Cascio et al. (1997) refer to downsizing as solely a reduction in employment greater than or equal to 5 per cent of the organisation’s workforce. Similarly, several other researchers (e.g. Littler & Innes, 2004; Ahmadjian & Robinson, 2001; Morris, Cascio, & Young, 1999; McKinley, Mone, & Barker, 1998) have argued that changes of 5 per cent magnitude are less likely to be due to attrition, and the workforce reduction of a magnitude greater than or equal to 5 per cent is most likely to be intentional. Thus, they have recommended to use arbitrarily a reduction in 5 per cent of the total employment as the minimum level to be
considered as downsizing. Although this method of measuring downsizing seems to be reasonable, there are problems in applying it to smaller organisations where workforce sizes are comparatively low. In smaller organisations (or organisational units) a 5 per cent reduction of total employment makes a significant difference. As a consequence it becomes difficult to determine whether workforce reduction has occurred through either downsizing or natural attrition.

The second rule for determining the level of downsizing intends to find out whether an organisation used layoffs for workforce reduction, and whether it was intentional and/or efficiency oriented. However, this second rule would not capture the level of downsizing, if the leaders use a downsizing strategy other than workforce reduction. For example organisational redesign as identified by Cameron et al. (1991) is one such strategy which focuses on reducing the work rather than workers.

While investigating the role of mutual trust on downsizing strategies in 91 organisations of the American automotive industry, Mishra and Mishra (1994) used a perceptual measure of downsizing to assess the extent of three downsizing strategies, viz., workforce-reduction, organisational redesign, and systemic change. A seven-point Likert Scale ranging from 1 = not at all, to 7 = great extent, was used for assessing the extent of downsizing strategies.

Similarly, Farrell and Mavondo (2004) also adopted the Mishra and Mishra’s (1994) method for measuring downsizing strategies while investigating the effect of downsizing approaches on learning orientation in top 2000 manufacturing organisations in Australia. A convergent approach to downsizing was reported to have captured the items regarding a variety of methods by which overall employment levels were reduced
throughout the organisation; and a reorientation approach was reported to have captured the items relating to organisational redesign such as reanalysing and redesigning jobs and tasks, eliminating functions and/or departments, and developing a continuous improvement philosophy. Again using the same sample of top 2000 manufacturing organisations, Farrell and Mavondo (2005) measured two types of downsizing approaches, i.e. downsizing driving organisational redesign and organisational redesign driving downsizing, while investigating the effects on business performance.

The focus of the present research was on how leaders approach downsizing, or more precisely, to what extent the downsizing actions are ideally preferred as well as practically used by leaders in publicly funded Australian universities. Therefore, the perceptual measure of downsizing was expected to suit the purpose. A five-point Likert scale (1 = not at all, 2 = very little extent, 3 = little extent, 4 = large extent, 5 = very large extent) was used for measuring ideal and practical downsizing actions.

This section discussed various approaches to measuring downsizing and the selection of an appropriate measure for the present research. It was suggested earlier in this chapter that one of the internal factors that could explain the differences in approaches to downsizing is leaders’ characteristics. The next section briefly emphasises the role of leaders’ characteristics in downsizing, which is followed by a review of various definitions of this construct.

2.3 Leaders’ Characteristics

While emphasising the proactive and reactive downsizing types, Kozlowski et al. (1993) proposed three significant characteristics that affect downsizing, viz. leadership, organisation system sophistication, and organisational culture. As downsizing is viewed by
leaders as a means to achieve economic consequences and part of a managerial obligation (Lamsa, 1999), so leadership forms a significant factor of influence during downsizing.

Although limited in number, research studies (e.g. Carmeli & Sheaffer, 2009; Adner & Helfat, 2003; Rust & McKinley, 2002) have focused on leadership issues in downsizing and insinuated leader’s characteristics as equally critical from the trait-based perspectives. Previous research studies (Conger, 1999; Applebaum, Leblanc, & Shapiro, 1998; McNeese-Smith, 1995) have suggested that downsizing cannot be realised unless mid-level leaders execute it successfully by adopting different behaviours and values. As a consequence, the understanding of leaders’ characteristics that drive downsizing proves critical for leaders and could help to explain why different approaches are pursued while downsizing.

While the literature has put forward a variety of internal factors as explanations for downsizing, these are almost perpetually entwined with leadership traits, preferences, and behaviours. Furthermore, currently there has been a renewed interest in the trait-based perspectives of leadership studies (Northouse, 2007; Zaccaro, 2007). Given the importance of leaders’ characteristics in downsizing, it necessitates reviewing the definitions, theoretical and empirical perspectives, and the measurement of leaders’ characteristics and is presented in the following sections.

**2.3.1 Defining Leaders’ Characteristics**

Leadership definitions have evolved over a period of time from simple reference to traits, to a more complex understanding of process perspective. In this context Bratton, Grint, and Nelson (2005, p.20) states ‘leadership theory and practice can only be understood as something in process within a structural setting.’ This view is asserted by
Northouse (2007) who describes leadership as a process since, it involves influence, occurs within a group context, and involves the achievement of goals. Northouse (2007, p.3) defines leadership as ‘a process whereby an individual influences a group of individuals to achieve a common goal.’ Similarly, in the past, Stogdill (1974, p. 4) also stated that leadership is ‘The process of influencing the activities of an organised group in its efforts toward goal setting and goal achievement.’ Furthermore, the “process perspective” espouses leadership as a relational phenomenon residing in the context and this context encompasses both external and internal factors, anything from global, economic and political forces to the specific way a job is designed to be performed (Bratton et al., 2005). It is asserted that ‘a leader affects and is affected by followers and the environment within which he/she operates’ (Bratton et al., 2005, p. 11), as leadership occurs and has its effects in contexts where individuals are moving towards a goal. No leader can be expected to achieve the organisational objectives by his/her own endeavours alone. Leadership in practice involves collaborative relationships that lead to collective action (House & Aditya, 1997). Thus, both leaders and followers are involved together in the leadership process as leaders need followers and followers need leaders (Hollander, 1992; Heller & Van Til, 1983; Jago, 1982; Burns, 1978). Additionally, leaders influence followers to achieve organisational objectives in relation to a context. Therefore a leadership process is comprised of three elements, viz. leaders, followers and context.

Contrary to this process-relational perspective of leadership, literature reveals that leadership can also be viewed from a system-controlled perspective. Watson (2005) contrasted the process-relational approach to leadership with the system-control approach by highlighting the unitarist perspective where the focus of leadership is on “leaders as
persons” rather than “leadership as a process”. Further, he argued that in the system-controlled approach, the focus is on followers and organisational goals are made clear and fixed, whereas in the process-relational perspective, the focus is on collaborators and organisational goals are ambiguous, constructed and constantly changing, which is in fact a pluralist perspective of researching leadership.

It needs to be noted that some researchers have argued for a process-relational approach (e.g. Hay & Hodgkinson, 2005; Barker, 1997; Burns, 1978; Alimo-Metcalfe, Alban-Metcalfe, & Pickard, 2002), while others (e.g. Conger & Kanungo, 1987; Bass, 1985) have supported the notion of a system-controlled approach. In relation to these two approaches, Yukl (2010) emphasises the importance of a collective approach where the focus is on many people as contributors to the leadership process in organisations rather than focusing on a leader as a single individual. This view is also asserted through the research findings of Heifetz and Laurie (2001) as they suggested that a leader is not someone who has all the solutions at his/her disposal, but rather a leader is someone who asks questions of others in order to utilise their expertise. This approach strengthens the notion of networking, building support for ideas and negotiation (Yukl, 2010) in a leadership process.

According to Gini (1997), leadership is a delicate combination of the process, the techniques of leadership, the person, the specific talents and traits of the leader, and the general requirements of the job itself. He argued that leadership cannot be separated from the person as leader and the job of leadership. This clearly emphasises the significance of the leader and his/her characteristics, and the context in which he/she functions (e.g. downsizing). Additionally Ford (2005) suggested the middle-ground approach of
leadership research studies which emphasises three interrelated elements of leadership, viz. characteristics of leaders, characteristics of followers, and relationships between leaders and followers. The leader is the central focus of attention in a process perspective though interaction takes place between leaders and followers within a context. Therefore, the leader as a person can’t be isolated from the leadership process.

Leaders are considered to be a critical component of the leadership process as “a leader is central to the process of leadership”. However, defining leadership as a “process” raises a concern that it is transactional, and not related to the traits or characteristics of leaders. This in turn necessitates arguing that it is the leader who often initiates the relationship, it is the leader who bridges the gaps through communication, and it is the leader who carries the onus of maintaining the relationships, though leaders and followers engage in an interactional process in a given context (e.g. downsizing).

Characteristics of leaders and followers are as important as contextual factors in the process of leadership. Leaders apply their leadership knowledge and skills in the leadership process but traits or characteristics such as personality and values can influence their actions and make them exceptional. Furthermore, McKenna and Yost (2004, p.292) emphasised that ‘leadership may be less about a place within a corporate hierarchy, and more about a person’s ability to remain emotionally under control in the midst of increasing pressure to lose control.’ This dichotomous view of leadership (process and traits) has been asserted by many researchers in the past (e.g. Jago, 1982) as well as in recent years (e.g. Northouse, 2007). Therefore, the present research adopted this notion and defined the leadership as “an interactional process in which leaders influence and are
influenced not only by their characteristics or traits but also by the collaborators and context while achieving the organisational objectives”.

The present research therefore, collectively acknowledges the trait theories, behavioural theories, and contingency model of leadership while integrating the multiple characteristics of leaders, viz. Big Five dimensions of personality (John, Donahue, & Kentle, 1991; Costa & McCrae, 1992; Goldberg, 1992; John & Srivastava, 1999), classic leadership styles (Stogdill, 1963; Stogdill and Coons, 1957), and personal values (Schwartz, 1992, 1994) in order to investigate whether such characteristics could possibly explain the differences in leaders’ approaches to downsizing.

Personality, leadership styles, and personal values indicate the inclusiveness of a variety of personal qualities that promote leader effectiveness and form an integrated constellation of attributes in accordance with the Zaccaro’s (2007) definition of leaders’ characteristics. Leaders’ personality, leadership styles and personal values are trans-situational variables and are expected to be enduring, producing cross-situational stability in leadership performance.

Further, it needs to be emphasised that there was a revival of trait-based perspectives of leadership in the late 1980s as research studies suggested that stable individual differences in leader behaviour exist (Lord, De Vader, & Alliger, 1986). More recently, Zaccaro (2007) reported that empirical research findings (e.g. Judge, Bono, Ilies, & Gerhardt, 2002; Peterson, Smith, Martorana, & Owens, 2003) in recent years have demonstrated the strong association between personality characteristics and other attributes of leadership. Therefore leaders’ characteristics need to be addressed in the foreground.
Claims of this nature are not new in the current context of leadership research where there is a renewed interest in researching leaders’ characteristics (or traits).

Many leadership studies have indicated the significance of leaders’ characteristics, e.g. personality (Yukl, 2010). Wilberg (2003) reports that among 65 different classification systems for leadership defined over the last 50 years (Stogdill, 1974; Fleishman, 1991), long lists have been provided with traits and elements of leadership (Boyatzis, 1982).

The literature often transposes both traits and characteristics. According to Yukl (2010), the term trait refers to a variety of individual attributes, including aspects of personality, temperament, needs, motives, and values. One of the early proponents of trait theories, Allport (1961, p. 347) defined the trait as ‘a neuropsychic structure having the capacity to render many stimuli functionally equivalent, and to initiate and guide equivalent (meaningfully consistent) forms of adaptive and expressive behaviour.’ More recently, Zaccaro (2007, p. 3) defined leaders’ traits as ‘relatively coherent and integrated patterns of personal characteristics, reflecting a range of individual differences, that foster consistent leadership effectiveness in a variety of group and organisational situations.’ According to Zaccaro, this definition has three important points. Firstly, the leaders’ traits are not to be considered in isolation but rather as integrated constellations of attributes that influence leadership performance. Secondly, the leaders’ traits concern the inclusiveness of a variety of personal qualities that promote stability in leader effectiveness. Thirdly, the leaders’ traits specify attributes as relatively enduring, producing cross-situational stability in leadership performance.

Conversely, Costa and McCrae (1990) argue that traits are dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings and actions.
Schwartz (1994) also suggested that traits are enduring dispositions and they reflect only what the people are “like” rather than the intentions behind their behaviour. Further, Schwartz (1994) contended that personal values refer to what people consider important, the goals they wish to achieve, and therefore values are transitiutional goals which vary in their importance as guiding principles in people’s lives. As a result, the personal values need to be considered as characteristics of individuals. Considering this notion, the present research identified personality, leadership styles and personal values of leaders, and termed them collectively as “leaders’ characteristics” which were expected to explain the differences in downsizing approaches. Thus, a contingency approach has been followed.

Based on previous research studies (e.g. Zaccaro, 2007; Costa & McCrae, 1990; Schwartz, 1994) the following definition of leaders’ traits has been adopted for the present research. Leaders’ characteristics are defined as “a set of distinctive variety of individual-attributes of leaders which are enduring dispositions as well as enduring goals”.

Leadership in a university downsizing climate, is much about dealing with changes and getting more out of knowledge and experience which may be limited by downsizing. According to Bratton et al. (2005), integrative literature indicates a trend toward convergence on an integrative model that focuses on three observable processes, viz. leader behaviour, influence, and facilitating conditions. Therefore, the present research acknowledges the importance of the role of leaders’ characteristics in downsizing while investigating whether differences in leaders’ approaches to downsizing could be explained by the leaders’ characteristics (viz. personality, leadership styles and personal values). In other words it was aimed at utilizing the contingency perspective to study the association of leaders’ characteristics with the downsizing strategies. The fundamental assertion
underlying a contingency perspective is that there is no one best way to manage organisations and that the optimal approach depends on a specific set of conditions. Using the contingency perspective to leaders’ approaches to downsizing, it is argued here that the appropriateness of a particular downsizing approach is dependent on certain leaders’ characteristics.

Many definitions of personality, leadership styles, and personal values could be found in the literature. However, theoretically sound definitions are warranted in the present research context of downsizing. Thus, the following operational definitions of individual leaders’ characteristics (viz. personality, leadership styles, and personal values) and their respective dimensions have been adopted in the present research.

1. **Personality:** ‘Dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions’ (McCrae & Costa, 1990, p. 23). The operational definitions for five personality factors are based on John and Srivastava’s (1999, p.121) short definitions which are as follows.

1.1 Openness to Experience (vs. closed-mindedness): Describes the breadth, depth, originality, and complexity of an individual’s mental and experiential life.

1.2 Conscientiousness: Describes socially prescribed impulse control that facilitates task- and goal-directed behaviour, such as thinking before acting, delaying gratification, following norms and rules, and planning, organising, and prioritizing tasks.

1.3 Extraversion: Implies an energetic approach toward the social and material world and includes traits such as sociability, activity, assertiveness, and positive emotionality.
1.4 Agreeableness: Contrasts a pro-social and communal orientation towards others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty.

1.5 Neuroticism: Contrasts emotional stability and even-temperedness with negative emotionality, such as feeling anxious, nervous, sad, and tense.

2. Leadership Styles: ‘the underlying need-structure of the individual which motivates his/her behaviour in various leadership situations’ (Fiedler, 1967, p. 36). The operational definitions for two classical styles of leadership are based on Stogdill’s (1963, p.3) short definitions which are as follows.

2.1 Consideration (or people-oriented style): Leader ‘regards the comfort, well-being, status, and contributions of followers.’

2.2 Initiating Structure (or task-oriented style): Leader ‘clearly defines own role, and lets followers know what is expected.’

3. Personal Values: ‘Desirable transitiuational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity’ (Schwartz, 1994, p. 21). The operational definitions for ten personal values are based on Schwartz (1994, p. 22) definitions which are as follows.

3.1 Self-direction: Independent thought and action (choosing, creating, exploring)

3.2 Stimulation: Excitement, novelty, and challenge in life

3.3 Hedonism: Pleasure and sensuous gratification for oneself

3.4 Achievement: Personal success through demonstrating competence according to social standards

3.5 Power: Social status and prestige, control or dominance over people and resources
3.6 Security: Safety, harmony, and stability of society, relationships, and self

3.7 Conformity: Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms

3.8 Tradition: Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide

3.9 Benevolence: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact

3.10 Universalism: Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature

This section reviewed various definitions of leadership and leaders’ characteristics, and also set out the definitions of personality, leadership styles and personal values adopted for the present investigation. Depending on whether the approach to leadership is trait based, or behavioural, the definitions of leaders’ characteristics have been primarily based on the premise of particular theoretical and empirical perspectives. Thus, the next section reviews the theoretical and empirical perspectives of leaders’ characteristics while maintaining a focus on the Big-five Personality Inventory model (John, Donahue, & Kentle, 1991), Leader Behaviour Description (Stogdill, 1963), and Schwartz Value Theory (Schwartz, 1992 & 1994) so as to underpin the choice of research questions with the appropriate theories.

2.3.2 Theoretical and Empirical Perspectives of Leaders’ characteristics

While emphasising the importance of leaders’ characteristics, Burke (2006) reported that organisations spend an estimated US$50 billion annually on the development of leaders (Fulmer & Conger, 2004). Further, according to Burke (2006), despite such a
vast knowledge and huge investment, most organisations seem to have faced a shortage of leaders.

The latest research findings of Den Hartog, Caley, and Dewe (2007) have demonstrated that many of the qualities (e.g. interpersonal skills, administrative skills, financial skills, strategic thinker, empathy, goal oriented, results driven, analytical, inspirational, charisma, visionary, drive, ability to convince, ambition, self-confidence) sought in recruitment advertisements indeed seem to reflect attributes proposed by most prominent trait theories (Kirkpatrick & Locke, 1991; Bass, 1985; Stogdill, 1963; Stogdill & Coons, 1957). Thus, trait perspective is arguably one of the prominent approaches to the study of leadership.

Trait perspective of leadership mainly focuses on the idea that leaders possess unique attributes that distinguish them from non-leaders. The leadership research began with the trait approach in the early 20th century but was rejected for its failure to account for situational variances in leadership behaviour. The trait theories received a setback in their early phases. For example Stogdill (1948, p.64) conducted an extensive review of leaders’ traits and concluded that ‘a person does not become a leader by virtue of the possession of some combination of traits.’ However 25 years later, Stogdill’s (1974) review demonstrated that some personal traits (e.g. intelligence, dominance, self-confidence, high energy level, and task knowledge) were in fact associated with leadership. Taking it further, several research studies in the 1980s challenged the empirical basis of rejection of leaders’ traits (Kenny & Zaccaro, 1983; Lord et al., 1986).

Theories on leaders’ traits suggest that certain types of individuals having specific traits such as intelligence, dominance, extroversion, and achievement motivation are more
likely to succeed as leaders (McClelland & Boyzatis, 1982; Lord et al., 1986). Similarly, Kouzes and Posner (1993) identified the traits such as honesty, competence, forward looking, and inspiration. Kirkpatrick and Locke (1991) also identified several traits such as drive, leadership motivation, honesty and integrity, self-confidence, cognitive ability and knowledge of business as being consistently associated with leadership. The role of leadership motivation has found scholarly support from few researchers (e.g. De Hoog, Den Hartog, Koopman, Thierry, Van den Berg, Van der Wiede, & Wilderom, 2005), whereas the role of cognitive ability in leadership has not been supported by others (e.g. Judge, Colbert, & Ilies, 2004). Likewise, some researchers (e.g. Mumford, Connely, & Gaddis, 2003; Zaccaro, Mumford, Connelly, Marks, & Gilbert, 2000; Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000) have found that creativity and creative problem solving skills, originality and flexibility are associated with leadership.

Furthermore, while studying what makes the Australia’s top CEOs the best, Sarros and Butchatsky (1996) identified the traits such as intelligence, fair mindedness, broad mindedness, straight forwardness, imagination, dependability, supportiveness, courage, caring behaviour, cooperation, maturity, ambition, determination, self control, loyalty and independence. Likewise, Kanter (1996) also argued that the leadership characteristics include political awareness and sensitivity, the ability to develop synergies and strategic alliances, and the awareness of the need to bargain and negotiate with subordinates rather than command them.

2.3.2.1 Personality

Many research studies (e.g. Zaccaro, 2004; Bono & Judge, 2004; Judge et al., 2002) have shown that personality traits have a significant role in leadership. Greenberg
and Baron (2003) identified 171 personality traits. However, only five distinctive dimensions of personality (referred to as the Big Five dimensions of Personality) with more or less the same names and definitions have emerged in most of the personality studies, though such studies were conducted independently using different methods by many researchers (e.g. Costa & McCrae, 1992; Goldberg, 1992; John, Donahue, & Kentle, 1991; Cattell & Schuerger, 2003).

The two well-known Five-Factor Models are empirically related but conceptually distinct. Many researchers transpose these two models. Firstly, Costa and McCrae's (1992) five-factor personality model is based on factor analyses of questionnaires which is hierarchical, and five factors are derived from factor analyses of lower-order facets; secondly, Goldberg's (1992) “Big-Five” personality dimensions, though based on factor analyses of adjectives, are not hierarchical but circular in nature. The Goldberg's (1992) Big Five elements of personality are Surgency, Agreeableness, Conscientiousness Emotional stability, and Intellect, whereas Costa and McCrae's (1992) five-factor model consists of personality dimensions, viz. Openness to Experience, Conscientiousness, Extroversion, Agreeableness, and Neuroticism. These five factors are usually abbreviated as OCEAN or CANOE. Additionally, in order to create a shorter inventory which could allow efficient and flexible assessment of the same five dimensions of personality, John, Donahue, and Kentle (1991) developed the 44-item BFI. The 44-item BFI represented the prototype definitions developed through expert ratings and verified through factor analysis.

Continuing the discussion further, it is noteworthy to mention that the research studies in recent years have shown that leaders possess few common traits. For example the importance of characteristics such as morality and fairness, role clarification, power
sharing, despotism are reflected in new approaches to leadership traits such as ethical leadership (Brown & Trevino, 2002; Aronson, 2001); characteristics representing a servant leader, viz. listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment, and building community, in servant leadership (Spears, 2004); altruistic love in spiritual leadership (Fry, 2003; Dent, Higgins, & Wharff, 2005); and felt meaning in aesthetic leadership (Hansen, Ropo, & Sauer, 2007).

McKenna and Yost (2004) identified characteristics such as demonstrating relationship, taking the perspective of others, empathy, demonstrating self-understanding, self-awareness, self-regulation and recognizing contribution, and introduced the differentiate leader concept. Furthermore, Avolio and Gardner (2005), and Luthans and Avolio (2003) identified self-awareness, self regulation, and positive modelling as specific qualities of authentic leaders. Additionally, Kernis (2003) identified four core elements of authenticity, viz. self-awareness, unbiased processing, relational authenticity, and authentic behaviour/action. Similarly, self-knowledge, self-concept clarity, and person-role, merger he/she experiences were identified by Shamir and Eilam (2005).

So far, the present discussion has been devoted to trait theories with a major emphasis on personality. However, leadership style has been identified as one of the constructs of the present research apart from personality and personal values. Therefore, the leadership behavioural theories demand attention in this regard.

2.3.2.2 Leadership Styles

Although many types of leadership styles have been identified by various researchers, the dichotomous characterization of leadership styles (i.e. people-oriented and task-oriented styles) is clearly evident throughout the leadership behaviour literature. The
only difference that could be observed is in the use of different titles, models and research concepts which, when distilled, reduce to two classic styles, i.e. people-oriented and task-oriented. For example McGregor’s (1960) Theory X entails forcing employees who are unwilling to perform tasks, whereas Theory Y involves providing encouragement which is people-oriented behaviour.

One of the most widely researched models in leadership literature is that of Fiedler’s (1967) Least Preferred Co-worker Model, which again when analysed results in categorising leaders into task- and people-oriented styles of leadership. Zaleznik (1977) distinguished between the leaders’ focus on what things mean to people and how things get done. Yet again, Hersey and Blanchard’s (1977) Situational Leadership Theory suggests leaders’ behaviour as comprising of two dimensions, concern for the task or concern for the people.

Bennis and Nanus (1985) identified leaders’ behaviour as either focus on people or systems and structures. Similarly, Bass’s (1985) leadership model explains the leaders’ behaviour on two dimensions, i.e. transformational and transactional. Transformational leadership behaviour motivates followers through transforming personal values to support the common goals of their organisations, whereas transactional leadership behaviour entails getting commitment for achieving the organisation’s goals by assuring rewards or initiating corrective actions for non-satisfactory performance. Therefore, transformational leadership behaviour could be considered as people-oriented and transactional as task-oriented.

Taking the discussion further, it needs to be observed that several researchers (e.g. Eagly & Johnson, 1990; Eagly et al., 2000; Eagly & Johannesen-Schmidt, 2001) argued
that women leaders have a more interactive style of leadership and behave in a more people-oriented, knowledge-sharing, and participative manner than men in similar positions. The leaders’ traits that have been associated with feminine leaders are consensus building, sharing power, and promotion of diversity (Bratton et al., 2005). Further, findings from the research studies of Alimo-Metcalfe (1995) showed that women’s descriptors related directly to notions of transformational leadership and men’s to that of transactional leadership.

Leadership research literature has often referred to the people-oriented approach as consideration and the task-oriented approach as initiating structure. Consideration is the degree to which a leader shows concern and respect for followers, looks out for their welfare, and expresses appreciation and support (Bass, 1990). Initiating structure is the degree to which a leader defines and organises his role and the roles of followers, is oriented toward goal attainment, and establishes well-defined patterns and channels of communication (Fleishman, 1991). The above argument enunciates the dichotomous characterization of leadership styles (i.e. people-oriented and task-oriented styles) present in the literature.

So far, the present discussion has been devoted to trait theories with a major emphasis on personality and leadership styles. However, “personal values” has been identified as one of the constructs of the present research apart from personality and leadership styles. Therefore, the personal value theories demand attention in this regard.

2.3.2.3 Personal Values

While exploring the effects of values and emotions on leader authenticity, Michie and Gooty (2005) asserted that self-transcendent values and positive other-directed
emotions play a fundamental role in the emergence and development of authentic leadership. Thus, latest research studies have focused on personal values as important leadership traits.

One of the most prominent theories on personal values is Schwartz’s value theory (Schwartz, 1992 & 1994) which requires due attention in the present research context. Schwartz’s value theory (1992, 1994) is based on the following concept of values. First and foremost, values are beliefs; secondly, values refer to desirable goals that motivate action. Thirdly, values transcend specific actions and situations; fourthly, values serve as standards or criteria; fifthly, values are ordered by importance relative to one another; lastly, the actions are guided by the relative importance of multiple values. Schwartz (1992, 1994) developed his ten personal values-type model consisting of 57 personal value items based on analyses of more than 200 samples from more than 60 nations.

Schwartz (1992, 1994) devised a coherent circular structure model consisting of ten value types, viz. power (attainment of social status and prestige, and control or dominance over people or resources), achievement (personal success through the demonstration of competence according to social standards), hedonism (pleasure and sensuous gratification for oneself), stimulation (excitement, novelty, and challenge in life), self-direction (independent thought and action), universalism (understanding, appreciating, tolerance, and protection of the welfare of all people and of nature), benevolence (concern for the welfare of others in everyday interaction), tradition (respect, commitment and acceptance of the customs and ideas that one’s culture or religion impose on the individual), conformity (restraint of actions, inclination, and impulses likely to upset or harm others
and violate social expectations or norms), and security (safety, harmony, and stability of society, of relationships, and of the self).

Further, Schwartz (1992, 1994) found that actions in pursuit of particular values (e.g. achievement) have consequences that conflict with other values (e.g. benevolence) but are congruent with several others (e.g. power). Thus, Schwartz (1992) summarized this circular structure of relations into two distinctive orthogonal dimensions, viz. self-enhancement (power and achievement) versus self-transcendence (universalism and benevolence), and openness to change (self-direction and stimulation) versus conservatism (security, conformity, and tradition). However, he noticed that hedonism values shared elements of both openness and self-enhancement.

Arguably, trait theories of leadership have identified a range of personality characteristics (e.g. openness to experience, conscientiousness, extrovertism, agreeableness, and neuroticism) and personal values (e.g. power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security), whereas leadership behavioural theories have identified task-oriented and relationship-oriented styles as two classic styles of leadership.

More recently, Zaccaro (2007) emphasised the importance of the integration of multiple leader characteristics rather than considering the leaders’ characteristics individually. Thus, leaders’ traits appear to have ‘re-emerged in the lexicon of scientific leadership research’ (Zaccaro, 2007, p. 1). In essence the literature on theoretical and empirical perspectives of leaders’ characteristics emphasises the complexity as well as the relevance of the topic within the context of research.
Different theoretical and empirical perspectives of leaders’ characteristics with a major emphasis on Big-five Personality Inventory (John, Donahue, & Kentle, 1991), Leader Behaviour Description (Stogdill, 1963), and Personal Value Theory (Schwartz, 1992 & 1994) formed the theoretical underpinning for the present study. Thus, using contingency perspectives, the present study was intended to fill the research gap existing in the downsizing literature by suggesting leaders’ characteristics as internal factors that could possibly explain the differences in downsizing approaches. The next section presents a review of the measurement of these leaders’ characteristics.

2.3.3 Measurement of Leaders’ characteristics

Measurement of leaders’ characteristics is as debatable as their definitions. It is difficult to find an objective measure for leaders’ characteristics and therefore, perceptual measures are normally used. Several questionnaires are self-evaluative and others are observer-evaluative which require colleagues or peers to assess. There are several others which are both self- and observer-evaluative. The following sections discuss the measurement of leaders’ characteristics with a main focus on personality, leadership styles and personal values.

2.3.3.1 Measurement of Personality

The literature on personality measurements shows the presence of a wide array of instruments that are used to measure depending on the researcher’s objectives. Around 300 scales constructed from International Personality Item Pool items are made available online by Goldberg et al. (1999) at www.ipip.org. However, Costa and McCrae’s (1992) 240-item measures of NEO PI-R (Neuroticism-Extroversion-Openness Revised Personality
Inventory) is one of the most widely used and commercially published personality inventories (Buchanan, 2001).

The original version of NEO PI-R, i.e. Neuroticism-Extroversion-Openness Inventory, NEO-I (Costa & McCrae, 1985) measured only three of the Big Five personality traits (viz. Neuroticism-Extroversion-Openness to experience) and therefore was revised by Costa and McCrae to include the other two traits (viz. Conscientiousness and Agreeableness). Each dimension of NEO PI-R contains six facets and the internal consistency is reported to be high, i.e. ranging from 0.86 to 0.92 for the five individual dimensions whereas the internal consistency of the facet scales range from 0.56 to 0.81.

The search for shorter versions of NEO PI-R prompted Costa and McCrae to develop a 60-item measure known as NEO FFI - Neuroticism-Extroversion-Openness Five Factor Inventory (McCrae & Costa, 2004). Each of the five dimensions of NEO FFI contains 12 items and the internal consistency is reported to be high, i.e. ranging from 0.75 to 0.83.

The demand for still shorter versions of Big Five Inventory prompted further research. For instance, the literature survey conducted for the present research suggests that Goldberg et al.’s (1999) 50-Item IPIP of Online Five Factor Inventory is one of the most widely used and extensively validated measures of the five factor model. The 50-Item IPIP uses the same domain constructs as that of NEO-PI-R (Costa & McCrae, 1992). It is freely available online for non-commercial purposes (research and teaching) and is shorter in length which enhances the participation of survey respondents who otherwise may get bored or irritated when expected to answer lengthy questionnaires of NEO-PI-R which contain 240 Items. Moreover, Online IPIP Five Factor Inventory exhibits acceptable
psychometric properties with a reasonable validity and internal consistency ranging from 0.74 to 0.88 (Buchanan & Goldberg, 1999).

However, researchers are usually faced with limited assessment time and there has been an accelerating trend towards shorter personality instruments (Rammstedt & John, 2007). For example John, Donahue, & Kentle (1991) constructed the Big Five Inventory which has 44 items, and developed it through expert ratings and subsequent factor analytic verification in observer personality ratings. Like other BFIs, it has demonstrated a reasonable validity and also the internal consistency and test-retest reliability ranges from .75 to .90 and .80 to .90, respectively.

The personality literature survey further reveals the presence of still shorter instruments. Gosling et al.’s (2003) TIPI (10-Item Personality Inventory), and Rammstedt and John’s (2007) BFI - 10 (10-item Personality Inventory) measure the same Big Five dimensions of personality (viz. Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) as that of personality inventories previously mentioned (i.e. Goldberg, 1992; Costa & McCrae, 1992; John, Donahue, & Kentle, 1991). The shortest among all personality inventories is that of Gosling et al.’s (2003) FIPI (5-Item Personality Inventory). However, the Gosling et al.’s (2003) TIPI and FIPI suffer from lower reliabilities.

In order to provide a measure of the Big Five for contexts in which participant time is severely limited, Rammstedt and John (2007) derived from the standard 44-item Big Five Inventory (John & Srivastava, 1999; John, Donahue, & Kentle, 1991) and abbreviated a 10-item version, known as BFI-10. To permit its use in cross-cultural research, the BFI-10 with just 2 items per scale was developed simultaneously in several samples in both
English and German. The personality characteristics seem to fit these elements of Big Five in the present research and it was considered valuable to explore the type of leaders’ personality in regard to downsizing strategies.

Rammstedt and John (2007) have argued that the expected Five-factor structure has not emerged in the results of factor analysis of Gosling et al.’s (2003) TIPI, whereas the BFI-10 has always showed a clear Five-factor structure. Also, the retest reliabilities averaged 0.75 for the BFI-10. Overall the research studies of Rammstedt and John (2007) have shown that BFI-10 possesses acceptable psychometric properties and is shorter in length compared to previous personality inventories. Therefore, BFI-10 was used in this research to measure personality of leaders on a five-point Likert scale ranging from 1 (disagree strongly) to 5 (agree strongly).

2.3.3.2 Measurement of Leadership Styles

Leslie and Fleenor (1998) have compiled a list of leadership instruments by stating the purposes and dimensions scored. Some of them are used for measuring leaders’ behaviour (e.g. The Visionary Leader Behaviour Questionnaire - Sashkin, 1984; Leadership Practices Inventory - Kouzes & Posner, 1988; Multifactor Leadership Questionnaire, Bass & Avolio, 1990; and Leader Behaviour Analysis II - Zigarmi et al., 1993), whereas others (e.g. Life Styles Inventory - Lafferty, 1981) measure self-concept. However, the leadership literature provides a wide array of measuring task-oriented and people-oriented styles of leadership. For example Eicher’s (1998) “Leader-Manager Feedback Form” measures the key competencies of leaders as people-oriented and task-oriented on the subscales of three items each for leadership and management respectively, but this scale has not been subjected to validity and reliability studies (Brown, 2003).
With regard to the Situational Leadership Questionnaire (SLQ) of Hersey and Blanchard (1969), the research findings of Johansen (2006) have shown that SLQ has failed to support the conceptual basis of the theory and the validity of the instruments. Further, the subscales and items of Fiedler’s (1967) Least Preferred Co-worker (LPC), and Blake and Mouton’s (1964) Managerial Grid, focus indistinctively on people-oriented and task-oriented styles, though both of these instruments represent the dichotomous styles of leadership.

The central focus of attention of the present research is on differences in leaders’ approaches to downsizing. Thus, it was expected to discover whether leaders focus their attention on concern for tasks or people (or relationships) while downsizing. Under such situations, leaders’ are expected to be either people-oriented or task-oriented, and Stogdill’s (1963) Leader Behaviour Description Questionnaire XII (LBDQ XII) would be the most appropriate instrument, though the literature reflects on many other instruments for measuring the leadership styles.

LBDQ has been widely used to measure leaders’ behaviour (Black and Porter, 1991). It is one of the oldest and widely acknowledged and also the most commonly used leadership instrument (e.g. Littrell, 2002; Schneider & Littrell, 2003; Littrell & Valentin, 2005; Littrell & Nkomo, 2005; Littrell, 2007). Similarly, Lok et al. (2005), Lok and Crawford (2004) have used LBDQ in the Australian context.

Although LBDQ was developed in the western context, its reliability is found to be consistently at acceptable to moderately high levels while being used in other countries, for example Hong Kong (Black & Porter, 1991), Germany and UK (Schneider & Littrell, 2003), and Romania (Littrell & Valentin, 2005). Stogdill (1963) has reported the reliability
coefficients for “consideration” (people-oriented) and “initiating structure” (task-oriented) as 0.82 and 0.78 respectively. Also, past research studies (e.g. Schriesheim & Kerr, 1974; Hamilton, 1990) have reported the reliability coefficients of 0.76 to 0.87 for “consideration” (people-oriented) and 0.70 to 0.80 for “initiating structure” (task-oriented). Further, the validity of LBDQ-XII is well documented through factor analysis. Due to its traditional acclamation in leadership research studies this research used only 20 items of LBDQ-XII to measure the dichotomous typology of leaders’ behaviour, i.e. task-oriented and people-oriented styles on a five-point Likert scale with 1 through 5, representing the response categories of never, seldom, occasionally, often, and always.

2.3.3.3 Measurement of Personal Values

Literature on value measurements reveals the presence of more than 40 instruments that are designed to measure different types of values, viz. personal values (e.g. Rokeach, 1973; Schwartz, 1992; England, 1967). Although an insightful description of leader’s values exists, there seems to be a dearth of quantitative research on the nature and strength of values held by leaders and particularly when there is a downsizing situation to deal with. Research studies concerning values are engulfed with hot debates over use of a “rating” against “rank ordering” procedures. Two seminal studies that find a place in value research studies are Rokeach Values Survey (Rokeach, 1973) and Schwartz Value Survey (Schwartz, 1994).

Rokeach and Ball-Rokeach (1989) have argued that the ranking procedure directly reflects the phenomenological reality of people engaging in value choice procedures, and this view has been supported by Krosnick and Alwin (1988). On the contrary, Maio et al. (1996) found that value ratings were more strongly related to target variables than were
value rankings. Also, Braithwaite and Law (1985) and Schwartz (1992, 1994) have maintained that a rating scale is more desirable as it allows participants to indicate that two values are equally important to them. Ng (1982) asserted that since a ranking procedure was often found to have violated the statistical assumption of independence, therefore a rating procedure should be preferred. Furthermore, it seems to be more time consuming and difficult in ranking values in the Rokeach Values Survey as compared to a rating procedure. Furthermore, Schwartz (1994) argued that ratings may be phenomenologically closer to the way in which people use values in their daily lives, as people are only loosely aware of their values.

Schwartz’s Value Survey (1994) is now widely acknowledged as the seminal instrument in the research field of values (Burroughs & Rindfleisch, 2002; Glazer, Daniel, & Short, 2004; Steenkamp, TerHofstede, & Wedel, 1999). Schwartz’s Value Survey (Schwartz, 1994) is based on Schwartz’s value theory. According to this theory, the 57 value items of the Schwartz’s Value Survey represent ten motivationally distinct values (viz., Power, Achievement, Hedonism, Stimulation, Self-Direction, Universalism, Benevolence, Tradition, Conformity, and Security). The reliability of Schwartz’s Value Survey ranges from 0.66 to 0.88 for value items. Also, it has been demonstrated to have relatively stable meanings in 65 countries (Schwartz, 1992 & 1994). However, in research studies, a scale with 57 items may be too time-consuming to fill in, and it may take up too much space in questionnaires. Empirical research could benefit greatly from the development of a more compact measure that does not have these shortcomings.

Lindeman and Verkasalo (2005) conducted a set of studies to develop a shorter version of the Schwartz’s Value Survey. These researchers analysed Schwartz’s (1994) ten
personal values in order to determine whether the shorter version could reliably and validly examine with only 10 items. The new scale of Lindeman and Verkasalo (2005) called Short Schwartz’s Value Survey (SSVS) is found to have good reliability and validity. The Short Schwartz’s Value Survey (SSVS) measures the 10 values with only one item each, whereas the original SVS measures the same 10 personal values with three to nine items each. Thus, Lindeman and Verkasalo (2005) demonstrated that the 10-item SSVS provides a practicable alternative to the original 57-item SVS as the shorter version questionnaire has good reliability and validity.

Single-item measures are usually discouraged in research studies because they are presumed to be unreliable and internal consistency coefficients cannot be calculated for them (Lindeman & Verkasalo, 2005). The Short Schwartz’s Value Survey used by Lindeman and Verkasalo (2005) consisted of 10 items, each of which indicated one original value and the related original value items as descriptors. Lindeman and Verkasalo (2005) conducted two studies while developing the SSVS. For Study 1 conducted, the 10 value items were rated on a 9-point scale ranging from 0 (opposed to my principles), to 8 (of supreme importance), and for the Study 2, the same 10 value items were rated on a 7-point scale ranging from -1 (opposed to my principles), to 5 (of supreme importance).

According to Betz (1996), a scale with five to seven response choices is optimal. Therefore, in contrast to the seven and nine point scales of SSVS (Lindeman & Verkasalo, 2005) a narrower scale range of only 5-points ranging from 1 (opposed to my principles), to 5 (supreme importance) has been used in the present research. 

This section reviewed the measurement of leaders’ characteristics (viz. personality, leadership styles, and personal values) and suggested the appropriate rationale of choosing
the instruments for the present research. The next section discusses the links between downsizing strategies and leaders’ characteristics.

2.3.4 Links between Downsizing Strategies and Leaders’ Characteristics

Although external factors, viz. economic, political, technology and legal (Ivancevich & Matteson, 2002), and competition (Sahdev, 2004) could have an impact on the way downsizing is realised in organisations, initiating and implementing downsizing strategies is foremost an intra-organisational matter (Dewettinck & Buyens, 2002). Leaders in organisations have hardly any control over such external factors. Organisational researchers have long advocated the importance of leadership and downsizing (e.g. Mishra & Mishra, 1994; Cascio & Wynn, 2004; Sahdev, 2004). Downsizing implications of leadership are then one of the most important criteria on which employees will evaluate the strategies used by their leaders for downsizing.

Many researchers in the past (e.g. Webber, 1987; Kirkpatrick & Locke, 1991; Ouchi, 1981; Kanter, 1988) have suggested that trust is a critical leadership characteristic for dealing effectively in a crisis during organisational change (e.g. downsizing). Mishra and Mishra (1994) investigated why only a few organisations typically use organisation redesign and systemic strategies for downsizing, though they are more likely to improve the organisational effectiveness, and investigated the role of trust in effective downsizing strategies. Interviews with 33 top managers of North American automotive companies were conducted to gather in-depth information about the factors that potentially affect their efforts in downsizing and found a strong consensus among executives about trust in leadership. The empirical findings established that the mutual trust within a top management team is positively associated with an organisation redesign strategy, whereas
mutual trust between members of an organisation and its key customers and suppliers is positively associated with a systemic change strategy. Finally these researchers concluded that mutual trust within a top management team and between top managers and employees is most important for organisational redesign strategy as well as systemic change strategy.

Similarly, the research findings of Gillespie et al. (2001) establish that trust in management has a significant impact on employees’ commitment and job satisfaction, under both high and low levels of imposed cost-cutting and downsizing. The staff has the expectation that their departmental head will protect their jobs, as heads of departments do exercise influence over who is targeted for downsizing.

Most of the organisations tend to use only staff reduction as their downsizing strategy (Mishra & Mishra, 1994), whereas others tend to use a set of combined strategies by exploring alternatives, and several others tend to take different perspectives of downsizing by avoiding staff reduction. However, organisational studies’ literature suggests that there has been little attempt to explain the heterogeneity in leadership decisions in regard to downsizing (Adner & Helfat, 2003).

Going back to age old research studies, March and Simon (1958, p.48) argued that each decision-maker brings his or her own set of “givens” to an administrative situation and these “givens” reflect the decision-makers’ cognitive base, their values, principles for ordering consequences or alternatives according to preference. A quarter century later, Hambrick and Mason (1984) synthesized the previously fragmented literature and concluded that organisational outcomes, strategic choices and performance levels are partially predicted by managerial background characteristics. More recently, Hambrick and Mason (2005) have highlighted the personality and tolerance to ambiguity as two
characteristics of leaders that could possibly influence the extent to which they perceive the challenges of their job demand, and downsizing is one of the leaders’ job demands. Thus, the main challenge for a leader during downsizing is to make a choice among the alternatives to workforce reduction. Few research studies have been conducted in this area and one of the most prominent theoretical studies is that of Greenhalgh, Lawrence, and Sutton (1988) who promoted the incremental approach of cutback alternatives and explained it by using their GLS (Greenhalgh, Lawrence, Sutton) Model of workforce reduction.

The GLS model of workforce reduction suggests that espoused employee-oriented values will lead to a preference for less severe workforce reduction strategies. For instance, there are few organisations which have no layoff policy (e.g. American based companies such as Jet Blue Airlines and Lincoln Electric). The GLS model was specifically aimed at determining the choice of workforce reduction strategies in the light of organisational decline. It has been tested and confirmed by Rosenblatt and Mannheim (1996). However, Barker and Mone (1993), and Ocasio (1995) have suggested that decline and periods of difficulties induce downsizing. Furthermore, the GLS model is restricted to only workforce reduction whereas downsizing comprises strategies other than workforce reduction (e.g. organisational redesign).

Dunphy and Stace (1993) conducted a study in thirteen organisations in the Australian service industry which had gone through large scale change. They found the systematic linkage between four leadership styles (viz. collaborative, consultative, directive, and coercive types) and four dimensions of organisational change (fine tuning, incremental adjustment, modular and corporate transformations). Although Dunphy and
Stace (1993) argued that any style of leadership can be used with any type of change, the directive or coercive leadership style is likely to be associated with the modular/corporate transformational change, whereas a consultative/collaborative leadership style is more appropriate for fine-tuning/incremental adjustment. However, James (2005) conducted research at Queensland Electricity Corporation and found that directive/consultative leadership style is more suited for a modular/corporate transformational change. Nonetheless, these studies have suggested the links between leadership styles and forms of organisational change which could include downsizing. However, it needs to be noted that these studies did not unequivocally insinuate downsizing as part of organisational change.

Mishra and Mishra (1994) investigated the association between mutual trust and downsizing strategies (viz. workforce reduction, organisational redesign, and systemic change) using a sample of 91 organisations in the automotive industry. Their findings suggested that mutual trust within a top management team is positively associated with the organization redesign and negatively associated with the workforce reduction. Interestingly, the findings also suggested that there exists no significant difference between mutual trust within a top management team and systemic change. It needs to be noted that the study of Mishra and Mishra (1994) focused solely on the top management team whereas the present study’s focus is on mid-level leaders.

Bradford’s (1997) two-year study in multinational companies which focused on leaders engaged in downsizing has revealed that they share four key characteristics, viz. attention through vision, meaning through communication, trust through positioning, and confidence through respect. While developing a conceptual framework of downsizing, Budros (1999) proposed that people-oriented leaders have a lower tendency to use
downsizing frequently. However, no empirical investigation could be located in the literature that could confirm this proposition. Additionally, Budros (1999) proposed that leaders with financial backgrounds will have a higher tendency to use downsizing frequently. Later on, this proposition was supported through an empirical study by Budros (2004). More specifically, Budros (2004) found that leaders with a financial background implemented layoffs (one among other downsizing actions) more frequently in the later stages of downsizing as compared to leaders with a non-financial background. Also, the findings of Budros (2004) suggested that older leaders avoided downsizing whereas long-tenured leaders with task knowledge tended to use downsizing.

The research findings of Rust et al. (2002) found that top managers’ desire to conform to managerial ideologies can explain the variance in downsizing over and above economic causes. Adner and Helfat (2003) found that the downsizing decisions clearly came from the top management team of the organization and despite facing similar conditions in the external environment, corporate managers in different companies made different decisions. However, the research findings of Adner and Helfat (2003) could not completely explain the reasons for the differences in such decisions through empirical research. Nevertheless, Adner and Helfat (2003) introduced the concept of dynamic capabilities by providing a conceptual framework.

Higgs and Rowland (2005) used qualitative as well as quantitative approaches and explored the association between three types of leadership behaviours (shaping, framing change, and creating capacity) and the change management. Their findings suggested that leaders’ shaping and creating capacity behaviours are more likely to be associated with internally-driven change, whereas framing change behaviour is associated with externally-
driven change. Chrusciel (2006) emphasised emotional intelligence during organisational change. Similarly, Elving (2005) offered a conceptual model while proposing that communication aspects such as information, feelings of a community within the organisation, and uncertainty have an influence on organisational change.

Hillel (2006) proposed a conceptual framework involving four leadership styles (viz. task oriented internally focused, task oriented externally focused, people oriented externally focused, and people oriented internally focused) and argued that congruence exists between a period of organisational change and the leadership style.

Gandolfi (2007) conducted a multiple-case study by interviewing the leaders of Australian and Swiss banks working at different hierarchical levels and found that leaders differed considerably while using different downsizing strategies. Gandolfi (2007) reflected on the national culture as a possible factor that could explain the reason for such differences. While analysing the influence of leadership styles on hospital restructuring, Cummings et al. (2005) found that resonant leadership style alleviated the influence of hospital restructuring on nurses, while dissonant leadership strengthened this influence.

While applying the contingency theory, DeRue et al. (2005) identified three structural approaches to downsizing in teams (viz. maintaining hierarchy, integrating hierarchy, and eliminating hierarchy) and found that a particular downsizing approach is influenced by the team members’ personality characteristics (viz. conscientiousness, emotional stability and extraversion). More specifically, DeRue et al.’s (2005) finding suggested that maintaining strategy is associated with conscientiousness and emotional stability, whereas an integrating approach is associated with the extraversion of team members; and an eliminating approach is associated with all the three types of personality
characteristics, viz. conscientiousness, emotionally stability and extrovertism. DeRue et al. (2005) conceptually identified three structural approaches to downsizing in teams and the used a longitudinal design while offering some interesting findings. However, it was conducted in a tightly controlled laboratory atmosphere with 71 five-person teams of 355 upper-level undergraduate students at a large American university. This raises a question of extending such a result to real life situations in business organisations.

Carmeli and Sheaffer (2009) empirically established the positive association between leaders’ personality characteristics (viz. self-centeredness and leader risk-aversion) and organisational decline, and subsequently the positive association between organisational decline and downsizing. Most recently, the research findings of Gilley, McMillan, and Gilley (2009) suggest that specific characteristics of leaders, viz. ability to motivate, communicate effectively, and build teams, are associated with the successful implementation of organizational change. Although downsizing is one of the few forms of organisational change (Hughes, 2007; Cameron, 2006; Worrall & Cooper, 2004; Cameron, 1994), it needs to be noted that McMillan & Gilley (2009) have not explicitly mentioned that the characteristics of leaders (viz. ability to motivate, communicate effectively, and build teams) are associated with the implementation of downsizing.

Obviously from the literature review, the link between downsizing strategies and the leaders’ characteristics is found to be unclear. Moreover, the past research studies are limited to only production based organisations, and it needs to be noted that characteristics of universities’ management functions are different from other industry sectors. Based on a review of the relevant literature, this research addressed the need to investigate three characteristics of leaders, viz. personality, leadership styles and personal values as factors
for explaining the differences in leaders’ approaches to downsizing. Thus the present research used multiple theoretical perspectives of leaders’ characteristics for studying downsizing.

Other than the prominent role of leaders’ characteristics in downsizing, the organisational culture was also identified as a construct that could possibly explain the differences in leaders’ approaches to downsizing. Thus, the next section briefly emphasises the significance of organisational culture in downsizing.

### 2.4 Organisational Culture

Organisational culture is a key element in the success or failure of any organization. A strong organisational culture shapes the organisation and the way organisational members do their work (Robbins, 1999). As a consequence, organisational culture differentiates one organisation from others and could possibly help to explain why different approaches are pursued while downsizing. Thus, organisational culture has become a central concept for researchers in the analysis of various organisational phenomena including downsizing. Even though organisational culture is often insinuated as a meaningful variable in downsizing approaches (e.g. Freeman & Cameron, 1993), there has been little empirical exploration in that direction. Given the importance of organisational culture in downsizing, it necessitates clarifying the definitions, reviewing theoretical and empirical perspectives, and the measurement of organisational culture. These are discussed in the following sections.

#### 2.4.1 Defining Organisational Culture

According to Howard (1998), management scholars fail to agree on a single definition of organisational culture. This is evident from the following Table 2.4 which...
presents some of the most common definitions of organisational culture found in the literature. Although Table 2.4 doesn’t provide a long list of organisational culture definitions, it definitely reveals many additions and deletions of various key terms as the definition for organisational culture was developed over a period of time.

Table 2.4
Definitions of Organisational Culture

<table>
<thead>
<tr>
<th>Researcher (s)</th>
<th>Definition of Organisational Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Louis (1980, p.143)</td>
<td>A set of understandings or meanings shared by a group of people that are largely tacit among members and are clearly relevant and distinctive to the particular group which are also passed on to new members.</td>
</tr>
<tr>
<td>Deal &amp; Kennedy (1982, p.4)</td>
<td>The way we do things around here.</td>
</tr>
<tr>
<td>Dill (1982, p. 307)</td>
<td>Is the shared beliefs, ideologies, or dogma of a group which impel individuals to action and give their actions meaning.</td>
</tr>
<tr>
<td>Wallach (1983, p.29)</td>
<td>Is the shared understanding of an organisation’s employees - how we do things around here.</td>
</tr>
<tr>
<td>Martin &amp; Siehl (1983, p.54)</td>
<td>The shared attitudes, values, beliefs and customs of members of an organisation.</td>
</tr>
<tr>
<td>Smircich (1983, p.344)</td>
<td>Shared meanings, patterns of beliefs, symbols, rituals and myths that evolve in time and that function as social glue.</td>
</tr>
<tr>
<td>VanMaanen &amp; Barley (1985, p.32)</td>
<td>A set of solutions devised by a group of people to meet specific problems posed by the situations they face in common.</td>
</tr>
<tr>
<td>Koberg &amp; Chusmir (1987, p.397)</td>
<td>A system of shared values and beliefs that produces norms of behaviour and establishes an organisational way of life.</td>
</tr>
</tbody>
</table>

Source: Based on the survey conducted for the present research
<table>
<thead>
<tr>
<th>Researcher(s)</th>
<th>Definition of Organisational Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deshpande &amp; Webster (1989, p.4)</td>
<td>The pattern of shared values and beliefs that help individuals understand organisational functioning and thus provide them with the norms for behaviour in the organisation.</td>
</tr>
<tr>
<td>Thomas, Chobra, &amp; Kumiega (1990, p. 18)</td>
<td>Ways of thinking, behaving and believing that members have in common.</td>
</tr>
<tr>
<td>O’Reilly, Chatman, &amp; Caldwell (1991, p.491)</td>
<td>A set of cognitions shared by members of a social unit.</td>
</tr>
<tr>
<td>Zammuto &amp; Krakower (1991, p.84)</td>
<td>Defined organisational culture as the patterns of values and ideas in an organization that shape human behaviour.</td>
</tr>
<tr>
<td>Schein (1992, p.111)</td>
<td>A pattern of basic assumptions that a group has invented, discovered or developed in learning to cope with its problems of external adaptation and internal integration, and that have worked well enough to be considered valid, and therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.</td>
</tr>
<tr>
<td>Grau &amp; Wellin (1992, p.43)</td>
<td>Fairly stable set of taken for granted assumptions, shared beliefs, meanings and values that form a type of backdrop for action in organisations.</td>
</tr>
<tr>
<td>Llopis-Taverner (1992, p.22)</td>
<td>A set of values, symbols and rituals shared by the members of a certain organisation, describing the way things are done within an organisation when solving internal managerial problems, together with those related to customers, suppliers and environment.</td>
</tr>
<tr>
<td>Kunda (1992, p.7)</td>
<td>A gloss for an extensive definition of membership in the corporate community that includes rules for behaviour, thought and feeling, all adding up to what appears to be a well-defined and widely shared member role.</td>
</tr>
<tr>
<td>Drennan (1992, p. 3)</td>
<td>The way things are done around here.</td>
</tr>
<tr>
<td>Gordon &amp; DiTomaso (1992)</td>
<td>The pattern of shared and stable beliefs and values that are developed within a company across time.</td>
</tr>
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</table>

Source: Based on the survey conducted for the present research
### Table 2.4 (Continued...)

**Definitions of Organisational Culture**

<table>
<thead>
<tr>
<th>Researcher(s)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Trice &amp; Beyer (1993, p. 2)</td>
<td>The observable norms and values that characterize an organization, influences which aspects of its operations and its members become salient and how its members perceive and interact with one another, approach decisions and solve problems.</td>
</tr>
<tr>
<td>Fleeger (1993, p.40)</td>
<td>An amalgam of symbols, language, assumptions and behaviours that overtly manifest themselves in a setting.</td>
</tr>
<tr>
<td>Bloor &amp; Dawson (1994, p.276)</td>
<td>A patterned system of perceptions, meanings, and beliefs about the organization which facilitates sense-making amongst a group of people sharing common experiences and guides individual behaviour at work.</td>
</tr>
<tr>
<td>McDaniel (1995, p.16)</td>
<td>Ways of thinking, behaving and believing that members have in common.</td>
</tr>
<tr>
<td>Denison (1996, p.624)</td>
<td>The deep structure of organisations, which is rooted in the values, beliefs and assumptions held by organisational members.</td>
</tr>
<tr>
<td>Seago (1996, p.42)</td>
<td>The shared philosophies, ideologies, values, assumptions, beliefs, expectations, attitudes, and norms that knit a community together.</td>
</tr>
<tr>
<td>Webb, Price, &amp; Coeling (1996, p.29)</td>
<td>Set of appropriate responses, devised by work group members to the situations they encounter as they work.</td>
</tr>
<tr>
<td>Grzyb-Wysocki &amp; Enriquez (1996, p.50)</td>
<td>The mix of values, beliefs, meanings, and expectations the members of a particular organization hold in common.</td>
</tr>
<tr>
<td>Goodridge &amp; Hack (1996, p.42)</td>
<td>A pattern of shared basic assumptions that the group learned.</td>
</tr>
<tr>
<td>Robbins (1996, p.687)</td>
<td>Social glue that helps hold the organisation together by providing appropriate standards for what employees should say and do.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Researcher(s)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Luk, Yau, Tsang, &amp; Laung (1998, p.14)</td>
<td>The ways of thinking, behaving, and believing shared by members of an organization.</td>
</tr>
<tr>
<td>Swe &amp; Kleiner (1998, p. 66)</td>
<td>A system of shared values and beliefs that interact with a company’s people, organisational structures, and control systems to produce behavioural norms.</td>
</tr>
<tr>
<td>Hawks (1999, p.68)</td>
<td>The assumptions, values, beliefs, expectations, principles, and behaviours shared by members of an organization.</td>
</tr>
<tr>
<td>Kostova (1999, p.309)</td>
<td>Particular ways of conducting organisational functions that have evolved over time.</td>
</tr>
<tr>
<td>Ingersoll, Kirsch, Merk, &amp; Lightfoot (2000, p.12)</td>
<td>Ways of thinking, behaviour and believing that members have in common.</td>
</tr>
<tr>
<td>Manley (2000, p.35)</td>
<td>A system of shared values and beliefs that interact with an organization's people, structure, and systems to produce behavioural norms.</td>
</tr>
<tr>
<td>Hofstede (2001, p.9)</td>
<td>The collective programming of the mind which distinguishes the members of one group or category of people from another.</td>
</tr>
<tr>
<td>Tzeng, Ketefian, &amp; Redman (2002, p.41)</td>
<td>A set of shared beliefs, values and norms about the ways things should be done in an organization.</td>
</tr>
<tr>
<td>Manojlovich &amp; Ketefian (2002, p. 16)</td>
<td>Underlying values and beliefs of an organization as perceived by its employees.</td>
</tr>
<tr>
<td>Van den Berg &amp; Wilderom (2004, p.570)</td>
<td>Shared perceptions of organisational work practices within organisational units that may differ from other organisational units.</td>
</tr>
<tr>
<td>Yamaguchi (2004, p.263)</td>
<td>Organizationally relevant norms, beliefs and values shared by most employees.</td>
</tr>
</tbody>
</table>

Source: Based on the survey conducted for the present research
Table 2.4 (Continued...)
Definitions of Organisational Culture

<table>
<thead>
<tr>
<th>Researcher(s)</th>
<th>Definition of Organisational Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilson, McCormack, &amp; Ives (2005, p. 28)</td>
<td>The way things are done around here, and encompass a shared understanding of beliefs and actions that are obtained through group socialization and learning.</td>
</tr>
<tr>
<td>Casida (2008, p.106)</td>
<td>Deep underlying assumptions and beliefs that are shared by members of an organization and that operate unconsciously.</td>
</tr>
<tr>
<td>Kriemadis, Koniordos, Leivadi, Mavromatis, Kartakoullis, Karlis, &amp; Oncescu (2008, p.35)</td>
<td>Beliefs, attitudes, experiences and values of an organization, which need to be embraced by the organisational members, in order to share a common goal, develop and be competent.</td>
</tr>
</tbody>
</table>

Source: Based on the survey conducted for the present research

According to Senior (1997), all definitions of organisational culture illustrate a degree of overlap. However, a review of the definitions of organisational culture conducted for the present study does not support this view. Furthermore, many researchers (e.g. Scott, Mannion, Davies, and Marshall, 2003; Lamond, 2003; Ashkanasy, Wilderom & Peterson, 2000; Locatelli & West, 1996; Denison & Spreitzer, 1991) agree that there is little consensus over definitions of organisational culture.

The organisational culture definitions could be divided into three major schools of thought. One school (e.g. Gordon & DiTomaso, 1992; O’Reilly et al., 1991; Deshpande & Webster, 1989; Smircich, 1983; Martin & Siehl, 1983) perceives culture as organisational members’ shared understanding of what their organisations are (e.g. employees’ shared values, beliefs and norms), whereas the second school (e.g. Webb et al., 1996; Drennan, 1992; Van Maanen & Barley, 1985, Deal & Kennedy, 1982) considers culture as what their organisations do or practise (e.g. a set of solutions devised for specific problems,
particular ways of conducting organisational functions). These two schools of thought have been referred to as ideationists and adaptationists, respectively by Sathe (1985). In contrast to these two schools of thought, the third school (e.g. Manley, 2000; Grau & Wellin, 1992; Zammuto & Krakower, 1991; Dill, 1982) regards organisational culture as both organisational members’ shared understanding of what their organisations are as well as what their organisations practise. Interestingly, Tzeng et al. (2002) view culture as the ways in which things should be done in an organization, thus being contrary to above three schools of thought.

Deal and Kennedy (1982) and Drennan (1992) considered organisational culture in simple terms as how things are conducted in a particular organisation. Likewise, Rizzo et al. (1994) simply regarded the culture as the patterns of behaviour. Contrarily, the most influential researcher, Schein (1992) offered a comprehensive but precise definition for organisational culture while focusing on its two important elements. First, the organisational members’ basic understanding of learned responses while dealing with problems associated with external adaptation and internal integration; second, promulgating such learned responses to newcomers as correct perceptions. These two elements suggest that organisational culture derives its meaning through a set of shared dispositions of organisational members in responses to external and internal forces of change. However, Cartwright, Andrews, and Webley (1999) contended that the organisation founder’s beliefs, national culture and industry pressures are the likely origins of prevalent and consistent organisational practices. Willcoxson and Millett (2000), and Van den Berg and Wilderom (2004) have also asserted that the founder’s values, beliefs and behaviours are decipherable into assumptions that characterize and lead the
organisation. For example Bill Gates of Microsoft has been credited for having introduced an aggressive culture and Walt Disney a strong culture.

Researchers such as Yamaguchi (2004), Tzeng et al. (2002), Seago (1996), Gordon and DiTomaso (1992), Deshpande and Webster (1989), Peters and Waterman (1982) have accentuated employees’ shared values, beliefs and norms that characterize their organisations, whereas others (e.g. Wilson et al. 2005; Van den Berg & Wilderom, 2004; Webb et al. 1996; Hofstede, Neuijen, Ohayv, & Sanders, 1990) have considered the organisational members’ shared perception of actions or work practices as organisational culture.

Coeling and Simms (1993) have drawn attention to four types of characteristic forces of organisational culture, viz. broadness (e.g. reflected in majority of organisational activities), subtlety (e.g. hidden from consciousness), powerful (e.g. organisational members determine the best method in order to survive) and pattern of behaviours (e.g. key behaviours that are unique to organisational members). Langan-Fox and Tan (1997) reviewed many definitions and identified the four elements of organisational culture: viz. it is stable and resistant to change; taken for granted and less consciously held; derives its meaning from the organization's members; and incorporates sets of shared understandings. Although, the four characteristics of organisational culture identified by Coeling and Simms (1993) are not the same as that of Langan-Fox and Tan (1997), both scholarly teams agree that organisational culture is subtle, i.e. hidden from consciousness. Likewise, Grau, and Wellin (1992) agree with Coeling and Simms (1993) that organisational culture is fairly stable. Furthermore, Van Maanen and Barley (1985) also investigated the concept of organisational culture and perceived it as a product of four attributes, viz. ecological
context, reproductive and adaptive capacity, differential interactions, and collective understanding. Thus, the organisational culture has been conceptualized using a multitude of definitions by culture researchers.

Organisational culture is articulated through organisational members’ values, beliefs, norms, symbols, rituals, ways of thinking, understandings or meanings (Deal & Kennedy, 1982; Schein, 1992) as well as the ways through which things are done within an organization when solving internal and external managerial problems (Wilson et al., 2005; Llopis-Taverner, 1992; Van den Berg & Wilderom, 2004; Ingersoll et al. 2000; Kostova, 1999; Wallach, 1983). Also, organisational culture is expressed through appropriate standards for what employees should say and do (Robbins, 1996).

Although there is no consensus among researchers over some elements of organisational culture definition, notably many have emphasised employees’ organizationally relevant shared common dispositions (e.g. Casida, 2008; Yamaguchi, 2004; Manojlovich & Ketefian, 2002; Manley, 2000; Hawks, 1999; Grzyb-Wysocki & Enriquez, 1996; Seago, 1996; Denison, 1996; Llopis-Taverner, 1992; Grau & Wellin, 1992; O’Reilly et al., 1991; Deshpande & Webster, 1989; Smircich, 1983; Martin & Siehl, 1983). Such common dispositions have been represented by various psychographic terms such as values, beliefs, norms, expectations, perceptions, attitudes, meanings, patterns of assumptions, symbols, rituals and myths, attitudes, cognitions, philosophies, and ideologies. These dispositions cannot be visualized but employees’ work practices appear through their behaviours in the organisation. For example Hofstede (1980) identified four types of cultural behaviours: viz. firstly, it includes priorities of a work group; secondly, it deals with power issues; thirdly, it involves peer relationships and specifies the extent to
which group members work collectively or alone; and lastly it includes group preferences for stability or change.

As employees are driven by their values and beliefs, likewise organisations function in accordance with their work practices. Contrarily, Posner, Kouzes, and Schmidt (1985) argued that organisational culture acts as a driving force in the organization which drives employees’ individual dispositions. Likewise, Deshpande and Webster (1989) also emphasised that behavioural norms are driven by organisational members’ shared values and beliefs. For example organisations with a strong innovative culture might recognize that reduction in staff numbers using forced layoffs need not be a necessary option, but instead downsizing through other actions that are humane (e.g. voluntary early retirement) or even other alternatives to downsizing (e.g. hiring freeze) could be used as unique ways of downsizing. Furthermore, this view is asserted by many other researchers (e.g. Rosen, 1995; Willmott, 1993; Zammuto & Krakower, 1991; Van Maanen & Kunda, 1989).

Although employees’ shared values, beliefs, philosophies and ideologies would shape the culture of their organisations, many studies conducted in the last decade (e.g. Van den Berg & Wilderom, 2004; Hofstede, 2001) have demonstrated that organisational culture could be better defined by organisational work practices as organisations differ more strongly on practices than dispositions (mainly values). Equally important is to acknowledge the fact that employees’ shared dispositions ‘form a type of backdrop for such work practices in organisations’ (Grau & Wellin, 1992, p.43). This view is also asserted by Trice and Beyer (1993) who perceived organisational culture as a collective characterization of two components, viz. organisational ideologies (norms and values) and organisational members’ behavioural practices.
Organisational culture may not be innate like employees’ individual dispositions (or characteristics) but it is learned and developed by the employees over a period of time. Individual dispositions and practices are not mutually exclusive and therefore, it is argued here that organisational culture needs to be defined not only by the organizationally relevant employees’ shared dispositions but also by the organisational work practices. For example organisations do not decide themselves to become either innovative or bureaucratic in culture. Innovation or bureaucracy is a result of actions of leaders and employees in response to external and internal problems faced by their organisations. This view of organisational culture is most relevant to the analysis of leaders’ approaches to downsizing. Moreover, organisational culture is characterized as a ‘broad and subtle, yet powerful, pattern of behaviours that can either facilitate or obstruct change’ (Coeling & Simms, 1993, p. 52).

Every organisation has its own way of solving internal and external problems and is guided by the dispositions (mainly, beliefs, values, norms and philosophies) shared by its members. This has been clearly emphasised by Wallach (1983) and also many other researchers (e.g. Dill, 1982; Van Maanen & Barley, 1985; Koberg & Chusmir, 1987; Schein, 1992; Llopis-Taverner, 1992). Thus, following Wallach’s (1983, p.29) definition the present investigation defined organisational culture as ‘the shared understanding of an organisation’s employees - how we do things around here.’ Wallach’s definition of organisational culture is simple but precise and also encapsulates the broader understanding of organisational culture.

The above review of various definitions of organisational culture suggests that there exists a lack of consensus between conceptual and operational definitions of
organisational culture. Furthermore, it reveals that the central issue is whether culture is shared “organisational members’ dispositions” or “organisational work practices” or both.

The next section reviews the theoretical and empirical perspectives of organisational culture that subsequently focus on the theory that underpins the present research.

2.4.2 Theoretical and Empirical Perspectives of Organisational Culture

Delobbe et al. (2002) argued that one of the greatest theoretical levers required for understanding organisations is organisational culture. To date there is no consensus on a defined set of culture dimensions that could describe and compare organisational culture. The following Table 2.5 presents some of the most commonly cited dimensions of organisational culture.

Table 2.5
Dimensions of Organisational Culture

<table>
<thead>
<tr>
<th>Researcher (s)</th>
<th>Dimensions of Organisational Culture</th>
</tr>
</thead>
</table>

Source: Based on the survey conducted for the present research
### Table 2.5 (Continued...)

<table>
<thead>
<tr>
<th>Researcher(s)</th>
<th>Dimensions of Organisational Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sashkin (1984)</td>
<td>Work should be fun, Being the best, Innovation, Attention to detail, Worth and value of people, Quality, Communicating to get the job done, Growth/Profit/other indicators of success, Hands-on management, and Importance of a shared philosophy.</td>
</tr>
</tbody>
</table>

Source: Based on the survey conducted for the present research
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<thead>
<tr>
<th>Researcher(s)</th>
<th>Dimensions of Organisational Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tucker, McCoy, &amp; Evans (1990)</td>
<td>Orientation to Customers, Orientation to Employees, Congruence amongst Stakeholders, Impact of Mission, Managerial Depth/Maturity, Decision-making/Autonomy, Communication/Openness, Human Scale, Incentive/ Motivation, Cooperation vs. Competition, Organisational Congruence, Performance under Pressure, Theory S / Theory T.</td>
</tr>
<tr>
<td>O’Reilly, Chatman, &amp; Caldwell (1991)</td>
<td>Innovation and Risk-Taking, Attention to detail, Orientation towards outcomes or results, Aggressiveness and Competitiveness, Supportiveness, Emphasis on Growth and Rewards, Collaborative and Team orientation, and Decisiveness.</td>
</tr>
<tr>
<td>Calori &amp; Sarnin (1991)</td>
<td>Openness to the environment, Participation in local activities, Societal contribution, Solidarity, and Flexibility.</td>
</tr>
</tbody>
</table>

Source: Based on the survey conducted for the present research
### Table 2.5 (Continued...)

**Dimensions of Organisational Culture**

<table>
<thead>
<tr>
<th>Researcher (s)</th>
<th>Dimensions of Organisational Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trompenaars &amp; Hampton-Turner (1998)</td>
<td>Universalism vs. Particularism, Collectivism vs. individualism, Neutral relationships vs. Affective relationships, Diffuse relationships vs. Specific relationships, and Achievement vs. Ascription.</td>
</tr>
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</table>

*Source: Based on the survey conducted for the present research*
Table 2.5 illustrates that the number and terms representing each of the dimensions of organisational culture differ greatly from one researcher (or research team) to another. This multiplicity brings about following observations. Although each researcher (or research team) has identified a mutually exclusive set of cultural dimensions, some replications of such dimensions could be found among many different studies. For example, outcome-orientation has been repeatedly reflected in studies such as Tsui et al. (2006), Delobbe et al. (2002), and O’Reilly et al. (1991). Likewise, innovativeness dimension has been identified by studies such as Tsui et al. (2006), Delobbe et al. (2002), Van Muijen et al. (1999), Gordon and DiTomaso (1992), and Wallach (1983). However, no cultural study has produced the complete set of dimensions that could be generalised, which obviously calls for a thorough empirical validation (specifically, Discriminance and convergence).

Till the mid-1980s, much research on organisational culture was at the theoretical level (e.g. Martin & Siehl, 1983; Smircich, 1983), though there was a strong emphasis on need for empirical investigations (e.g. Louis, 1980; Geertz, 1973). Later, different dimensions of organisational culture were unravelled using empirical investigations through the use of qualitative research (e.g. Schein, 1999; Prifling, 2010), ethnographic observations and interviews (e.g. McNay, 1995), quantitative approach (O’Reilly et al., 1991), and triangulation method (Hofstede et al., 1990; Denison & Mishra, 1995; Glaser, 1987; Hofstede et al., 1990).

The initial studies on organisational culture started with a unitarist view, suggesting that organisations have a unitary culture from top to lower management levels. Further research (e.g. Trice & Beyer, 1993; Bullis, 1990; Ogbonna & Wilkinson, 1990; Hofstede et al., 1990; Martin, 1992) suggested that large organisations do not have such a unitary
culture; instead sub-cultures exist at different management levels and organisational units in such large organisations thus introducing the pluralists’ perspective of organisational culture. For instance, Van Bentum and Stone (2005) suggested that older organisations may demonstrate multiple cultures. Interestingly, few studies (e.g. Koberg & Hood, 1991) have shown that there are no significant cultural differences among different organisational units of a large organisation, though culture was found to be different (bureaucratic, innovative, and supportive culture) across different management levels. However, the most recent study by Kriemadis, Koniordos, Leivadi et al. (2008) has suggested that there is no significant difference among managers of middle and upper levels.

The literature on organisational culture offers numerous perspectives on studying culture. For example Smircich (1983) points out that organisational culture has been viewed from a cognitive perspective (e.g. O’Reilly, Chatman & Caldwell, 1991; Rossi & O’Higgins, 1980), a symbolic perspective (e.g. Geertz, 1973; Smircich, 1983), and a structural and psychodynamic perspective (e.g. Gemmill, 1982; Walter, 1982). Likewise, Martin (1992) emphasised three perspectives, viz. fragmentation, differentiation, and integration. According to Martin (1992), the ambiguities within subcultures and across entire organisations dominate in fragmentation, whereas they remain controlled in differentiation and are completely eliminated in the integration perspective. Yet another tripartite perspective of organisational culture introduced by Schultz (1994) reveals the viewing culture as rationalism, functionalism, and symbolism. Schultz (1994, p.14) argued that a rationalism view of culture presents a means to achieve organisational goals (e.g. efficiency), whereas a functionalism view considers culture as “a pattern of shared values and basic assumptions” intending to perform “external adaptation and internal integration”.

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Thus, a functionalism view asserts the Schein’s (1990) conceptualization of culture. In relation to these two views, the symbolism is ‘a pattern of socially constructed symbols and meanings’ which expresses ‘complex patterns of symbolic actions’ (Schultz, 1994, p.14).

Interestingly, the Schultz’s (1994) tripartite perspective of culture mirrors the Hatch’s (1997) perspectives, viz. modern, symbolic-interpretive, and postmodern. According to Hatch (1997), the modern perspective is premised on culture as an organisational attribute, whereas the symbolic-interpretive perspective considers culture as contextual. In contrast to these two, the postmodern perspective is similar to Martin’s (1992) fragmentation which regards culture as dynamic, and ambiguous, i.e. agreements, disagreements and confusion exist together. Willcoxson and Millett (2000) also have drawn attention to three different perspectives of organisational culture, viz. anarchist, pluralist, and unitarist which in essence are the same perspectives as emphasised by Martin (1992).

Organisational culture as conceptualized by Smircich (1983), Martin (1992), Schultz (1994), Hatch (1997), and Willcoxson and Millett (2000) appears to offer different insights, but in essence these present more or less mirrored views of the same phenomenon.

The concept of organisational culture based on systems theory framework (e.g. Smircich, 1983; Deal & Kennedy, 1982; Louis, 1980) suggests that organisations themselves produce distinctive cultural artifacts (e.g. legends, ceremonies, and rituals). In other words, the proponents of the systems theory framework take an anthropological stance and argue that culture cannot be easily changed. Contrarily, the concept of scientific
rationalism takes a different view by suggesting that culture is susceptible for a transformation and change. Bate (1994) considers that the anthropological view of culture argues about conforming, whereas the scientific rationalism view of organisational culture is about reforming.

While using the competing values framework, Quinn and Rorbaugh (1983) suggested that organisations demonstrate different subcultures in which each exhibit four culture types, viz. rational (or market- or goal-oriented), hierarchical (rules-oriented), group (or clan- or support-oriented), and developmental (or adhocracy- or innovation-oriented) cultures with the first two types emphasising the focus on the external environment and other two types accentuating the focus on the internal organisation. In other words, hierarchical culture is opposed to developmental culture and group culture contrasts with rational culture. The four types of culture as theorised by the competing values framework have been empirically validated by many research studies (e.g. Lamond, 2003; Van Muijen, Koopman, De Witte et al., 1999; Miller, 1994).

Organisational culture’s most influential researcher Schein (1985) conceptualized the culture as consisting of three levels (viz. basic assumptions, beliefs and values, artifacts and behaviour) and argued that unlike values, beliefs, assumptions, the behaviour and artifacts (e.g. dress code) could be observed and therefore surfaces as the most visible level of culture. Although behaviour and artifacts could be observed easily, they don’t provide a better understanding of culture in organisations. It is actually suggested that one should understand the culture of an organisation through its employees’ shared assumptions and beliefs which lie at the deepest level. While looking from a broader perspective, Ott (1989) suggested that Schein’s (1985) first level (underlying assumptions - which cannot be
observed physically) and third level (i.e. artifacts - which are visible) represent ideationalist and adaptionist views, respectively. In contrast to these two levels, Ott (1989) regarded Schein’s (1985) second level (i.e. values and beliefs) as fitting into both adaptionist and ideationalist views.

As organisations develop over a period of time, so does culture. Therefore, some researchers (e.g. DiMaggio, 1997; Van den Berg & Wilderom, 2004) have called for a dynamic theoretical approach to studying culture instead of the prevalent static approach of comparing different cultural dimensions. For instance, Hatch (1993) while furthering the Schein’s Model of Organisational Culture, introduced the cultural dynamics theory and considered organisational culture as a process (manifestation, realization, symbolization, interpretation) instead of a set of cultural elements (e.g. assumptions, values, artifacts, symbols).

While acknowledging the methodological challenges involved in assessing and describing the organisational culture, Glaser et al. (1987) used the triangulation approach to analyse organisational culture and based on the perceptions of organisational members at different management levels (top management to lowest management level), these researchers described culture as consisting of six important components, viz. involvement, teamwork and conflict, information flow, climate and morale, supervision, and meetings. Glaser et al. (1987, p. 174) contended that these six components are central to organisational culture ‘around which rituals develop and stories evolve.’ However, Glaser et al. (1987) conceded that those six dimensions of organisational culture should not be considered as exclusive because additional dimensions would emerge in the subsequent research studies. Similarly, Hofstede et al. (1990), used qualitative and quantitative
approaches in twenty units from ten different organisations (in Denmark and the Netherlands), and identified six independent dimensions, viz. process-oriented vs. results-oriented, employee-oriented vs. job-oriented, parochial vs. professional, open system vs. closed system, loose vs. tight control, and normative vs. pragmatic.

The literature shows that the triangulation approach for researching organisational culture was continued further. For example Denison and Mishra (1995) conducted qualitative case studies in five large American companies (viz. Medtronic, People Express Airlines, Detroit Edison, Procter and Gamble, and Texas Commerce Bancshares) and developed a culture model consisting of four cultural traits (or dimensions), viz. involvement, adaptability, consistency and mission, thus emphasising external orientation vs. internal integration, change and flexibility vs. stability direction involvement in organisations. The exploratory test of the culture model was conducted using a quantitative technique with a sample of top executives including Chief Operating Officers and Chief Finance Officers of 764 organisations from five major industries, viz. manufacturing, business services, finance, insurance, and real estate, retail, and wholesale.

In contrast to the above studies which used the triangulation research method, O’Reilly et al. (1991) developed the Organisational Culture Profile using a quantitative technique. It was based on longitudinal as well as cross-sectional data, showing that organisational culture is characterized by eight commonly defined dimensions, viz. innovation and risk-taking, attention to detail, orientation towards outcomes or results, aggressiveness and competitiveness, supportiveness, emphasis on growth and rewards, a collaborative and team orientation, and decisiveness. Furthermore, Tsui et al. (2006) used an inductive and contextualized approach while identifying five dimensions of
organisational culture, viz. harmony and employee orientation, customer orientation, systematic management control, innovativeness, and outcome orientation.

Delobbe et al.’s (2002) review of twenty questionnaires in the organisational culture literature identifies the four most common cultural dimensions as people-orientation, innovation, outcome-orientation, and bureaucratic-orientation. Delobbe et al.’s (2002) own cultural instrument called ECO (French acronym of Echelles de Culture Organisationnelle) identifies five core dimensions (viz. recognition-support, commitment-solidarity, continuous learning, control, and innovation-productivity). Although, ECO is much smaller in its number of dimensions in comparison to all other instruments, and claimed to be representative of broader concepts, the first three dimensions represent people-orientation, i.e. supportive culture; second, the control dimension corresponds to control behaviour i.e. through a set of rules which indicates bureaucratic culture; and lastly, the innovation-productivity dimension represents innovation as well as outcome-orientation culture.

Organisational culture literature reveals many investigations which have resulted in a smaller number of dimensions of culture (e.g. Delobbe, Haccoun, & Vandenberghe, 2002; McNay, 1999; Van Muijen, Koopman, De Witte et al., 1999; Denison and Mishra, 1995; Walker, Symon, & Davies, 1996; Bergquist, 1992; Kilman & Saxton, 1983). Most recently, using twenty-six semi-structured expert interviews in Germany’s cooperative banking sector, Prifling (2010) identified only three core dimensions of organisational culture, viz. safeguarding culture, consensus orientation, and sustainability orientation.

In contrast to studies mentioned above, Wallach (1983) took a different approach to describe the culture by identifying three types of organisational cultures, viz. bureaucratic,
innovative, and supportive cultures. She suggested that every organisation has a combination of these three cultures to varying strengths and as such, cultures cannot be compartmentalized precisely into three divisions. Wallach (1983) argued that unlike bureaucratic culture, the innovative culture is likely to be conducive for creative and ambitious people, and the supportive culture is best suited for people who are friendly, fair and helpful to each other.

The present review of theoretical and empirical research of organisational culture suggests that the dimensions of organisational culture that have been identified by researchers over the years range from three (e.g. Wallach, 1983) to twelve (e.g. Cooke & Lafferty, 1989) and to even thirteen (Tucker, McCoy, & Evans, 1990). There are replications as well as distinctiveness among various dimensions of culture identified by different researchers (or research teams).

While asserting Martin’s (1992) view, the present review evokes that there exists no single perspective that could overshadow the organisational culture literature as the research methods used to assess differ from one researcher to other. Some research studies on organisational cultural dimensions have a strong theoretical and conceptual origin (e.g. Schein, 1990; Quinn and Rorbaugh, 1983; Trice and Beyer, 1993; Hatch, 1993), while others have been developed in a more practical way (e.g. Denison and Mishra, 1995; Hofstede et al., 1990).

Interestingly, the three most common dimensions (viz. supportive, innovative and bureaucratic) as identified by Wallach (1983) appear to emerge from a multitude of theoretical and empirical studies on organisational culture. Firstly, a supportive culture reflects the presence of a “harmonious” and “friendly” environment in which all
organisational members work (Wallach, 1983, p.33). For example team work and communication (Alexander, 1978), Group Culture (Quinn and Rorbaugh, 1983), social relations (Kilman & Saxton, 1983), worth and value of people (Sashkin, 1984), humanistic/helpful (Cooke & Lafferty, 1989), concern for others/helping others (Meglino, Ravlin, and Adkins, 1989), supportiveness (O’Reilly, Chatman, & Caldwell, 1991), people-orientation (Delobbe, Haccoun, & Vandenberghe, 2002), human resource orientation (Van den Berg & Wilderom, 2004), and harmony and employee-oriented (Tsui, Zhang, Wang, Xin, & Wu, 2006) are all apparently pointing towards a supportive cultural dimension.

Secondly, an innovative culture indicates an “exciting” and “dynamic” work environment (Wallach, 1983, p.33). For example studies of Delobbe, Haccoun, and Vandenberghe (2002), Tsui et al. (2006), Van Muijen, Koopman, and De Witte et al. (1999), O’Reilly, Chatman, and Caldwell (1991), and Alexander (1978), all explicitly emphasize the innovativeness dimension of organisational culture.

Thirdly, bureaucratic culture is another significant dimension that has been frequently reflected in most of the studies. It focuses on the importance of the “hierarchical and compartmentalized” workplaces (Wallach, 1983, p.32). The bureaucratic construct is reflected in the hierarchical culture (Quinn and Rorbaugh, 1983), attention to detail (Sashkin, 1984; O’Reilly, Chatman, & Caldwell, 1991), power (Cooke & Lafferty, 1989), and rules-orientation (Van Muijen, Koopman, & De Witte et al. 1999).

The review conducted for the present study revealed that Wallach’s (1983) three dimensions of organisational culture are found to be the most accepted and widely used in the literature. These three dimensions underscore distinctive characteristics of
organisations which are conducive for a particular leaders’ characteristics profile. The first dimension, bureaucratic culture emphasises power-oriented, structured, ordered, regulated and established work environment; the second dimension, the innovative culture involves risk-taking, results-oriented, creative, stimulating and challenging environment; and the third dimension, the supportive culture accentuates relationship-oriented, personal freedom, safe, and trusting work atmosphere elements of organisational culture. It is interesting to note that, most aspects of culture dimensions as suggested by many researchers (e.g. Glaser et al., 1987; Hofstede et al., 1990; O’Reilly et al., 1991; Tsui et al., 2006; Delobbe et al., 2002) overlap with Wallach’s (1983) three dimensions, viz. bureaucratic, innovative, and supportive culture.

The present research focused on these three culture dimensions, because they represented not only a diverse set of distinctive culture dimensions but were also found to be extensively researched organisational culture types. Moreover, they have appeared as the most reliable in culture constructs that are available in the literature.

The focus on the Wallach’s (1983) dimensions of culture is appropriate for this study. The leaders’ characteristics (viz. personality, leadership styles, and personal values) need to match with the organisational culture for successful implementation of any downsizing strategy. Wallach (1983) likens organisational culture to individual characteristics. According to her, organisations could be described by their culture in the same way as individual characteristics (e.g. personality, personal values) could be used to describe people. In addition, many research studies in the past (e.g. O’Reilly et al., 1991; Pavett and Lau, 1983; Posner et al., 1985) have suggested that organisational culture corresponds to thinking and behavioural styles, personal values and personality
characteristics of individuals. These three dimensions thus formed the theoretical basis for this study. Within the context of leaders’ approaches to downsizing, the present study examined the extent to which three types of organisational culture, viz. bureaucratic, innovative and supportive cultures exist in publicly funded Australian universities. The discussion that follows later, i.e. in the Data Analysis and Results Chapter, will explore the leaders’ accentuation on each of these three cultural dimensions in regard to their downsizing strategies.

The above review suggests that the variety of dimensions that are associated with the organisational culture has contributed to conceptualizing the culture in different ways by different researchers. Consequently, the measurement of these cultural dimensions assumes significance. Accordingly, the following section reviews the literature on the measurement of organisational culture.

2.4.3 Measurement of Organisational Culture

The goal of this review was to identify potentially useful instruments to measure the various dimensions of organisational culture discussed in the previous section and then to assist in evaluating the appropriate instrument for the present study. Previous discussion reveals that although there is a lack of agreement on the major dimensions of organisational culture, the three most common dimensions (viz. supportive, innovative and bureaucratic) could be distilled from a multitude of theoretical and empirical studies on organisational culture. Further, it is suggested that one of the reasons for the lack of consensus could be the variability in the items that are used to measure the different dimensions of organisational culture.
According to Coeling and Simms (1993), culture could be assessed using unstructured approaches (e.g. participant observation and listening) that demand time and skill as well as structured methods (e.g. Likert type survey instruments) which help in identifying different cultural dimensions.

Given the wide variety of cultural instruments available in the literature, Scott et al. (2003) recommended three different approaches to measuring organisational culture, viz. positivism, constructivism and interviewing approaches. In regard to the unit of analysis, some cultural instruments are more organizationally oriented (e.g. Gordon & DiTomaso, 1992; O’Reilly et al., 1991; Wallach, 1983) whereas others are oriented towards individual characteristics (e.g. Hofstede et al., 1990; Cooke and Lafferty, 1989) and there are even others which are organisational-unit oriented (e.g. Coeling and Simms, 1993; Cooke and Rousseau, 1998).

Furthermore, some instruments have been developed through an inductive approach (e.g. Denison & Mishra, 1995; Gordon & DiTomaso, 1992; Hofstede et al., 1990; Meglino, Ravlin, & Adkins, 1989) while others use a deductive approach (Tucker et al., 1990; O’Reilly et al., 1991; Cooke & Lafferty, 1989; Quinn and Rorbaugh, 1983; Quinn and Cameron, 1983) and several others have used both, inductive and deductive approaches (Glaser et al., 1987; Calori & Sarmin, 1991). Still others have been developed through a literature review (e.g. Van den Berg & Wilderom, 2004; Gershon et al., 2004; Walker, Symon, & Davies, 1996) and also combining a literature review with interviews (e.g. Glaser, Zamanou, & Hacker, 1983).

Interestingly, the origins of some instruments are not yet clear (e.g. Stevenson, 2000; MacKenzie, 1995; Wallach, 1983; Alexander, 1978). For instance, Wallach (1983)
has herself ascribed to having used the works of Litwin and Stringer (1968), and Margerison (1979) in developing the Organisational Culture Index. Her research article first published in the Training and Development Journal does not explicitly mention any details of the development or testing of the questionnaire. Interestingly, it is one of the extensively used organisational cultural survey questionnaires in the past as well as recent times (e.g. Berson et al., 2008; Lok et al., 2005; Silverthorne, 2004; Kanungo et al., 2001; Koberg & Chusmir, 1987).

Delobbe et al. (2002) suggested that the identification of common dimensions for assessing organisational culture requires comparisons between the cultures of different organisations. However, Delobbe et al. (2002, p.9) conceded that there is no single instrument that could offer a ‘valid measure of a sufficiently large set of generic cultural dimensions.’ More recently, an extensive review of Jung, Scott, Davies, Bower, Whalley, McNally, and Mannion (2007) revealed the presence of seventy instruments for measuring the organisational culture of which forty-eight are not found to have psychometric assessment. In this regard, Jung et al. (2007) suggested that no single instrument could be considered as ideal for measurement.

While highlighting the importance of psychometric requirements for measures of organisational culture, Delobbe et al. (2002) suggested that any instrument to be viable should demonstrate four key characteristics, viz. 1) high variance, 2) low overlap of scale, 3) consensual validity, and 4) inter-organizational discrimination. Delobbe et al.’s (2002) extensive review has indicated that not all cultural instruments satisfy all of these requirements. Although, Delobbe et al.’s (2002) own cultural instrument “ECO” (French acronym of Echelles de Culture Organisationnelle) has been claimed to be exceptional as it
demonstrates all four key psychometric properties, the construct validity is yet to be confirmed through confirmatory factor analysis.

The Corporate Culture Questionnaire (Walker, Symon, & Davies, 1996) consists of a five-point Likert scale with 126 question items, which is too long a questionnaire for a project that is comprised of survey questionnaires for other constructs. Likewise, the Organisational Culture Questionnaire (Hofstede et al., 1990) is also too long as it consists of 135 question items to be answered on a five-point Likert scale. The Organisational culture Inventory (Cooke & Lafferty, 1989) has good psychometric properties but it is again a long and complex instrument which consists of 120 items measured on a five-point Likert scale. Moreover it is copyrighted and could be expensive to use.

Organisational Culture Survey (Glaser, Zamanou, & Hacker, 1987) is a relatively shorter instrument with only 31 question items measured on a five-point Likert type scale, but addresses only superficial issues (Scott et al., 2003). The Nursing Unit Cultural Assessment Tool (Coeling & Simms, 1993) consisting of 50 items measured on a six-point Likert type scale is targeted only at a single occupational group within an organisation and is more appropriate for identifying an occupational culture rather than an organisational culture. MacKenzie’s (1995) Culture Questionnaire consists of 76 items capturing 12 dimensions of culture but the origin of items and psychometric properties are unknown. The Survey of Organisational Culture (Tucker et al., 1990) consists of 55 items measured on a five-point scale capturing 13 dimensions of culture. However, it has been used only on senior leaders in an American context.

The Organisational Culture Profile (O’Reilly, Chatman, & Caldwell, 1991) including its shortened versions (40-item measure by Cable & Judge, 1997; 28-item
measure by Sarros, Gray, Densten, & Cooper, 2005) is one of the most extensively used
cultural instruments. The original version contains 54 items measured on an ipsative scale
capturing eight dimensions of culture and is reported to have good psychometric
properties. Although the shortest version of Organisational Culture Profile (Sarros, et al.,
2005) is able to overcome the problems associated with an ipsative scale by using Likert
type scale, it suffers from a few shortcomings such as individual-level data and possible
social desirability bias.

Several quantitative measurement instruments have been designed to allow
comparisons in organisations and to research the association between organisational
culture and other constructs (e.g. organisational commitment, customer relationship
management, effectiveness), but there has been no single attempt to capture culture
dimensions that are sufficiently relevant and generic to leaders’ approaches to downsizing.

The present study required the measures of leaders’ perceptions of their
organisations’ downsizing approaches, and the values and personality that are
characteristics of organisational members. Wallach’s Organisational Culture Index (1983)
was selected for this research as three cultural dimensions appear to be related more
closely to the leaders’ individual characteristics as compared to other organisational culture
instruments, and was expected to help in explaining the differences in the leaders’
approaches to downsizing.

Wallach developed the Organisational culture Index based on the works of Litwin
and Stringer (1968), and Margerison (1979). The three dimensions of culture as identified
by Wallach’s (1983) Organisational Culture Index cover most of the elements assessed by
the culture researchers.
Leaders’ under ideal situations may prefer a particular downsizing strategy but in practice the same strategy may not be possible to use as the organisations are driven by a particular culture, and leaders may find themselves in conflict between their individual characteristics and the organisational culture while downsizing strategies are used. The conflict may arise due to the fact that the organisational culture represents the organisation’s interests and individual characteristics represent individual interests. Owing to the above stated reasons, Wallach’s (1983) Organisational Culture Index was found to be best suited for the present research.

Wallach’s Organisational culture Index (OCI) is freely available and reliabilities have been established by many studies (e.g. Chen, 2004; Lok & Crawford, 1999; Kangas et al., 1999; Koberg & Cushmir, 1987). Wallach’s OCI has been extensively used in the past as well as recently in different countries, viz. North America (e.g. Kangas et al., 1999), Australia (e.g. Lok & Crawford, 1999; Lok, Westwood, & Crawford, 2005), India (e.g. Kanungo et al., 2001), China (Chow & Liu, 2007), and Taiwan (e.g. Chen, 2004).

The Organisational Culture Index is comprised of 24 items, with eight items assigned to each of the three dimensions of organisational culture. Survey respondents are required to report the extent to which each of the items is characteristic of their organization. Response options range from 0 (‘doesn’t describe my organization’) to 3 (‘describes my organization most of the time’).

This section reviewed the measurement of organisational culture and the rationale in preferring Wallach’s (1983) Organisational Culture Index for the present study. The next section discusses the links between downsizing strategies and organisational culture.
2.4.4 Links between Downsizing Strategies and Organisational Culture

Organisational culture has been often theoretically identified as an influential factor affecting the organisational change in general (e.g. Latta, 2009; livari, 2005; Langan-Fox & Tan, 1997) and downsizing in particular (e.g. Gandolfi, 2007; Radcliffe et al., 2001; Freeman & Cameron, 1993). However, the literature on downsizing strategies and organisational culture have limited empirical research and are often ignored by scholars.

As culture is unique to an organisation, so organisations differ in their culture, (Reynolds, 1986; Buono, Bowditch, & Lewis, 1985). Many organisations could be involved in the same kind of products and services but still can be very different in culture (Visagie, Kroon, & Walt, 2002). Previous studies (e.g. (Hickok, 2002; Freeman & Cameron, 1993) have stressed the need to understand the culture of the organisations prior to downsizing.

Many change initiatives fail because organisational culture does not readily accept the organisational change (James, 2005), and downsizing is that most commonly used change initiative by the organisations. Many researchers (e.g. Schneider, 2000; Perez, 1995; Wilkins, 1983) have strongly promoted the concept of culture based business strategies including downsizing strategies. Furthermore, Weber (1996) has highlighted that organisational culture about mergers and acquisitions is a highly relevant subject.

In one of the key early studies on the role of organisational culture in downsizing, Freeman and Cameron (1993) theorised that certain core cultural dimensions (emphasis on organic or mechanistic processes, and internal or external orientation) can have a differential impact on approaches to downsizing (reorientation and convergent approaches). Accordingly, Freeman and Cameron (1993) introduced the convergence and
re-orientation framework and argued that organisations with internal orientations will be more successful during convergent periods than organisations with external orientations. However, their propositions were not supported through an empirical investigation.

Several previous research studies (e.g. Devos, Buelens, & Bouckenooghe, 2007; Mishra & Mishra, 1994; Freeman & Cameron, 1993) have suggested that the organisations which engage in a very limited downsizing are found to have supportive culture, mainly, trust.

As organisations have experienced downsizing more often in recent times, a strong emphasis is being placed on organisational culture and its role in assisting or hindering the downsizing. For example Radcliffe et al. (2001) stressed the cultural dynamics’ role in inducing a crisis in organisations. These researchers used three firms’ case study approach and identified three types of downsizing, i.e. cost-saving downsizing, strategic downsizing and merger-acquisition downsizing while suspecting a significant relationship between organisational culture and its tendency towards downsizing. However, Radcliffe et al. (2001) failed to discern the cultural fit between three types of downsizing that they identified. Hickok (2002) proposed a categorisation of downsizing actions based on their impact on organisational culture, i.e. downsizing action may tend to be either culturally reinforcing (e.g. voluntary redundancy, proportionate staff cuts) or destabilising (e.g. forced layoffs). Hickok (2002) argued that downsizing destabilises an organisation and therefore acts as a catalyst for a culture change. However, there is no empirical evidence to support such a proposition.
Gandolfi (2007) found that leaders differed considerably while using different downsizing strategies, and therefore he reflected on cultural values as a possible factor that could explain the reason for such differences.

Few researchers in the past (e.g. Radcliffe et al., 2001; Hickok, 2002; Freeman & Cameron, 1993) have acknowledged the links between downsizing strategies and organisational culture. The previous research studies alluded to the association between organisational culture and downsizing strategies being reflexive in that downsizing strategy is influenced by organisational culture as well as affected by it. By far the most direct support for the present research came from Radcliffe et al. (2001), and Freeman and Cameron (1993) whose studies are suggestive of the strong links between downsizing strategies and organisational culture. The present review therefore, suggested that organisational culture could possibly explain the differences in downsizing strategies.

It is evident from the literature that organisational culture could maintain a major influence on leaders and in turn on their approaches to downsizing. There is theoretical support for the nexus between organisational culture and downsizing strategies. However, the links between downsizing strategies and organisational culture have not yet been empirically established. The next section discusses the design of a conceptual model for the present research.

2.5 Designing a Conceptual Model

The main objective of this section is to design a conceptual model developed from insights gained through the review of relevant literature. The present research was primarily driven by the research question, “Why would leaders differ in their approaches to downsizing?” Given the broad nature of this question, a systematic approach was needed
while attempting to answer it. Designing a conceptual model was expected to help the research investigations to postulate and test certain associations so as to improve the understanding of the dynamics of the problem. The specific assumptions and definitions that form the conceptual foundation of this study are clarified to provide a better appreciation of the variables and proposed links between them.

The present study follows a contingency approach while using the Five-Factor Model of Personality (John, Donahue, & Kentle, 1991), Leadership Behaviour Description (Stogdill, 1963), Schwartz’s value theory (Schwartz, 1992) and the Organisational Culture Index (Wallach, 1983) in order to provide a unifying framework for studying the links between leaders’ characteristics and downsizing strategies. Then, it examines methodically in an exploratory fashion which particular leaders’ characteristics, and organisational culture dimensions would be most likely to favour certain downsizing strategies.

While the literature has put forward a variety of explanations for the differences in downsizing strategies, as acknowledged in the literature review chapter, the business conditions could be one of the reasons for the differences in leaders’ approaches to downsizing.

Business conditions refer to those external factors that affect organisations’ day-to-day functioning. In the university sector, these factors mainly include students, economic, social, political and legal conditions, and governance associated with board composition, financial management and the formation of subsidiary companies (Wilmoth, 2004).

Australian universities, like most publicly funded universities in other countries, have manifold objectives. For instance, some universities in Australia are technology focused (e.g. QUT, UTS, Curtin University of Australian Technology Network) and some
others are innovative-research intensive (e.g. Griffith University, La Trobe University of Innovative Research Universities’ group). Owing to universities’ manifold objectives there could be a wide variety of students, staff, academic programs, research clients and communities. However, these universities are all publicly funded and receive their major funding from the same Federal Government. All publicly funded universities function under more or less similar economic, social, political and legal conditions. More precisely, publicly funded Australian universities function under the direct legislative responsibility of the States, whereas the Federal government controls the funding and therefore little structural diversity (Goedegebuure et al., 1993) is evident in the sector.

Since the creation of the Unified National System, there is limited diversity in the composition of Australian universities (Skuja, Clarke, & Birney, 1997). Therefore, the differences in the business environment, if any, are lessened or become convergent. In short, the business conditions under which all publicly funded universities function are not inherently different from each other. If the business conditions are similar, then why would leaders differ in their approaches to downsizing in publicly funded Australian universities?

Thus, once the central research question was precisely defined, based on a review of the relevant literature the present research posited leaders’ characteristics and organisational culture as possible explanatory constructs for explaining the differences in approaches to downsizing.

Arguably, one of the most important management levels of leaders impacted by the downsizing strategies implementation are those charged with the headship of the academic, research and administration units in the universities. The previous studies have emphasised the importance of mid-level leaders being involved in downsizing strategies (e.g. Gillespie
et al., 2001; O'Neill & Lenn, 1995). These mid-level leaders differ in their pursuit of downsizing across different organisations functioning under similar conditions in their business environment. Thus, the question that needed to be answered was: ideally, are leaders with a specific set of characteristics and the culture in their organisations likely to favour certain downsizing strategies? More specifically, this research explored the links of ideal downsizing strategies with the leaders’ characteristics (viz., personality, leadership styles and personal values) and the organisational culture (viz., bureaucratic, innovative and supportive culture).

This approach to studying downsizing is in harmony with Weber’s (1978) notion of the “ideal” or “pure” type. According to Weber (1978), if the social world is overly complex, then social reality needs to be simplified with abstract concepts. Weber’s insight lies in the very simple idea that human cognitive capacities are of a limited nature. Since the world is very complex and with all limited human cognitive capacities, every detail of social reality cannot be described, explained, and/or understood. Rather, one needs to emphasize certain characteristics of a phenomenon (downsizing in this case) and display the assumptions underlying this emphasis. This would help to put forward a simple representation of certain entities and activities that are related in different ways.

In contrast to the above stated ideal situation, mid-level leaders have limited or no freedom to prefer certain downsizing strategies over others in practice. Because in practice, downsizing strategies are identified by the top management and leaders who are at the middle management level often have nothing to do with such decisions of the top management but to implement them. Therefore, their individual characteristics should not be expected to play any role in the practical use of different downsizing strategies.
However, mid-level leaders still differ in their pursuit of downsizing strategies across different organisations functioning under similar conditions in their business environment.

The involvement of these mid-level leaders in downsizing is important in order to gain an understanding of the organisational culture existing in their organisations. A review of relevant literature revealed that organisations differ in their organisational culture, as culture is unique to an organisation, (Cameron and Quinn, 1999; Reynolds, 1986; Buono, Bowditch, and Lewis, 1985). The review conducted for the present study further suggested that how organisational culture influences leaders’ approaches to downsizing has not yet been established through empirical research. Accordingly, this research addressed the need to investigate whether the organisational culture could possibly explain the differences in leaders’ approaches to downsizing in publicly funded universities. If the organisational culture could be measured through the perceptions of such leaders, then the question that needed to be answered was: Are organisations with a certain type of culture likely to favour specific downsizing strategies in practice?

Additionally, other aims of this research were to develop a view on how downsizing strategies are realised widely in publicly funded Australian universities, and which strategies are ideally preferred and practically used while downsizing in publicly funded Australian universities. Thus, finally, the following research questions were derived:

RQ1: Is there a widespread orientation towards downsizing in publicly funded Australian universities?

RQ2: Are downsizing strategies associated with leaders’ characteristics and organisational culture under ideal conditions in publicly funded Australian universities?
RQ3: Are downsizing strategies associated with organisational culture under practical conditions in publicly funded Australian universities?

The conceptual models that have been developed served the main purpose of the present research, i.e. to examine whether the differences in approaches to ideal downsizing could be explained by the leaders’ characteristics and organisational culture; and whether the differences in approaches to practical downsizing could be explained by the organisational culture.

The conceptual model for ideal downsizing uses different theoretical perspectives of leaders’ characteristics (viz. The Big-five Personality Inventory - John, Donahue, and Kentle, 1991; Leader Behaviour Description - Stogdill, 1963; Schwartz’s Value Theory - Schwartz, 1992) and Wallach’s (1983) organisational culture dimensions. The conceptual model for ideal downsizing is depicted in Figure 2.1.
In referring to Figure 2.1, leaders’ characteristics (viz. personality, leadership styles and personal values) and three types of organisational culture have been identified that could help to explain the differences in leaders’ approaches to ideal downsizing. Furthermore, three dimensions of organisational culture have been identified that could...
help to explain the differences in approaches to practical downsizing. The conceptual model for practical downsizing uses Wallach’s (1983) organisational culture dimensions and is as depicted in Figure 2.2.

**Figure 2.2 Conceptual model of Practical Downsizing**

The conceptual models of ideal and practical downsizing developed in the present investigation consist of the following key research constructs:

1. **Downsizing Actions**: Ten downsizing actions pursued by leaders in publicly funded Australian universities were extracted from the previous literature and then their common
underlying dimensions were identified through analysis and referred to as downsizing strategies.

2. Leaders’ characteristics: For the present research, leaders’ characteristics have been identified as comprised of three personal characteristics of leaders, viz. personality, leadership styles, and personal values.

2.1 Personality: The Big Five Inventory has been used for the research thesis. The Big Five elements of personality (John, Donahue, & Kentle, 1991) are Openness, Conscientiousness, Extrovertism, Agreeableness and Neuroticism.

2.2 Leadership Styles: The two classical styles of leadership have been identified for the research, viz. task oriented or initiating structure style, and people oriented style or consideration (Stogdill, 1963; Stogdill & Coons, 1957).

2.3 Personal Values: Ten personal values (Schwartz, 1992 & 1994) identified are self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism.

3. Organisational culture: The three dimensions of organisational culture (Wallach, 1983) identified are Bureaucratic, Innovative and Supportive Cultures.

The association of downsizing strategies with the leaders’ characteristics and organisational culture may have different components to be considered when trying to explain the differences in leaders’ approaches to downsizing. In this study, it was considered important to explore the association of downsizing strategies with the leaders’ personality, leadership styles, personal values, and organisational culture dimensions (bureaucratic, innovative and supportive culture). In the first place, based on the relevant literature, leaders’ characteristics (viz. personality, leadership styles, and personal values)
and organisational culture dimensions are posited to be linked to ideal downsizing strategies. Secondly, only organisational culture dimensions are posited to be linked to practical downsizing strategies.

The review of relevant literature suggests that leaders’ personality, leadership styles, and personal values have been described as having potential role in downsizing strategies (e.g. DeRue et al., 2005; Budros, 1999; Greenhalgh, Lawrence, & Sutton, 1988). Furthermore, the literature review also suggests that organisational culture has been portrayed as having a possible influence on downsizing strategies (e.g. Radcliffe et al., 2001; Freeman & Cameron, 1993). Unfortunately, none of the previous research studies have been conducted in university settings.

Due to absence of research undertaken on whether Australian universities are able to responsibly implement downsizing strategies through their mid-level leaders in today’s educational setting, and considering the consequences of the downsizing implementation, it was valuable to determine the association between the downsizing strategies and leaders’ characteristics, and organisational culture in publicly funded Australian universities.

From an empirical standpoint, the present investigation was intended to develop explanatory model of differences in leaders’ approaches to ideal downsizing that account for leaders’ characteristics (personality, leadership styles and personal values) and organisational culture which could serve as a basis for further generating relevant hypotheses. Furthermore, it was aimed at developing an explanatory model of differences in leaders’ approaches to practical downsizing that account for organisational culture which could serve as a basis for further generating relevant hypotheses.
2.6 Conclusion

There has been a much focus on researching the causes of downsizing, and downsizing strategies. The literature review presented in this chapter demonstrates that systematic links between downsizing strategies, and leaders’ characteristics (viz. personality, leadership styles, and personal values) and organisational culture in publicly funded Australian universities, have not been empirically established to date. The present research has attempted to fill this significant omission in the literature.

In the review of relevant literature, a number of theoretical and empirical perspectives relating to the topic of research were examined, which brought greater clarity and focus to the research problem. The literature review discussed the constructs of interest (viz. downsizing strategies, leaders’ characteristics and organisational culture) in the context of publicly funded Australian universities. Finally, the research gaps were identified and conceptual models for ideal and practical downsizing were introduced while formulating research questions. The next chapter presents the research method adopted for answering the research questions.
CHAPTER 3
RESEARCH METHOD

“It isn’t they can’t see the solution, it is that they can’t see the problem”
- G. K. Chesterton, English Journalist and Novelist

3.1 Introduction

The previous chapter reviewed the extant literature on downsizing strategies, leaders’ characteristics, and organisational culture that led to the construction of a research model and formulation of the research questions. This research was primarily driven by the central research question, RQ: Why would leaders differ in their approaches to downsizing? Further, the following research questions were derived from this central research question: RQ1: Is there a widespread orientation towards downsizing in publicly funded Australian universities? RQ2: Are downsizing strategies associated with leaders’ characteristics and organisational culture under ideal conditions in publicly funded Australian universities? RQ3: Are downsizing strategies associated with organisational culture under practical conditions in publicly funded Australian universities?

The first research question RQ1 was expected to discover whether publicly funded Australian universities’ widespread preference is characterized by any particular downsizing action (e.g. voluntary redundancy, voluntary early retirement, and targeted redundancy). RQ1 was also aimed at explaining the different downsizing actions in terms of their common underlying dimensions (referred to as downsizing strategies) with a minimum loss of information. In other words, RQ1 also focuses on identifying the different types of ideal and practical downsizing strategies in publicly funded Australian universities. The second research question RQ2 was formulated to explain the differences
in approaches to downsizing in terms of leaders’ characteristics and organisational culture under ideal conditions whereas third research question RQ3 in terms of only organisational culture under practical conditions.

While justifying the chosen research method in order to answer the above stated research questions, this chapter discusses the intricacies associated with the research design, research ethics, survey instrumentation, pretesting of the survey questionnaire, survey population, data collection and processing procedure, demographics of the sample, data analysis and conclusion.

3.2 Research Design

The present study adopted a quantitative research paradigm while using cross-sectional design, and a postal survey technique with self-report measures. The goal was to formulate the research problem more precisely, clarifying concepts, gathering explanations, gaining insight, and eliminating impractical ideas.

The purpose of the research design in the present study was to ensure that the central research question (i.e. why would leaders differ in their approaches to downsizing?) is answered as unequivocally as possible in an exploratory way. Thus, a logical structure had to be designed in order to establish the empirical evidence for answering this central research question in a credible way. As discussed in the literature review chapter the following are the two specific research problems underpinning the present study.

1. Whether differences in approaches to ideal downsizing could be explained by the leaders’ characteristics and organisational culture.
2. Whether differences in approaches to practical downsizing could be explained by the organisational culture.
The conceptual models were designed and discussed in the literature review chapter. First, the conceptual model of ideal downsizing (Figure 2.1, p.137) consists of five variables, viz. ideal downsizing actions, personality, leadership styles, personal values and organisational culture. Second, the conceptual model of practical downsizing (Figure 2.2, p.138) consists of two variables, viz. practical downsizing actions and organisational culture. A set of reliable and valid instruments suitable for gathering the data relevant to leaders’ characteristics (viz. personality, leadership styles, personal values) and organisational culture were drawn from the literature review. However, the question items of the instruments of ideal and practical downsizing were identified based on a literature review and further subjected to reliability and validity tests. These conceptual models were tested in a large sample of mid-level leaders in publicly funded Australian universities. Thus, the unit of analysis is an individual mid-level leader within publicly funded universities in Australia and therefore each response was treated as an individual data source.

The purpose was not hypotheses testing but to generate hypotheses in an exploratory way by explaining the differences in approaches to downsizing in terms of internal factors, viz. leaders’ characteristics and organisational culture. In other words, it was intended to explain the difference in approaches to downsizing in a non-contrived setting where organisational work proceeds normally in a natural environment without interference by the researcher. This approach was expected to offer an enhanced understanding of the associations that exist among various constructs of research interest instead of delineating the cause of one or more problems.
Kerlinger (1986, p. 378) suggested that surveys generally focus on ‘the vital facts of people, and their beliefs, opinions, attitudes, motivations, and behaviour,’ and generally they use cross-sectional design. The present research involving key constructs as highlighted above were intended to gather the data just once over a period of time in order to answer the respective research questions. Thus, cross-sectional design was considered as an appropriate choice of research design in the present research.

Quantitative survey was considered as an efficient data collection method when a researcher knows exactly what is required and how to measure the variables of interest (Sekaran & Bougie, 2003). Research scholars use this technique to determine the characteristics of a population so that inferences about populations can be made (Antonakis, Schriesheim, Donovan, Gopalakrishna-Pillai, Pellegrini, & Rossomme, 2004). Normally, leaders such as heads of organizational units (e.g. deans, directors of administration, and heads of schools) are generally inaccessible. The difficulties associated with the inaccessibility have been experienced frequently by the downsizing researchers in the past. Under such conditions, a survey questionnaire is found to be economical and have the advantage of reducing interviewer bias, and also ensures feelings of anonymity (Breakwell, Hammond, & Fife-Schaw, 2000; Narins, 1999). However, a researcher has the risks such as the possibility of gathering poor quality data due to lower response rates, lack of completeness of responses, and the limitation of being unable to clarify questions by respondents or correct misunderstandings by the researcher. These demerits could be negated as survey research allows a respondent the time to think about her/his responses which has the potential to minimize the possibility of researcher bias.
The present research required a large sample size but consisted of geographically dispersed population. The respondents worked in different publicly funded universities spread across different states of Australia. The postal survey technique is quite appropriate for reaching such a geographically dispersed population and is cost effective, especially when it involves a large sample size (Ticehurst and Veal 2000; Zikmund, 2003). Moreover, there is no need to send survey administrators off-site or pay for respondents to come to us (Narins, 1999). Therefore, a postal survey was considered as the most appropriate method for this research.

Before embarking on the postal survey technique, a range of methods were considered to elicit the data on downsizing strategies in regard to leaders’ characteristics and organisational culture in publicly funded Australian universities. Firstly, conducting in-depth interviews seemed not feasible for the research due to the following practical reasons. The publicly funded universities are situated across different states of Australia which is the sixth largest country in the world. It would have been very unrealistic, in terms of time and cost, to travel across Australia for conducting personal interviews with leaders in publicly funded universities. Secondly, the sensitive nature of downsizing as a topic of research during the Global Financial Crisis (year 2008) was not conducive to using interviews. Furthermore, the limitations imposed on time and resources for this research did not permit the researcher to add face-to-face interviews to a quantitative survey method.

Secondly, the option of a telephone survey was explored but proved to be costly as it does not match a large size sample survey. Moreover, the lengthiness of the survey
questionnaire in the present research was not conducive to a sample that was comprised of mid-level leaders who are usually found to have busy schedules.

Thirdly, the web hosting option was explored but was again found to be too expensive. Even though e-mail surveys have become more popular in recent times, the follow-up process is more complicated than a postal survey and if the respondents are identifiable, then they may not feel comfortable in responding to the questionnaire which could possibly result in a lower response rate. Recent studies have shown that internet surveys have significantly lower response rates than postal surveys (Solomon, 2001). Lastly, a paramount concern regarding an internet survey is that potential survey respondents can more easily and quickly choose not to participate in the survey by merely using the delete button. In contrast to the above mentioned data gathering methods, the postal surveys have been used to answer many types of research questions emanating from downsizing and leaders’ characteristics perspectives. The next section discusses research ethics that were given due attention while conducting the present study.

3.3 Research Ethics

Relevant research ethical practices were followed while conducting this research. Firstly, the present researcher received a letter of approval from the Human Research Ethics Committee (HREC) of the Research Services Office at Australian Catholic University (Appendices A and B).

Secondly, the key organisational representatives, Pro Vice-Chancellors or Deputy Vice-Chancellors (Research) were contacted in order to seek permission for conducting the survey research at their institutions. A research proposal and the list of generic position titles were sent along with the covering letter addressed to Pro Vice-Chancellors / Deputy
Vice-Chancellors (Research). The format of the covering letter and the list of generic position titles are presented in the Appendix C and D, respectively. Finally, the significance of research, permission received from their respective institutions, approval of HREC, informed consent, and assurance of confidentiality of participants’ identity, were clearly articulated in the letter addressed to the survey respondents (Appendix E).

Participation in this research was voluntary with complete anonymity and all respondents were absolutely free to withdraw from the research at any time until they returned their completed questionnaire to the researcher. Participants were under no obligation to answer each and every question. However, the informed consent ensured that all participants were deemed to have agreed to participate in this research by completing the survey questionnaire. Further, it was ensured that no information about the research would be published in any form or matter whatsoever that allowed any participants or their institutions to be recognized. The next section discusses survey instrumentation.

3.4 Survey Instrumentation

The main purpose of this research was to gain an understanding of differences in approaches to downsizing in publicly funded Australian universities. This was expected to be accomplished by exploring the links between ideal and practical downsizing strategies, leaders’ characteristics (viz. personality, leadership styles and personal values) and the organisational culture (viz. bureaucratic, innovative and supportive culture). Therefore, this research gathered the data using a survey questionnaire in order to measure the perceptions of downsizing, leaders’ characteristics and organisational culture.

The survey questionnaire designed for this research was entitled “Downsizing in Australian Universities” and contained 82 question items (Appendix F). All question items
were structured and separated into the following seven sections starting from A through G; each of them was designed to serve a specific purpose. Different sections, their sources and purposes of use in the present research are presented in the following Table 3.1.

**Table 3.1**
Different sections of the Survey Questionnaire

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Number of question items</th>
<th>Original Source</th>
<th>Purpose of use in the present research</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Downsizing Survey (Practical)</td>
<td>10</td>
<td>Present research</td>
<td>To measure the extent of leaders’ use of different downsizing actions.</td>
</tr>
<tr>
<td>B</td>
<td>Big Five Inventory-10 (BFI-10)</td>
<td>10</td>
<td>Rammstedt &amp; John (2007)</td>
<td>To assess five personality characteristics (viz. Openness, Conscientiousness, Extrovertism, Agreeableness and Neuroticism) of leaders.</td>
</tr>
<tr>
<td>C</td>
<td>Leader Behaviour Description Questionnaire-XII (LBDQ-XII)</td>
<td>20</td>
<td>Stogdill (1963)</td>
<td>To assess the leadership styles (people-oriented and task-oriented) of leaders.</td>
</tr>
<tr>
<td>E</td>
<td>Downsizing Survey (Ideal)</td>
<td>10</td>
<td>Present research</td>
<td>To measure the extent of leaders’ ideal preference of different downsizing actions.</td>
</tr>
<tr>
<td>F</td>
<td>Organisational Culture Index</td>
<td>15</td>
<td>Wallach (1983)</td>
<td>To describe three types of organisational culture (viz. bureaucratic, innovative and supportive culture).</td>
</tr>
<tr>
<td>G</td>
<td>Demographics</td>
<td>7</td>
<td>Present research</td>
<td>To obtain relevant demographic profile of the survey population.</td>
</tr>
</tbody>
</table>
All sections (except section G - Demographics) used a five-point Likert scale because it is extremely popular for measuring perceptions and the method is simple to administer (Zikmund, 2003). A brief summary of different sections of the survey questionnaire follows.

**Section A - Downsizing Survey (Practical) and Section E - Downsizing Survey (Ideal)**

As this research was intended to explore the differences in approaches to downsizing, so the perceptual measure of downsizing was expected to suit the requirement. The focus was to measure the extent of different downsizing actions ideally preferred and practically used in publicly funded Australian universities by the leaders over the last three years. Many researchers in the past have used similar kinds of questionnaires (e.g. Farrell & Mavondo, 2005, 2004; Mishra & Mishra, 1994).

The downsizing was explicitly defined in the university context based on a thorough review of extant scholarly literature in downsizing research and practice, and accordingly the items of the questionnaire were developed using the theoretical definition. Therefore, the literature review for the present research mainly included articles relevant to downsizing in Australian universities (e.g. Koppi, Naghdy, Chicharo, Sheard, Edwards, & Wilson, 2008; Harman and Harman, 2008 Clarke, 2007; Szekeres, 2006; Gillespie et al., 2001; Gumport, 2000). Other articles published in the Australian Universities’ Review Journal were also reviewed (e.g. Hugo, 2005; Currie, 1995). These articles reflected the downsizing actions that are being used in Australian universities. Additionally, research articles on downsizing relevant to universities around the world were reviewed. These studies included, Canadian universities (e.g. Budros, 2001), United States universities (e.g. De Pillis & De Pillis, 2006; Rhodes et al., 2003; Pencavel, 2001, 2004; Cameron & Smart,
Next, the process of experts’ validation method was used to ensure the practicality of the questionnaire as explained in the next chapter (ref section 4.2.5). Thus, a deductive approach was adopted in generating the question items through theoretically defining downsizing. This is in contrast to an inductive approach in which a questionnaire is developed through qualitative techniques. The kind of research approach that has been adopted for this research has also been used in the earlier studies on downsizing (e.g. Tsai & Shih, 2007).

In the section A - Practical Downsizing Survey Questionnaire, leaders were asked to respond to the question which stated “as a head of organizational unit, to what extent have you used the following actions while downsizing in the last three years.” Ten downsizing actions were mentioned and leaders were required to choose the downsizing action and then rate on a five-point scale the extent to which they had used that each of the downsizing action in the last three years.

In order to minimize problems relating to respondent’s memory and to have valid research findings for a period of time, the downsizing questionnaire (practical) required leaders to rate on a five point scale to what extent they have used each downsizing action in the last three years. A five-point Likert scale with 1 = not at all, 2 = very little extent, 3 = little extent, 4 = large extent, 5 = very large extent, was used for measuring the extent of practical downsizing actions.
In the section E - Ideal Downsizing questionnaire, leaders were asked to respond to the question which stated “as a head of organisation unit, please think about to what extent you would ideally prefer to use the following actions while downsizing.” Leaders were required to rate on a five point scale the extent to which they would ideally prefer each of the downsizing action. A five-point Likert scale with 1 = not at all, 2 = very little extent, 3 = little extent, 4 = large extent, 5 = very large extent, was used for measuring the extent of ideal downsizing actions.

Section B: Big Five Inventory-10

The ten-item measure of Big Five Inventory developed by Rammstedt and John (2007) was used to assess five personality characteristics (viz. Openness, Conscientiousness, Extrovertism, Agreeableness and Neuroticism) of leaders. The BFI items were rated on a five-point Likert scale ranging from 1 (disagree strongly) to 5 (agree strongly). Respondents were asked to respond to the question which stated, “Think about how well the following statements describe your personality”. Two question items each represent one personality characteristic.

The leaders’ personality characteristics seem to fit well with the dimensions of Big Five and therefore, it was expected to be beneficial in explaining the differences in approaches to downsizing strategies. Moreover, BFI-10 has always showed a clear five-factor structure and the test-retest reliability is 0.75. Overall, the research studies of Rammstedt and John (2007) have shown that BFI-10 possesses acceptable psychometric properties. It was therefore, decided to include this questionnaire for the present research instead of any other personality questionnaire.
Section C: Leader Behaviour Description Questionnaire XII

The twenty-item measure of Leader Behaviour Description Questionnaire XII - LBDQ-XII (Stogdill, 1963) was used to assess the leadership styles (people-oriented and task-oriented) of leaders.

The questionnaire was comprised of ten questions each on task and people oriented styles. Each of the scale items employed a five-point Likert scale, scored 1 through 5, representing the response categories of never, seldom, occasionally, often, and always. Respondents were asked to rate how frequently as a leader they engaged in the behaviour described by the given statements. The given statements included such as, “I make my attitudes clear to the team”, “treat all team members as my equals”, “give advance notice of changes”.

The leadership styles (viz. people-oriented and task-oriented styles) seem to fit well within the dimensions of LBDQ-XII and therefore, it was expected to be beneficial in explaining the differences in approaches to downsizing strategies. This instrument is extensively used and the reliability of the instrument has proven to be high. It was therefore decided to include this questionnaire for the present research instead of any other leadership styles questionnaire.

Section D: Short Schwartz’s Values Survey

The ten-item measure of Short Schwartz’s Values Survey (SSVS) developed by Lindeman and Verkasalo (2005) was used to assess the personal values of leaders (viz. Power, Achievement, Hedonism, Stimulation, Self-direction, Universalism, Benevolence, Tradition, Conformity, and Security).
The SSVS comprises ten question items. The respondents are asked to rate the importance they would give to each of the ten value items as a guiding principle in their organisational decisions, using a five-point rating scale consisting of 1 (against my principles), 2 (not at all important), 3 (important), 4 (very important), and 5 (supreme importance).

Leaders tend to engage in behaviours that they believe will get them what they want and that they believe they can do. Thus, a strong sense of personal values could be of high importance in leaders’ pursuit of certain downsizing strategies over others. The SSVS is found to have good reliability and validity. Therefore the SSVS questionnaire was included in this research.

Section F: Organisational Culture Index (OCI)

A fifteen-item measure was adopted for this research to describe three types of organisational culture (viz. bureaucratic, innovative and supportive culture), although the Wallach’s original Organisational Culture Index (1983) contained 24 items measured on a four-point scale. However, the present research used only 15 items on a five point scale, with five items assigned to each of the three dimensions of organisational culture.

Survey respondents were required to report the extent to which each item is a characteristic of their organization. Response options range from 1 (poorly describes my organization) to 5 (strongly describes my organization).

Wallach’s Organisational culture Index (OCI) is freely available and found to have good reliability. It is also found to be user friendly and possesses a degree of relevance to the target population of this research. Wallach’s OCI is a validated instrument for empirically assessing the three dimensions of culture which covers almost all aspects of
organisational culture (Kanungo et al., 2001). The cultural dimensions (viz. bureaucratic, innovative and supportive cultures) seem to fit well within the dimensions of Wallach’s Organisational Culture Index (1983) and therefore, it was expected to be beneficial in explaining the differences in approaches to downsizing strategies.

Section G: Demographics

Seven questions reflecting about personal and professional background of leaders were identified for this research. The demographics questionnaire sought to obtain relevant demographic profiles of the leaders. The data included the leaders’ gender, age group (ranging from 35 years or under to 66 years and above), current position title (academic/research and admin positions at the middle management level), number of years in the current position (ranging from 1 year or less to 10 years and above), number of years of experience in higher education sector (ranging from 5 years or less to 21 years and above), whether a respondent had worked outside the higher education sector or not, and lastly, the leaders’ broad field of organisational unit covering education, arts, science, engineering, health, management and mixed fields. The next section discusses survey population.

3.5 Survey Population

The survey population for the present research constituted all leaders working at the middle management level in publicly funded Australian universities. This group of mid-level leaders was selected for two basic reasons. First, it is within the academic/research organisational units (e.g. faculties, schools, departments, research centres) and administration units (e.g. Human Resources, Student Services, Media and Communication) where the downsizing actions of leaders will have the most essential impact on the nature
and structure of universities as a whole. Second, the leaders’ positions are located between the demands of top management and the standards and expectations of rank-and-file staff members of academic/research and administration units in universities. Although the common perception as well as the downsizing literature has evidenced the top down approach adopted by the universities, the specific requirements are normally identified by the mid-level leaders. Thus, to be successful the downsizing will need the support of the mid-level leaders who in fact play a critical role in implementing downsizing actions.

Although, there are various definitions of what constitutes an organization’s middle management in universities, previous research that advocates surveying academic managers, research managers and administration managers was followed. These leaders are involved in the basic management and control of the universities or the day-to-day activities closest to the action with respect to academic/research and administration duties and are responsible for implementing downsizing strategies.

Arguably, leaders at the middle management level in universities are one of the most important groups of leaders who are offered the responsibility of leading the academic/research and administration organisational units. The roles of mid-level leaders have the capacity to manage the financial and human resources associated with downsizing strategies. Further, Santiago et al. (2006) suggested that the mid-level leaders have the responsibility of leading the organisational units that are at the operational base of the higher educational institutions, and such managers are best placed for implementing institutional policies and strategies. Therefore, it is assumed that the leaders at the middle-management levels are ideally positioned to provide reliable information on downsizing
strategies, and will have a fair understanding of different downsizing strategies whose recurrent use has infiltrated the publicly funded Australian universities at its base.

In the university sector, the academic managers have been defined by Subramanian (2003, p.524) as “Deans, Associate Deans, and Heads/Deputy Heads of the Schools or Departments, including other academics working in positions involving administrative responsibilities”. Similarly, Whitchurch (2004, p.3) has defined the universities’ administrative managers as those ‘who do not hold academic posts, but who have responsibility for functions such as student services, finance, human resources, estates, enterprise and external relations.’ Middle management for the purpose of the present study followed these definitions.

Furthermore, the upper boundary was set at the level of Deans and Directors (academic/research), and Directors (administration units), and the lower boundary of middle management at the level of Heads of Departments or Schools (for academic/research units) and Managers (administration units), since leaders at these levels directly supervise downsizing activities, and are responsible for executing policies and procedures associated with downsizing. Consequently, the survey population included mid-level leaders such as Deans, Head of School, Divisional Director and Director of administration unit, Registrar, Director of Research Centre, and Director of Institute, Manager of administration unit and Librarian were chosen as survey respondents. Leaders who hold the rank of Vice-Chancellor, Deputy Vice-Chancellor, and Pro Vice-Chancellor were excluded from the sampling population because such leaders are considered to be at the senior management level and do not conform to the definition of middle management adopted for this research. Such leaders are responsible for formulating policies and
procedures associated with downsizing. However, the focus of this research is on the implementation stage rather than formulation of downsizing strategies. Therefore, the survey population chosen for the research is considered appropriate.

The main purpose was to reduce the perceptual measurement bias and obtain as homogeneous a sample as possible, and therefore data were gathered from different leaders at the middle management level in publicly funded Australian universities. The fact that the study sample consisted of a homogeneous sample facilitated in having the same definition of middle management as valid across all universities that participated in the survey.

Further, in order to avoid any possible confusion arising out of conflicts in the understanding of downsizing phenomenon, it was reasonably considered that all leaders holding responsible positions while dealing with downsizing will necessarily have a thorough understanding of each and every downsizing action as suggested in their university policies.

Variation in influences and the extent of the use of downsizing actions by leaders were identified through survey respondents. Thus, it was possible to examine under similar conditions of business environment, whether the differences in approaches to downsizing could be explained in terms of differences in leaders’ characteristics and organisational culture.

This research focused only on the publicly funded universities in Australia and the heads of organisational units in these universities. A publicly funded university is an organisation which is predominantly funded by public means through federal and/or respective state governments. The sampling frame was constructed from the list of publicly
funded Australian universities (Appendix I) as published by the Department of Education, Employment and Workplace Relations, Australia (DEEWR, 2008). Currently, among 39 Australian universities listed by DEEWR (2008), two are private (Bond University and University of Notre Dame) and all the others are public universities.

While targeting the survey population, it was ensured that a reasonably well distributed population in different geographical locations in Australia and different categories of Australian universities was achieved, viz., new-generation metro and new-generation regional universities, innovative research universities (IRU), ATN (Australian Technology Network) universities, regional universities, and Group of Eight (Go8) universities. The focus of this research was only on higher education and limited to publicly funded universities in Australia. Therefore, the universities’ entities such as overseas campuses, Technical and Further Education (TAFE) institutes, the private universities, viz. Bond University and the University of Notre Dame Australia, and two foreign universities, Carnegie Mellon University (USA) and Cranfield University (UK), which have campuses in Adelaide, were excluded from the survey.

Although the focus of this research is on the implementation of downsizing strategies rather than downsizing decision-making, it was considered essential and appropriate for the senior management leaders of the publicly funded universities to be contacted prior to inviting the middle management leaders to participate voluntarily in this project. This approach was adopted for the following reasons:

First and foremost it is a mandatory requirement as part of a human research ethics process; secondly, it is a matter of courtesy to inform the senior management leaders prior to conducting a survey research in their respective universities; thirdly, the endorsement of
these senior management leaders could be conveyed to the leaders at the middle management level in order to encourage them to participate in the present research.

All 37 publicly funded universities as listed by Department of Education, Employment and Workplace Relations, Australia (DEEWR, 2008) were contacted. A package containing a letter addressed to the Pro Vice-Chancellors or Deputy Vice-Chancellors (Research) as applicable was sent to each University along with a research proposal, Human Research Ethics Committee Approval letter and a list of generic position titles of heads of organisational units. The letter introduced the researcher, described the purpose of the research and requested permission to conduct the survey research at their universities. Pro Vice-Chancellors or Deputy Vice-Chancellors (Research) were informed that survey respondents were heads of organisational units working in Australian universities and the research findings were expected to identify new ways of thinking about leaders' approaches to downsizing strategies that affect their professional future and their institutions.

In order to facilitate active participation, the postal correspondence was followed by a telephone contact with the office of Pro Vice-Chancellors or Deputy Vice-Chancellors (Research). Of 37 universities, permission was granted by ten universities, eight universities refused to participate, eighteen universities did not respond and one university gave permission subject to the condition of distributing the questionnaire internally to their relevant staff. However, the condition put forth by this university was not accepted owing to research methodological reasons. Therefore, only ten universities were available for participation in this research, which provided a representation of more than 25 per cent of publicly funded Australian universities. The sample was drawn from schools and faculties,
research centres, and administration units of these ten publicly funded universities. Due to the exploratory nature of this research, the representativeness of the whole population was not the intent. However, it can be observed that seven out of 18 of the first three university types (i.e. New-generation Metro universities, New-generation Regional universities, Innovative Research universities) participated in this study (ref Table 3.2). Thus data from a reasonable sized sample (with an approximately 39 per cent response rate) comprising of three university types has been gathered. Table 3.2 summarizes the number of universities contacted and the number participated by Group Affiliation in the present research.

**Table 3.2**

**Participating publicly funded universities by group affiliation**

<table>
<thead>
<tr>
<th>University Group</th>
<th>Number of universities contacted</th>
<th>Number of universities participated</th>
</tr>
</thead>
<tbody>
<tr>
<td>New-generation Metro universities (NGMU)*</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>New-generation Regional universities (NGRU)*</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Innovative Research universities (IRU)</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Australian Technology Network (ATN)</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Regional universities*</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Group of Eight (Go8)</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

* Source: Present research
The various reasons stated by the 8 universities for the non-participation in this research are presented in the Table 3.3.

Table 3.3  
Reasons stated by the universities for their non-participation

<table>
<thead>
<tr>
<th>Reason for non-participation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) “This university has been in growth mode for the past sixteen years and continues to grow. Downsizing has not occurred here apart from one area”.</td>
</tr>
<tr>
<td>2) “…decided to decline the request”.</td>
</tr>
<tr>
<td>3) “University’s strict internal control policy doesn’t permit…..”.</td>
</tr>
<tr>
<td>4) “….is not able to participate in the research at this time”.</td>
</tr>
<tr>
<td>5) “There is some uniqueness within the university’s collective agreement that was ruled upon by the courts. As such, the ability to accommodate this research on this topic is not possible at this time”.</td>
</tr>
<tr>
<td>6) “...request has received thoughtful consideration by members of the university’s survey reference group but I regret to advise you that permission to conduct the research at the university of ............has not been granted”.</td>
</tr>
<tr>
<td>7) “I will have to decline your offer at this time. Our staff members are currently engaged in numerous data collection activities and we are mindful of “over surveying” or creating uncertainty regarding the purpose/nature of further questionnaires”.</td>
</tr>
<tr>
<td>8) “....not interested to participate in the research”.</td>
</tr>
</tbody>
</table>

* Reason for non-participation in the present research was conveyed to the researcher through e-mail or letter or telephone by the PVCs or DVCs or by their respective executive assistants or personal assistants.

Due to the anonymity of survey responses, it was difficult to find out whether the returned responses from the survey population came from a reasonably well distributed population in different categories of Australian universities. However, it was ensured that the survey population consisted of all mid-level leaders from academic, research and administration units.
Downsizing has always been a controversial area of research and over time the challenges have increased. As this research was conducted during the GFC (Global Finance Crisis), considerable attention was paid to the sampling strategy. For instance, publicly funded Australian universities in the year 2008 were undergoing Higher Education Review (Bradley, Noona, Nugent, & Scales, 2008) processes initiated by the Federal Government and many universities were reported to have been experiencing organisational change at that time. Therefore, such universities were not necessarily able to participate in the research. This was evidenced from their letters and e-mails sent to the researcher stating their unwillingness to participate in this survey research.

Although not expressed overtly by the university authorities, the sensitive nature of the topic of research was also supposed to be one of the main reasons of non-participation in this research. Many universities were reported to have been experiencing organisational change and did not want to endorse this research project by taking part in it. Under such circumstances, it was hard to expect good support from all universities. Most of the universities reacted in this way, in spite of the fact of the survey questionnaire being anonymous (neither the participants nor their institutions were identifiable in any way) and assurance of strict confidentiality of records from the researcher’s side.

A careful identification of the appropriate survey population from the ten publicly funded Australian universities was required to facilitate the findings in order to reflect the following two goals. The first goal was to examine the ideal and practical downsizing strategies in the publicly funded Australian universities. The second goal was to explore the links between downsizing strategies, leaders’ characteristics and organisational culture. To achieve these goals, data were required to be collected from the middle-management
level leaders about the downsizing actions, their personal characteristics and the type of culture in their universities.

There were two challenges confronted while sampling for this survey research. There was neither any opportunity and time to seek position descriptions of leaders, nor the possibility of getting the same information from the Australian universities’ websites. There is a large diversity in the use of position titles in different Australian universities. It was decided to target the leaders based on the generic titles, number of people reporting to them and the meanings of those position titles that are widely used in the Australian university sector. However, there was no single existing database which could provide all such details of the staff in these publicly funded Australian universities. Therefore, the organisational structures of all participating universities were examined thoroughly and a probable list of all leaders who were expected to form the potential survey population was prepared using their contact details from their respective universities’ websites. The list was mainly limited to middle management level. Overall, it was harder to ascertain the exact number of leaders in the middle management positions (academic/research and administration). One thousand six hundred and thirty five leaders were identified from the publicly available websites of Australian universities as a potential survey population that conformed with the definition of middle management for this research.

Instead of examining the ideally preferred and practically used downsizing strategies in depth in one or a few universities at the group or organisational unit levels, this research adopted an approach of researching the downsizing strategies in a broad range of universities’ groups and within universities that varied by size and number of organisational units. The survey population that was selected varied in the type of
organisational units (viz. academic, research and administration units) of publicly funded Australian universities.

The use of organizational representatives in surveys is common in the downsizing research studies (e.g. Mishra & Mishra, 1994; Farrell & Mavondo, 2004; Farrell & Mavondo, 2005). In this direction, Seidler (1974), Houston and Seymour (1974), Phillips (1981), and Mitchell (1994) have suggested certain useful guidelines in selecting key informants within organisations. The potential survey respondents were chosen on the premise that they have the understanding of different downsizing strategies used in the Australian University sector. Also, owing to the fact that these leaders were mainly at the middle management level, they were believed to be directly responsible for implementing the downsizing strategies in their respective organisational units. Precisely, the following guidelines were used in this research for choosing the potential respondents;

- Currently hold a formal leadership role at the middle management level.
- Occupy identical positions as heads of organisational units in Australian universities with the current position titles such as Dean, Head of School or Department, and Director of administration units (e.g. Human Resources, Student Services, Marketing, Media and Communication).
- Are able to share the researcher's interest in the downsizing research. This is confirmed by the completed responses returned to the researcher.

The focus of this research is on the implementation of downsizing strategies rather than downsizing decision-making, and therefore the heads of organisational units were expected to provide the reliable source of information responsibly on the extent of different
downsizing strategies which have been used. The next section discusses the data collection procedure.

3.6 Data Collection Procedure

A survey questionnaire package containing a covering letter to the participant, a survey questionnaire, and a reply-paid envelope was sent through Australia Post to 1635 leaders working mainly at the middle management level at ten publicly funded Australian universities. Given the difficulties involved in collating the postal addresses of leaders of all ten publicly funded Australian universities at once, the survey questionnaire packages were sent in batches between 1st September 2008 and 31st December 2008. This method proved to be time efficient.

With the intent of not disturbing the regular functions and to ensure that the respondents would receive the documents in the shortest possible time, the questionnaire was posted directly to the survey participants. This proved to be not only economical but also time efficient. This method is a non-personal technique of data collection as the respondents answer their questionnaire without the researcher being present.

The letter to the survey respondents clearly stated the purpose and use of the research, and also the respondents were informed that their institution has been contacted and the researcher has been permitted to contact all participants directly. The covering letter clearly indicated that this research seeks to gain an insight into role of leaders’ characteristics and organisational culture in choosing downsizing strategies.

The survey respondents were requested to return the completed questionnaires through the reply-paid envelopes so as to reach the researcher directly. Participation was strictly voluntary and completing the survey was taken as informed consent to participate.
Respondents were assured that the survey questionnaire would remain confidential and neither the participants nor their institutions were identifiable in any way.

In order to achieve a higher response rate, it was decided to send follow-up letters through e-mail communication. Therefore, the first reminder (Appendix G) was sent four weeks after the completion of the first contact with the respondents. This was followed by the second reminder (Appendix H) sent four weeks from the date of first follow-up. 277 responses were returned. Of 277 returned responses, 20 responses had to be discarded due to various reasons as stated in Table 3.4.

Table 3.4
Reasons for discarding the returned responses

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Respondents were no longer at those addresses as depicted on their universities’ websites. This was revealed through returned envelopes bearing “Returned to Sender”. (It is to be noted here that the researcher was unable to find out how many survey questionnaires were wasted without being returned as the posts were sent through ordinary mail)</td>
<td>14</td>
</tr>
<tr>
<td>2) Respondents returned the questionnaires without completing them but stated that they were,</td>
<td></td>
</tr>
<tr>
<td>– not in a position of authority to use downsizing actions</td>
<td>2</td>
</tr>
<tr>
<td>– have not downsized in the last three years</td>
<td>2</td>
</tr>
<tr>
<td>– no longer heads of organisational units</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total number of responses that were discarded</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

Additionally, two respondents returned the survey questionnaires after completing less than one quarter of the total number of questions. Sekaran and Bougie (2003) have suggested discarding the returned response when a respondent has not answered more than 25 per cent of the questionnaire. Therefore, these two returned responses were not considered. In addition to the above, 24 respondents received the questionnaires but chose
not to complete them for various reasons (ref Table 3.5) resulting in an actual population size of 1615.

**Table 3.5**

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Not in a position of authority to use downsize strategies.</td>
<td>4</td>
</tr>
<tr>
<td>2) Do not wish to participate in the survey though qualified to use downsizing strategies.</td>
<td>8</td>
</tr>
<tr>
<td>3) Long leave, overseas visits and other reasons.</td>
<td>10</td>
</tr>
<tr>
<td>4) Occupied the leadership position recently and not involved in using any downsizing actions.</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total number</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

* Various reasons stated by survey respondents for their non-response was revealed through their e-mails in some cases, and their executive assistants’ e-mails in others.

Finally, 255 returned responses (approx. 16 per cent return rate) were considered as valid and useable for this research. Since the intention was to conduct an exploratory test with the data from a large number of mid-level leaders of publicly funded Australian universities, this response rate was judged to be adequate.

Even though respondents were meticulously selected using the information about their position titles as depicted on their university websites, some position titles turned out to be at an advisory or honorary level. For instance, one respondent had the position title of “director” but did not have authority to use downsizing strategies. Another respondent had no staff members reporting to him, though having the title of “manager”. Considering such difficulties associated with identifying the eligibility of respondents in the sampling frame chosen for the research, attempting to compute the real figure of response rate becomes a
futile exercise. As the survey questionnaires were sent through ordinary post, it is impossible to determine how many leaders actually received the survey questionnaire.

It was not known how many of the leaders who received the questionnaire had not engaged in downsizing strategies in the last three years and therefore did not complete the questionnaire because it was not applicable to them, versus how many who knew that they had engaged in downsizing strategies in the last three years but who chose not to participate in the research.

The survey questionnaire may not have been posted to or received by all eligible staff in leadership positions in each university. It may have not reached most leaders who were either unavailable at the time of survey (on an annual leave or overseas visit) or had recently quit the leadership position. Therefore, it is reasonable to assume that a set of 255 valid responses is modest in studies that are conducted under a downsizing environment in a university setting. It holds good in the case that every eligible staff member who has a position of authority to use downsizing strategies in each of the participating universities had received and opened the survey questionnaire package.

Although the non-response was disappointing for the researcher, it is not unusual for research topics and surveys of this kind. Burns (1994) has suggested the response rates to mail questionnaires are generally low and rarely exceed 50 per cent, and rates between 15 - 50 per cent are common. Furthermore, recent studies (e.g. Keeter, Kennedy, Dimock, & Craighill, 2006; Holbrook, Green, & Krosnick, 2003) have demonstrated that the return rate is not as important a measure of survey data quality as was thought earlier. Furthermore, Zahes and Baker (2007) have argued that surveys with low return rates, even
as low as 4 per cent can yield results that are statistically equivalent to those from surveys with much higher return rates, although a high return rate is usually better than a low one.

During the last two decades, most of the publicly funded universities have been operating on similar lines to corporate organisations, owing to an increased commercialization of higher education in Australia (Shin & Harman, 2009; Naidoo, 2006; Kezar, 2004). There exists a large diversity of position titles in the higher education sector and management levels and roles are complex in nature. Therefore, it was difficult to identify and target the survey population based on the position titles as such. Further, it needs to be admitted that the hierarchical structure of universities contains fewer elements of authority in comparison to commercial business organisations (Cyert, 1978). Moreover, when direct approaches using mail questionnaires are made to key leaders such as directors who are organisational representatives, these are typically characterized by lower response rates compared to a population of individuals (Baruch, 1999). The next section discusses the demographic profile of the sample.

3.7 Demographic Profile of the Sample

Demographic data of the leaders gathered for this research covered their personal as well as professional information. Consequently, questions were included to capture more specific data from the leaders. Demographic data about the leaders has been presented in Table 3.6 to support the discussion in this section that these leaders are representative of the target population of middle management in publicly funded Australian universities.
### Table 3.6
Demographic Profile of the Sample

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Category</th>
<th>Frequency (N)</th>
<th>Per cent (%)</th>
<th>Responses (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td>Female</td>
<td>121</td>
<td>47</td>
<td>255</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>134</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td><strong>Age Group</strong></td>
<td>35 years or less</td>
<td>15</td>
<td>6</td>
<td>255</td>
</tr>
<tr>
<td></td>
<td>36 - 50 years</td>
<td>108</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>51 years and above</td>
<td>132</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td><strong>Current Position Title</strong></td>
<td>Executive Dean</td>
<td>7</td>
<td>3</td>
<td>253</td>
</tr>
<tr>
<td></td>
<td>Dean, Deputy Dean, Associate Dean, Head of university campus</td>
<td>29</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Director of Research Centre</td>
<td>15</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Director of Institute or College</td>
<td>6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Head of School, Associate Head of School, Deputy Head of School</td>
<td>54</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Divisional Director of Administration unit, Registrar</td>
<td>26</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Director, Associate, Director of Administration unit</td>
<td>43</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manager of Administration unit</td>
<td>62</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Librarian, Head of Campus Library or Faculty Library or Department Library</td>
<td>11</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Length of time in current position</strong></td>
<td>1 year or less</td>
<td>90</td>
<td>35</td>
<td>255</td>
</tr>
<tr>
<td></td>
<td>2 - 5 years</td>
<td>123</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 years and above</td>
<td>42</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>
Table 3.6 (Continued...)

**Demographic Profile of the Sample**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Category</th>
<th>Frequency (N)</th>
<th>Per cent (%)</th>
<th>Responses (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience in Higher Education Sector</td>
<td>10 years or less</td>
<td>93</td>
<td>36</td>
<td>255</td>
</tr>
<tr>
<td></td>
<td>11 - 20 years</td>
<td>96</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21 years and above</td>
<td>66</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Worked outside Higher Sector</td>
<td>Yes</td>
<td>237</td>
<td>93</td>
<td>254</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>17</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Broad field of organisational unit</td>
<td>Natural &amp; Physical Sciences, Agriculture, Environment and related studies, Society &amp; Culture, Creative Arts</td>
<td>30</td>
<td>12</td>
<td>247</td>
</tr>
<tr>
<td></td>
<td>Information Technology, Eng. &amp; related Technologies, Architecture &amp; Building</td>
<td>43</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health, Food, Hospitality, and Personal Services</td>
<td>39</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>33</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management and Commerce</td>
<td>67</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mixed field</td>
<td>35</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Academic / Research Position: Executive Dean / Dean / Deputy Dean / Associate Dean / Head of University Campus / Head / Deputy Head / Associate Head of School or Department / Director of research centre / Director of Institute or College

Administration Position: Divisional Director of administration unit / Registrar / Director / Associate Director of administration unit / Manager of administration unit / Librarian / Head of Campus or Faculty or Department Library

The demographic data were not only used to provide a better understanding of the sample’s profile, but also has been used while describing the most widely preferred (and used) as well as least preferred (and used) downsizing actions in publicly funded Australian universities. This is presented in the descriptive analysis section of the next chapter.
Two hundred and fifty five leaders at the middle management level from ten publicly funded Australian universities provided valid and useable survey responses for this research. All leaders in the sample indicated that they would ideally prefer one or the other downsizing action to “a large extent”. Of the 255 leaders, 24 per cent (N = 61) reported to have used practically none of the listed downsizing actions in the last three years. However, 194 leaders have indicated that they have used one or the other downsizing action to “a large extent” in the last three years.

Breakdown by gender shows that there is a nearly even distribution of women and men in the sample. Of the 255 leaders, 47 per cent (N = 121) are women and 53 per cent (N = 134) are men. The gender distribution in the sample indicates men outnumbering women by only six per cent. Hence, the survey results were considered not to be gender-biased. However, it is interesting to note that Australian higher education sector-wide statistics relating to full-time equivalent staff by gender indicate 55 percent are women and 45 per cent are men (breakdown by gender and not leadership position), that is, women outnumbering men by ten percent (Department of Education, Employment and Workplace Relations - DEEWR, 2009). This suggests that women are under-represented in the present sample and men are over-represented in comparison to their relative representation in the higher education sector.

These leaders (N = 255) are divided into three age groups, viz., leaders who are 35 years or under (six per cent), 36 - 50 years (42 per cent), and those who are 51 years and above (52 per cent). Australia's population like that of most developed countries is ageing which is reflected in the current research as more than one half of the sample (N = 132) are in the age group of 51 years and above. It is clearly seen that age distribution has its weight
in the 51+ segment.

As for current position title, participants were asked to indicate which of the listed positions they were currently holding. Of the 253 respondents who reported their current position title, 44 per cent of the sample (N = 111) were found to be academic/research staff, and 56 per cent (N = 142) were administrative staff. This distribution of full-time equivalent staff by function is more or less consistent with the Australian higher education sector-wide statistics which indicate 47 percent are academic/research staff and 53 per cent are administrative staff (Department of Education, Employment and Workplace Relations - DEEWR, 2009). Furthermore, nearly one half of the sample (N = 123) has the current positional tenure of two to five years, and 35 per cent (N = 90) with one year or less.

A quarter of the sample (N = 66) was found to have a work experience of 21 years and above in the higher education sector and nearly 38 per cent (N = 96) had worked from 11 to 20 years in the same sector. This indicates that they had sufficient experience that was beneficial as an input for the downsizing research. Contrastingly, out of 255 respondents 93 per cent (N = 239) reported to have worked outside the higher education sector at some stage of their working life.

The respondents are from different fields of organisational units. Of the 247 respondents who answered this question, more than a quarter (N = 67) reported their broad field of organisational unit as Management, Commerce and administration, and 14 per cent (N = 35) are from mixed fields. Other relevant characteristics of the survey population are presented in Table 3.6.

There is no evidence from the demographic data of the survey population to suggest that the responses are not from experienced leaders who are representative of the
population at the middle management level in publicly funded Australian universities. The next section discusses the data processing procedure.

3.8 Data Processing Procedure

For a meaningful interpretation of results, the data are required to be reasonably good (Sekaran & Bougie, 2003). The raw data could not be used to reach conclusions until they are converted into information in a format that is suitable for decision-making (Zikmund, 2003). The procedures in converting raw data into useful information for this research included data editing, data coding, data entry, reversing negatively worded items and data analysis. The research data were processed and analysed using SPSS version 16.0. The different stages of data processing procedures are discussed in the following sections.

3.8.1 Data Editing

The data editing mainly involves a process of checking the data for errors and omissions in the questionnaires and making it ready for coding and entry. As the data were collected through mail questionnaires in this research, so in-house editing (Zikmund, 2003) was considered the appropriate method of data editing. The data editing method provided clarification of the responses that were logically inconsistent.

A few respondents had not completed the questionnaire properly and this could have resulted in inaccurate and incomplete data. These errors could not be corrected by contacting the respondents and clarifying the responses as the survey questionnaire was completely anonymous (neither the participants nor their institutions were identifiable in any way) and strict confidentiality was assured. Thus, bad responses were discarded. Some respondents had mentioned “not applicable” beside some question items from sections A, B, C, D, E, and F. Such responses were considered as Missing Data. This approach of data
editing ensured ‘completeness, consistency and reliability of the data’ (Zikmund, 2003, p.454) before subjecting it to a coding process.

3.8.2 Data Coding

Prior to data entry onto the computer, all returned survey response sheets were assigned a case ID consisting of three digits, 001, 002, 003, etc. This coding process ensured the identification of mail responses using corresponding numerical scores while transcribing those scores onto the computer. Next, the question items of Ideal and practical downsizing actions, BFI-10, LBDQ-XII, SSVS, OCI and demographic data were coded using numerals. A numerical code of 9 was assigned to missing data for the question items of continuous variables. In case of demographic data, a numerical code of 9 was assigned to missing data for all question items except the current position title and broad field of organisational unit for which a numerical code of 99 was assigned.

Some respondents had provided dual or multiple responses for the question items on current position title as they held more than one position (e.g. Dean as well as Head of School). The highest position was considered as the respondents’ current position title and re-coded. Similarly, a few respondents had mentioned their current position title as “other”. Titles such as Head of Program, Program Leader, Deputy Academic Leader were considered as at the level of a Head of School; Clinical Practice Manager, Policy Manager at the level of a Manager; Director of Executive Development, Director of Clinical Practice at the level of a Director of administration unit; Chief Technology Officer at the level of a Divisional Director of administration unit. These titles were then re-coded. Additionally, few respondents had declined to answer some questions or skipped without apparent reason. Such responses were treated as missing and a numerical code 9 was assigned. After
completing the editing and coding procedures, the data were keyed into the computer using SPSS spread sheet.

3.8.3 Data Entry

Sekaran and Bougie (2003) have suggested several means of data entry, such as an optical scanning system and manually keying the data into computer. This research used the survey questionnaire which was not designed to suit optical scanning and therefore, data entry was done manually.

3.8.4 Data Screening

After the data were collected, edited, coded and entered into SPSS 16.0, the data file was checked for accuracy. While, the data were manually keyed into the computer by the researcher, another person verified the data entered to ensure accuracy before it was ready for analysis.

3.8.5 Reversing negatively worded items

Question items of BFI-10 (viz. B1, B3, B4, B5, and B7) and LBDQ-XII (viz. C12, C13, C14) contained negative wording. In order to help prevent response bias, these items were reverse scored before subjecting the responses to data analysis. The next section discusses the different stages of data analysis.

3.9 Data Analysis

In this section, the different stages of data analysis are discussed briefly. While exploring the links between ideal and practical downsizing strategies, leaders’ characteristics and organisational culture, the quantitative research data was analysed through five stages using SPSS version 16.0. SPSS (originally, Statistical Package for Social Sciences) is one of the most widely used computer programs for a statistical
analysis within the social sciences. Table 3.7 presents the different stages of data analysis and their purposes.

Table 3.7
Different Stages of Data Analysis and their purposes

<table>
<thead>
<tr>
<th>Stages</th>
<th>Analytical technique</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Preliminary Data Analysis</td>
<td>To analyse the missing data, check for any possible outliers, assess the normality of distribution, and lastly, the reliability analysis and validity testing of downsizing survey questionnaires.</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Descriptive Statistical Analysis, Cross-</td>
<td>To answer the research question, RQ1: Is there a widespread orientation towards downsizing in publicly funded Australian universities?</td>
</tr>
<tr>
<td></td>
<td>tabulations and Chi-square Analyses</td>
<td>The exploratory factor analysis was specifically used to find out whether ten downsizing actions could be reduced to a smaller number of more general or “inclusive” dimensions referred to as ideal and practical downsizing strategies.</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Exploratory Factor Analysis</td>
<td>The factor scores on each of the factors were used to categorise the respondents into clusters. The clusters thus formed were used in subsequent analysis, i.e. one-way ANOVAs.</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Cluster Analyses</td>
<td>To answer the research questions, RQ2: Are downsizing strategies associated with leaders’ characteristics and organisational culture under ideal conditions in publicly funded Australian universities? RQ3: Are downsizing strategies associated with organisational culture under practical conditions in publicly funded Australian universities?</td>
</tr>
</tbody>
</table>

In referring to Table 3.7, first, quantitative research data were analysed in order to gain an understanding of the survey population and of the data using preliminary data analysis. Second, it was intended to gain a closer understanding of the nature of leaders’ responses towards downsizing actions in publicly funded Australian universities. The research data that had to be explored in this study thus warranted the use of descriptive statistics (frequencies, means and standard deviations), Crosstabs and Chi-square analyses,
and exploratory techniques, viz. exploratory factor analysis and cluster analysis. Owing to the exploratory nature of this research, the aim was to generate hypotheses and not seek to test them. The exploratory factor analysis which formed the third stage of data analysis was used to find out whether ten downsizing actions could be reduced to a smaller number of more general or “inclusive” dimensions referred to as downsizing strategies, thus, answering the research question RQ₁. Fourth, downsizing strategies identified through exploratory factor analysis were used to cluster the leaders into strategic orientation groups based on the similar emphasis that leaders place on a particular downsizing strategy. The clusters thus formed were used in the final stage of analysis, i.e. one-way ANOVAs for answering the research questions RQ₂ and RQ₃. These stages of data analysis are presented briefly in the following sections.

3.9.1 Preliminary Data Analysis

The first stage of the analyses comprised preliminary data analysis which included Missing Data Analysis, checking for any possible outliers, and assessing the normality of the distribution, reliability analysis and validity testing. These analyses are discussed briefly in the following sections.

3.9.1.1 Missing Data Analysis, checking for any possible Outliers and assessing the Normality of Distribution

Newman (2009) considers the missing data as a statistical difficulty, which resulted from the decision by one or more sampled individuals to not respond to a survey or survey item. Missing data definitely poses a problem for a data analyst as it leads to the biasing of statistical results.

Therefore, SPSS MVA (Missing Value Analysis) was used to determine the extent
and pattern of the missing data for Ideal and practical downsizing actions. The list-wise exclusion of cases resulted in a loss of massive data and therefore, pair-wise exclusion of cases was used in this research. During this stage of analysis, 61 cases were identified who used practically none of the listed downsizing actions in the last three years. Therefore, these cases were deleted from the sample size of 255 valid and useable responses and only 194 cases were used for subsequent analyses of practical downsizing actions. Thus, 255 cases were considered for analysis of ideal downsizing actions whereas only 194 cases for the analysis of practical downsizing actions.

After the Missing Data Analysis, data were checked for any possible outliers. Hair, Black, Babin, and Anderson (2010) and Pallant (2007) suggest that outliers are not representative of the population and found to distort the statistical tests. Therefore, the data in this research were first screened for any outliers and only after ascertaining the genuineness of scores, was their possible influence examined in order to decide the course of action that was needed.

At first, the item-wise tails of the distribution of histogram were inspected thoroughly. Next, the item-wise boxplots were inspected for any indications of outliers. SPSS considers outliers as those points that extend more than 1.5 box-lengths.

The descriptive statistics were studied to investigate the influence of these outlying cases for both ideal and practical downsizing actions. As suggested by Pallant (2007), item-wise comparison was made between 5 per cent trimmed mean values with the original mean values to determine whether there was any difference between them. The two mean values (5 per cent trimmed mean and original mean values) for all the items were found to
be reasonably similar. Given this, and the fact that the values were not too different from the remaining distribution, it was decided to retain these outlying cases in the data file.

According to Coakes, Steed, and Ong (2009), the assumption of normality is a pre-requisite for many inferential statistical techniques. However, Tabachnick and Fidell (2007) argue that normality of the variables is not always required for analysis, but the solution is usually quite a bit better if the variables are all normally distributed. Nevertheless, they acknowledge that the solution becomes degraded if the variables are not normally distributed and particularly, if the variables are non-normal in very different ways, i.e. some positively and some negatively skewed. In line with the above contention, Hair et al. (2010) also suggest that researcher should assess the normality for all variables included in the analysis, though large sample sizes tend to diminish the detrimental effects of non-normality.

Other than the two most common statistics, that is, skewness and kurtosis statistics, Shapiro-Wilks and Kolmogorov-Smirnov provide the level of significance for the differences from a normal distribution. According to Hair et al. (2010), such tests of significance are useful in samples with size fewer than 30 and quite sensitive in samples exceeding 1000 observations, and they strongly recommend the use of the statistical tests as well as graphical plots to assess the normality. Therefore, the normality of variables was assessed by statistical as well as graphical methods for all item-variables of ideal and practical downsizing actions in this research. As a first step, the simplest diagnostic tests for normality such as histogram, normal and detrended normal plots were conducted for all item-variables of ideal and practical downsizing actions.

Tests for Kurtosis and Skewness were performed to ensure that all the item-
variables were normally distributed. Weisstein’s (2004) thumb rule was used to assess the skewness. Weisstein (2004) recommend’s value of 1 as moderate skewness and values from 1 to 10 indicate moderate non-normality while values greater than 10 indicate severe non-normality. In all instances, a check for reasonable variance and normality of distribution of scores for the survey population was one which was used in subsequent analyses. In addition to the above, normality of the distribution of scores was assessed for Shapiro-Wilks and Kolmogorov-Smirnov statistics. The next section discusses the reliability analysis.

3.9.1.2 Reliability Analysis

According to Brace, Kemp, and Snelgar (2009), if items within a questionnaire are intended to measure the aspects of the same construct then they should all be fairly strongly correlated with each other. In other words, the questionnaire should be assessed for the degree of internal consistency between multiple measurements of a variable. As reported by Black (1999), Mehrens and Lehmann (1984) describe six major kinds of reliability, viz. test-retest reliability, parallel forms, split-half estimate, Cronbach’s Alpha, Kuder-Richardson estimates of internal consistency, and scorer reliability.

Given the limitations of the research design and purpose of this research, test-retest reliability, parallel forms, Kuder-Richardson estimates of internal consistency, and scorer reliability were considered to be inappropriate measures of reliability. Black (1999) suggests that it is better to use Cronbach’s Alpha if one has not planned a test with matched halves. Cronbach’s Alpha was chosen as the most suitable measure to assess the internal consistency of the Ideal and Practical Downsizing Survey Questionnaires.

Pedhazur and Schmelkin (1991) argue that the user of the measure must determine
how reliable the test should be depending on the circumstances of the research. However, Kline (2000) suggests that Alpha should ideally be around 0.9 and never be below 0.7. Nevertheless, research scholars such as Clark-Carter (2004), Hair et al. (2010), Brace et al (2009), and Pallant (2007) suggest that a Cronbach’s Alpha of 0.7 is reasonably acceptable. Additionally, Sekaran and Bougie (2003) argue that reliabilities less than 0.6 are generally considered as poor, those in the range of 0.7 as acceptable and those over 0.8 as good.

The objective of the reliability analysis in this research was to establish whether all variables are robust, reliable, and valid. Therefore, reliability was assessed using Cronbach’s alpha measure for the Ideal and practical downsizing actions. Other parts of the survey contained previously published questionnaires, viz. LBDQ-XII, BFI-10, SSVS and OCI, and they are found to have good reliability (refer section 3.4).

In order to determine how reliable the Ten - Item measure of downsizing is, the reliability analyses were conducted for both downsizing questionnaires (ideal and practical). The Cronbach’s (1951) Alpha was used to assess the internal consistency of the respondents’ answers to all question items. Additionally, to find out the degree to which each item correlates with the total score, the item-total statistics (Hair et al., 2010) were assessed for both questionnaires of downsizing. The details of reliability analysis are presented in the data analysis and results. The next section discusses the validity test.

3.9.1.3 Validity Testing

Firstly, the content validity of Ideal and Practical Downsizing Survey Questionnaires was established by generating question items using scholarly literature, thus defining downsizing by theoretical means (refer section 2.2.3). This was followed by
experts’ validation. Secondly, the criterion-related validity was ensured through the use of a five-point Likert scale for all six variables, viz. ideal downsizing actions, practical downsizing actions, personality, leadership styles, personal values and organisational culture. Thirdly, the factor analysis indicated strong inter-item correlation and hence confirmed that each construct is being measured separately. Thus, the construct validity of the Ideal and Practical Downsizing Survey Questionnaires was established. The details of validity testing are presented in the data analysis and results. Other parts of the survey contained previously published questionnaires, viz. LBDQ-XII, BFI-10, SSVS and OCI, and they are found to have good validity (refer section 3.4).

In order to gain a better understanding of the research data and thence to answer the research question RQ1, the descriptive statistical analysis, crosstabs, chi-square analyses and exploratory factor analyses were conducted, whose discussion is presented in the following sections.

3.9.2 Descriptive Statistical Analysis

One of the aims of this research was to find out, if there is any generalised preference of certain downsizing actions over others in publicly funded Australian universities. The descriptive statistics, viz. frequencies, percentages, means and standard deviations were used to determine the most preferred (and used) and least preferred (and used) downsizing actions, in addition to finding out the perceived similarities and differences in regard to the downsizing under two contexts, ideal and practical. The results are presented in the next chapter.
3.9.3 Cross-tabulations and Chi-square Analysis

The purpose of the cross tabulations was to establish the extent to which the ideal and practical downsizing actions identified are associated with the demographics of leaders (viz. gender, age group, positional tenure, position title, work experience in higher education sector and the broad field of organisational unit). The Chi-square tests were conducted to assess the leaders’ demographic differences on the extent to which they would prefer as well as use different downsizing actions.

3.9.4 Exploratory Factor Analysis

The third stage of data analysis constituted exploratory factor analysis of ideal and practical downsizing actions aimed at data reduction and thereby extending the answer to the research question RQ1. The purpose of factoring items was to explain the downsizing actions in terms of their common underlying dimensions or factors, thereby reducing the information contained in the constructed questionnaire into a smaller set of dimensions with a minimum loss of information. In other words, the goal of using exploratory factor analysis was to discover optimal weightings (Floyd and Widaman, 1995) or weighted linear combinations (Hair et al., 2010) of the measured variables of downsizing, so that a large set of related variables (in this case, ten downsizing actions) could be reduced to a smaller set of factor scores that have maximum variability. Rummel (2002) suggests that factor analysis is a tool for developing an empirical typology. Exploratory factor analysis was used to factor analyse the ten ideal and practical downsizing actions in order to arrive at a distinctive set of factors which were later referred to as downsizing strategies. Thus, the results of the factor analysis were used to advance empirical typologies of practical and ideal downsizing.
It was intended to gain a closer understanding of the nature of leaders’ responses towards Ideal and practical downsizing actions. The resulting factor scores were used in subsequent analyses. If the ten ideal and practical downsizing actions could be represented as a smaller number of composite variables in order to be used for further analyses (Cluster Analysis and one-way ANOVAs in this research), then such analyses could be made more parsimonious (Hair et al., 2010). The factor scores thus produced were expected to provide an individual’s score on this smaller number of measures of composite variables.

As the variables are combined into a single factor, then the problem of multicollinearity would disappear (Field, 2009). This research approach was expected to provide an insight into the Ideal and Practical Downsizing Survey Questionnaires constructed for this research, which is aimed at investigating the differences in downsizing strategies in publicly funded Australian universities, and thence to explore the links of downsizing strategies with the leaders’ characteristics and organisational culture.

Principal Component Analysis (PCA) and Common Factor Analysis (CFA) were found to be two statistical procedures expected to serve the purpose of factor extraction. Both PCA and CFA share important mathematical characteristics as well as the common goal of reducing the dimensionality of the data, but the approaches taken to do so may be different (Velicer and Jackson, 1990, Joliffe, 2002). However, there is no consensus among researchers when it comes to results provided by PCA and CFA. For instance, some researchers such as Velicer and Jackson (1990), Steiger (1990), Shoemann (1990), and Guadagnoli and Velicer (1988) have argued about the high degree of similarities in results, whereas others such as Snook and Gorsuch (1989), Borgata, Kercher, and Stull (1986), Hubbard and Allen (1987), and Mulaik (1990) strongly disagree with it.
Notwithstanding these agreements and disagreements among scholars, Tabachnick and Fidell (2007) provide a common ground by suggesting that the choice between PCA and CFA depends on the researcher’s assessment of the fit between the models, the data set, and the goals of the research. Principal Component Analysis (PCA) was used in this research for the following reasons.

- Data reduction is the primary aim for using factor analysis in this research and PCA is highly recommended when data reduction is the primary aim (Floyd and Widaman, 1995).

- A literature survey conducted for this research suggests that PCA is a widely preferred statistical procedure in business related studies.

- The aim in this research of using factor analysis was not to identify the latent variables which are contributing to the common variance in a set of measured variables.

- Use of PCA was expected to greatly facilitate interpretation of results (Tabachnick & Fidell, 2007).

- The goal was to extract maximum variance and not only to reproduce the correlation matrix from the data with a few orthogonal factors.

- Tabachnick and Fidell (2007) have suggested that if the factors are orthogonal then their use in other analyses may greatly facilitate interpretation of results.

  PCA was considered appropriate for this research as the orthogonal factors could be used in further analyses (Cluster Analysis and one-way ANOVAs) to facilitate the interpretation of results.

The following paragraphs discuss the different stages used to factor analyse the
ideal and practical downsizing actions, the choices made in selecting a particular method or a criterion, and lastly the interpretation and labelling of different dimensions.

A six-stage factor model building process as suggested by Hair et al. (2010) was adopted while making exploratory factor analysis decisions in this research. The following are those six stages: 1. establishing the objectives of the factor analysis; 2. designing the analysis; 3. assessing of assumptions; 4. factor extraction; 5. interpretation; 6. validation.

Fabriger, Wegener, MacCallum, and Strahan (1999) suggest that the utility of results of exploratory factor analysis is largely determined by the soundness of the research design from which the data are collected. Sample adequacies as well as relevance of the measured variables to the domain of research interest are two important design issues that are repeatedly stressed by most researchers. An assessment was therefore done in order to find out whether the item-variables have factorability or not.

First and foremost, the size of 255 returned responses in case of ideal downsizing falls within the acceptable limits as suggested by many researchers (Hair et al., 2010; Brace et al., 2009; Cattell, 1978; Guilford, 1954). This size may be classified as somewhere between “fair” and “good” according to Comrey and Lee’s (1992) thumb rule. The number of cases to variables (in this case, it is item-variable) ratio is approximately 26:1 (i.e. N / n = 255 / 10 = 25.5) which is much above the minimum acceptable limits of 10:1 as suggested by many researchers (e.g. Hair et al., 2010; Pedhazur, 1997; Nunnally, 1978; Everitt, 1975). Likewise the size of 194 returned responses in case of practical downsizing falls within the acceptable limits as suggested by many researchers. This size may be classified as “fair” according to according to Comrey and Lee’s (1992) thumb rule. The number of cases to variables (in this case, it is item-variable) ratio is approximately
19:1 (i.e. N / n = 194 / 10 = 19.4) which is much above the minimum acceptable limits of 10:1 as suggested by many researchers. Therefore, the item-variables of both Ideal and practical downsizing actions were considered to have factorability and to be suitable for conducting factor analysis. Finally, it was decided to conduct factor analysis on the responses of 255 leaders in case of ideal downsizing whereas 194 leaders in case of practical downsizing.

Hair et al. (2010) have cautioned that any departures from underlying statistical assumptions such as normality can diminish correlation between variables. Likewise, Brace et al. (2009) have suggested that the factor analysis should be used only when the variables are normally distributed or else transformation needs to be considered. The distribution of ten ideal and practical downsizing actions was therefore examined for normality, and was found to have a reasonably normal distribution.

Hair et al. (2010) have further suggested assessing the factorability of the correlation matrix for the statistically significant correlations. This involved inspecting the matrix for correlation coefficients, computing KMO Measure of Sampling Adequacy (Kaiser, 1974) and Bartlett’s (1954) test of Sphericity.

Firstly, Tabachnik and Fidell (2007), Pallant (2005), and Field (2009) have suggested correlation coefficients need to be 0.3 and above. Floyd and Widaman (1995) have however, suggested that if an item does not correlate at least moderately (i.e. greater than 0.2) with the other items for the same construct, then the item will correlate poorly in a factor analysis. Secondly, Kaiser (1974) has recommended KMO of 0.5 as a minimum value, values between 0.5 and 0.7 as mediocre, values between 0.7 and 0.8 as good, values between 0.8 and 0.9 as great and values above 0.9 as superb. Additionally, Tabachnick and
Fidell (2007) have recommended KMO values of 0.6 and above are required for a good factor analysis. Thirdly, Bartlett’s test of Sphericity (1954) indicates the presence of nonzero correlations, and the test value is significant if the value of $p$ is less than 0.05 (Field, 2009). Fourthly, Field (2009) recommends scanning of correlation coefficients greater than 0.9 which would reveal the multicollinearity in the data. Multicollinearity was not at all a problem in this research as the ideal and practical downsizing actions were factor analysed using the principal component method and the resulting factor scores were used in subsequent analyses. In the current research, all ten ideal and practical downsizing actions were found to correlate above 0.3 with at least one other item. Further, pair-wise deletion was used to exclude cases as list-wise deletion resulted in a considerable loss of data.

Repeatedly and consistently, most researchers have cautioned about the distortion of results due to either under-extraction or over-extraction of factors. According to Hair et al. (2010), selecting the number of factors is interrelated with an assessment of structure, which is revealed in the interpretation phase. These researchers have suggested that several factor solutions with differing numbers of factors are to be examined before the structure is well defined.

Tabachnik and Fidell (2007) further argue that selection of the number of factors is probably more critical than selection of rotational techniques. The literature reveals that there are a number of different criteria used in deciding the number of factors for extraction and interpretation. Some are found to be subjective and others objective in nature but varying in their degree of accuracy. The literature suggests the following list of criteria to determine the number of factors: 1. Bartlett’s Chi-square Test (Bartlett, 1950); 2.
Eigenvalue criterion or K1 rule (Kaiser, 1974); 3. Parallel Analysis (Horn, 1965); 4. Scree Plot Criterion (Cattell, 1966); 5. Reliability of factors approach (Jackson & Morf, 1973); 6. MAP or Minimum Average Partial (Velicer, 1976). Other criteria such as Maximum likelihood estimation, Percentage of variance, use of factor scores and choosing the most interpretable solution are used often by researchers. However, these criteria are not found to be attributed to any particular proponent.

All ten possible factors of ideal and practical downsizing actions, and their relative explanatory power as expressed by their initial eigenvalues were studied. Before making any final conclusion on the number of factors, several factor analyses were performed by specifying each time the number of factors as determined by Scree Test (two factors), PA (1 factor), K1 rule (three factors), and Percentage of variance explained (three factors), and researching the adequacy of the solution and its representation of the structure of the variables at every time while checking the ability to meet the goals of this research. The statistical program developed by Watkins (2000) was used to arrive at results of Parallel Analysis. Practical reasons were guided by the desired multiple variables per factor as well as total variance explained apart from choosing the most interpretable solution.

Tabachnick and Fidell (2007) have summarized a list of rotation techniques in order to aid in the clear interpretation, along with the goals of analysis. This research preferred to use SPSS 16 software for the factor analysis, so choice had to be made among orthogonal rotation techniques that are available in SPSS, viz. Varimax, Quartimax, and Equamax rotation. Tabachnick and Fidell (2007) suggest Varimax rotation simplifies the factors and Quartimax the variables, whereas Equamax simplifies both factors and variables. The goal of using rotation was to simplify the factors through maximizing the
variance of the loadings within the factors, in variables as well as to obtain uncorrelated factors.

The Varimax rotation proved to be very successful as an analytical approach to obtaining an orthogonal rotation of factors (Hair et al., 2010). This method of rotation was expected to satisfy two purposes in this research. First, to find out whether the explanatory power could be shifted to a more even distribution; and second, could a simplified structure of a factor matrix be helpful for interpretation. Therefore, Varimax rotation technique was found appropriate to arrive at a simple structure of factor matrix. Having computed the factor loading matrix, the interpretation of factors was done by examining the unrotated and then rotated factor matrices for significant factor loadings.

Tabachnick and Fidell (2007) argue that the choice of cut-off for loading size to be interpreted is a matter of the researcher’s preference as the greater the loading, the more the variable is a pure measure of the factor. In this direction, Comrey and Lee’s (1992) rule of thumb was considered as appropriate to be used in assessing the loadings of the rotated factor matrix. Comrey and Lee’s (1992) rule suggests that loadings in excess of 0.71 are considered as excellent, 0.63 as very good, 0.55 as good, 0.45 as fair, and 0.32 as poor. Hair et al. (2010) suggest that a loading with greater than 0.4 as significant. In order to ease the factor interpretation process with as many significant loadings as possible, ± 0.40 or above was considered as a cut-off point for interpretation purposes.

While it was realised that a satisfactory factor solution has been obtained the next attempt step was to assign some meaning to the factors in order to categorize the findings. This process involved substantive interpretation of the pattern of factor loadings for the item-variables, including their signs, in an effort to name each of the factors. Hair et al.
(2010) suggest that variables with higher loadings influence to a greater extent the name selected to represent the factor. Therefore, each factor was named based on the item-variables with higher loadings. Additionally, Rummel (2002) recommends three ways of labelling, viz. symbolically, descriptively, or causally. As symbolical naming is observed to be problematic in communicating research findings, it was not considered as an option in the present research. Similarly, the factors that emerged could not be identified properly with the underlying influences causing them, so the idea of labelling causally was also dropped.

One of the aims of this research was to categorize the downsizing strategies or evolve a downsizing typology which could be used in subsequent analyses, viz. cluster analysis and one-way ANOVAs. Rummel (2002) recommends descriptive labelling in such a situation. It comprises selecting a concept which will reflect the nature of the phenomena involved (Rummel, 2002). Therefore, descriptive labelling was considered as an appropriate method for naming the factors.

The naming exercise involved looking into the content of item-variables that load onto the same factor and thence to identify the common themes in order to label them appropriately. Here, it needs to be emphasised that the process of naming the factors is reliant on the subjective opinion of the researcher due to differences in her/his background and training (Hair et al., 2010). It is also a matter of personal taste, communication, and long-run research strategy (Rummel, 2002). Thus, it is conceded that the naming used in this study is not a definitive.

As confirmatory factor analysis was found to be not feasible for the current research, so split sampling analysis was conducted for the purpose of validation. The
original data was split into two random sub-samples. Separate factor analyses were conducted for each sub-sample and the results of the two split sample analyses were compared with the analysis of the full data set. To split the sample into two random sub-samples (not necessarily equal in size), a random variable was generated that indicated which part of the sample each case should be placed in. The random number seed was specified to compute a random selection of cases. However, prior to random selection, it was ensured that the data set is sorted in the original sort order. Data set was sorted in ascending order by case ID. The details of split sample analyses have been presented in sections 4.4.1.2 and 4.4.2.2 for ideal and practical downsizing actions, respectively.

Principal Component Method provided the basis for a data reduction through factor scores which were intended to be used in subsequent analyses. This method was considered as appropriate for use in this research for combining the item-variables within each factor into a single score that could replace the original set of item-variables with the new composite variables of downsizing.

Literature suggests three commonly used methods to produce factor scores, viz. regression method, Bartlett’s method (1937), and Anderson-Rubin (1956) method. Tabachnick and Fidell (2007) suggest Anderson-Rubin (1956) method as the best if uncorrelated scores are required. Finally, as this research required uncorrelated scores, so factor scores were produced using Anderson-Rubin method. A detailed discussion on all these stages of factor analysis is presented in the data analysis and results.

\subsection*{3.9.5 Cluster Analysis}

In the fourth stage, cluster analysis was used to group leaders into manageable clusters based on their ideal and practical downsizing strategies. Cluster analysis, with its
objective of forming homogeneous groups that are distinct from one another as much as possible, provided a unique methodology for developing taxonomies with maximal managerial relevance. The clusters thus formed were used in subsequent analyses, i.e. one-way ANOVAs for answering the research questions RQ2 and RQ3. The factor scores on each dimension in factor analysis were used to categorise the respondents into clusters. In other words, factor scores for each of the 255 respondents in case of ideal downsizing strategies whereas 194 respondents in case of practical downsizing were computed and provided the basis for a clustering procedure.

The clustering procedures enabled categorization of leaders into segments that defined the basic character of group members. In an effective segmentation, leaders were viewed not only as individuals, but also members of relatively homogeneous groups portrayed through their common profiles. Segments provided an avenue for examining the links between downsizing strategies and leaders’ characteristics and organisational culture. This facilitated in understanding what unique personal characteristics do leaders of each segment possess in regard to downsizing strategies.

A six-stage factor model building process as suggested by Hair et al. (2010) was used as a guideline while making cluster analysis decisions in this research. Objectives of cluster analysis were established in the first stage, analysis was designed in the second stage, and assumptions were assessed in the third stage. Deriving clusters, interpretation, validation and profiling of clusters were conducted in the fourth, fifth, and sixth stages, respectively. Finally, clusters centroids, a mean profile of the cluster for the derived factor scores were computed and these were used to characterize the data in subsequent analysis, i.e. one way ANOVAs. A detailed discussion on all these stages of cluster analysis.
In forming homogeneous groups of leaders, cluster analysis addressed the three basic objectives as suggested by Hair et al. (2010). Firstly, the taxonomy description; secondly, data simplification; and thirdly, examining the association.

The first stage in applying cluster analysis involved establishing the objectives to be achieved. Once the objectives were established, the next step was to select the clustering variables to be used in the clustering process. It was decided to look for clusters based on the factor scores of leaders.

The ideal and practical downsizing strategies as identified through exploratory factor analysis were used to cluster the leaders into strategic orientation groups based on the similar emphasis that leaders place on a particular downsizing strategy. Hair et al. (2010) recommend that cluster analysis design should address four key issues, viz. detecting outliers, determining similarity measure, sample size, and standardizing the cases, as these issues affect the nature and character of cluster solutions. In this research, these four issues were duly addressed and are discussed in the following paragraphs.

Hair et al. (2010) have suggested three methods to detect outliers, viz. graphical approach, empirical approach and measures of similarity. The large number of cases in this research required large number of graphs and therefore the use of a graphical approach was ruled out. Although, Hair et al. (2010) argue that multivariate approaches provide a comprehensive set of tools for detecting outliers from many perspectives, measuring similarity was considered to be appropriate. Correlational measures are found to consider only the patterns of the responses rather than absolute values, and cluster analysis objectives are best achieved with a distance measure (Hair et al. 2010). The distance
measure was therefore preferred in measuring the similarity instead of the correlational measure.

Given that the clustering variables are metric, squared Euclidean distance measure was found to be appropriate. A hierarchical clustering procedure using Ward’s method of clustering was conducted and clustering patterns were studied. Outliers were removed by identifying those which are found in insignificant segments within the population.

Multicollinearity has been addressed by choosing the variables that are highly uncorrelated with each other based on the factor analysis. The uncorrelated factor scores obtained through Principal Component Analysis using Anderson-Rubin method formed an input to the Cluster Analysis procedure. This approach was expected to avoid the concerns associated with multicollinearity.

According to Hair et al. (2010), the sample size adequacy is not a statistical inference issue but the ability of the sample to identify managerially useful segments. That means larger the better. Hair et al. (2010) argue that in a sample with 100 cases, segments consisting of ten per cent or more cases are meaningful. However, the literature search did not reveal the presence of any rule of thumb in this regard. Furthermore, Rapkin and Luke (1993, p. 269) suggest that “comparisons of mean differences among clusters do not require as many cases per cluster as within-cluster follow-up analyses”. The present research was aimed at comparing mean differences among clusters and therefore the adequacy of the sample size in this research was guided by practical terms rather than any statistical requirement. It was decided to consider the sample size that could produce large enough clusters or homogeneous sub-groups of cases (not less than ten cases per cluster) which are reasonably meaningful. Each cluster was expected not only to provide sufficient
representation of small groups within the population but also to represent the underlying structure.

Standardization is expected to allow variables to contribute equally to the definition of clusters. Researchers such as Hair et al. (2010), Tabachnick and Fidell (2007), and Harrigan (1985) recommend standardization as a remedy to eliminate the potential effects of scale differences among variables. Others (Milligan, 1980; Edelbrock, 1979) evidenced that standardization has no significant effects. In fact, Edelbrock (1979) argued that standardization may have adverse effects, i.e. it eliminates meaningful differences among elements (in this research, elements are cases, i.e. leaders). There is no consensus among researchers on this issue.

Whether or not standardization could be used in this research was guided by two key issues pertaining to the research method. Firstly, the factor scores were used in the cluster analysis and not the original variables, i.e. ten practical downsizing actions, though they are measured on the same scale (1 to 5). Second, within-case standardization was not considered to be useful to apply, because the extent of downsizing was measured by the magnitude of the leaders’ perceptions and the magnitude of perceptions is an important element of the clustering objectives. Above all, the cluster analysis in this research is interpreted from the factor scores therein, and standardized factor scores would make it harder to interpret each cluster’s meaning. After thoroughly analysing these issues, it was decided not to standardize and therefore to proceed with cluster analysis.

The basic issue of multicollinearity was addressed as part of the assumptions in cluster analysis. The sample representativeness was not an issue in the present study (ref section 3.5). Further, the uncorrelated factor scores obtained through Principal Component
Analysis using Anderson-Rubin method, formed as an input to Cluster Analysis procedure. This approach was expected to avoid the concerns associated with multicollinearity.

In applying cluster analysis to a sample of 255 leaders in case of ideal downsizing and 194 leaders in case of practical downsizing, it was decided to use the two-step approach as suggested by many researchers (e.g. Punj & Stewart, 1983; Hair et al., 2010). The first step constituted a partitioning stage in which a hierarchical clustering procedure with Ward’s hierarchical clustering method and squared Euclidean distances were used to identify a preliminary set of cluster solutions as a basis for determining the potential of an appropriate number of clusters within the data. Ward’s method was preferred to minimize the within-cluster differences and to avoid concerns such as long snake like chain formations found in other methods (Aldenderfer and Blashfield, 1984). Moreover, the Ward’s method has the tendency to generate clusters that are homogeneous and relatively equal in size (Hair et al. 2010).

In the second step, a non-hierarchical clustering procedure of K-means clustering was used to arrive at the exact number of clusters solution followed by profiling and validating of the final cluster solution. The following paragraphs will discuss these two stages of analysis in detail.

Hierarchical clustering procedure was performed in four stages. First, the clustering algorithm of Ward’s method was chosen; second, the cluster results were generated while checking the single case and other inappropriate clusters; third, the preliminary cluster solution was selected by applying the stopping rule; and finally, the clustering variables were profiled in order to identify the most appropriate cluster solutions. In doing so, issues such as methodological as well as managerial and clustering objectives were addressed to
derive the most representative cluster solution for the sample in publicly funded Australian universities.

Given the clustering variables, i.e. ideal and practical downsizing strategies represented by factor scores of 255 and 194 respondents, respectively, the squared Euclidean distance was chosen as the similarity measure. With the similarity measure as squared Euclidean distance and initial clustering algorithm as Ward’s method defined, it was decided to proceed with applying the hierarchical clustering procedure. The results were reviewed for the range of cluster solutions selected. This process enabled identification of any clusters that might need to be deleted due to small size or other reasons such as outliers, unrepresentative members of population, etc. After a review, the identified clusters or data were deleted and the cluster analysis was conducted again with the reduced data set.

The dendogram suggested the three, four and five cluster solutions to be suitable in both, ideal and practical downsizing. However, the stopping rule applied was based on assessing the changes in the heterogeneity between cluster solutions. The agglomeration schedule provided the information for each of the stages of the clustering process. As each combination of a cluster resulted in increased heterogeneity, so the focus was on large percentage changes in the coefficient. Changes in the agglomeration coefficients were used as with the proximity measures to help identify the appropriate number of clusters or preliminary cluster solutions which formed the basis for the non-hierarchical analysis (k-means clustering) from which a final cluster solution was selected.

The data in this research involved ideal and practical downsizing actions, leaders’ characteristics and organisational culture. The interest was in explaining the differences in
leaders’ approaches to ideal downsizing in terms of leaders’ characteristics and organisational culture; and, differences in leaders’ approaches to practical downsizing in terms of only organisational culture. Thus, a manageable number of clusters from a strategic and tactical perspective would be more than two but no more than six or seven (Hair et al., 2010).

To decide on the optimal cluster solution, a K-Means clustering method was used to develop three, four and five cluster solutions based on the SPSS software generated cluster-seed points. The meaning of the clusters was interpreted by analysing the final-mean centred values, cluster sizes (dispersion of cases among the clusters), and significance of clustering variable differences for each of the cluster solutions. However, the best cluster solution was not solely determined by the statistical results. The cluster solutions were compared in terms of cluster stability as well as applicability to the research question in order to select a single solution as the final cluster solution.

The next stage of cluster analysis involved tests to confirm the validity of the four-cluster solution while ensuring the same has practical significance. Hair et al. (2010) suggest using cross-classification to test the cluster stability. First, a item-variable of Ideal and practical downsizing strategies was selected from the data set and the SPSS sort function was used to change the order of the cases. Then, K-means cluster was once again used to place the cases into one of the clusters. Following the clustering routine, a cross-classification was performed using the cluster membership variable from the first K-Means solution as one variable and the cluster membership variable from the second K-Means solution as the other variable.

The hierarchical cluster analyses followed by K-Means clustering were found to be
successful in performing a segmentation of leaders. The process not only created homogeneous groupings of leaders based on their downsizing strategies, but also found that these clusters met the tests of cluster stability and distinctiveness, which are all necessary for achieving practical significance (Hair et al., 2010). A detailed discussion on all these stages of cluster analysis is presented in the next chapter, i.e. data analysis and results.

3.9.6 One-way Analysis of Variance

In the final stage of the data analysis, one-way ANOVAs were used specifically to find out whether leaders pursue different downsizing strategies regardless of their personal characteristics and organisational culture types and thence to answer the research questions RQ<sub>2</sub> and RQ<sub>3</sub>.

The explanatory variables used in these analyses were leadership styles (viz. people-oriented and task-oriented), leaders’ personality (viz. openness, conscientiousness, extrovertism, agreeableness and neuroticism), personal values (viz. power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security) and the types of organisational culture (viz. bureaucratic, innovative and supportive culture). The identified clusters were dependent variables. The importance of identifying these variables is in assessing both practical significance and the theoretical basis of the identified clusters.

Although most researchers agree that ANOVA is a robust test, which means that it does not matter much if the assumptions of the tests are not met as the F-statistic will still be reliable. However, Field (2009) argues that it is an oversimplification of the situation as ANOVA covers many different situations and the performance of F-statistic is investigated
in only some of the situations. Quinn and Keough (2002) further suggest that the F-statistic can become very unreliable in case of unequal sample sizes combined with a data having non-normal distribution and heterogeneous variances. Therefore, checks were conducted in order to identify whether any underlying ANOVA assumptions have been violated.

First, all variables (leaders’ characteristics and organisational culture) were measured on an interval scale. Second, the valid sample size with a wide geographical diversity in Australia has been drawn through a random selection process from among the entire staff of each university’s staff directory. Therefore, there was no evidence to suggest that a random sample of leaders was not achieved and the distributions within groups were found to be reasonably normally distributed. Third, the Levene’s test of homogeneity for the item-variables was used to test the assumption of homogeneity of variance.

A post-hoc analysis followed the significant \( p < 0.05 \) results for the ANOVA in order to explore the differences between each of the clusters. Although, population variances were assumed equal, cluster sizes were found to be very different to each other and therefore Hochberg’s GT2 test was used to detect significant differences between each pair of clusters. The detailed results of one-way ANOVAs are discussed in the data analysis and results chapter.

Several previous research studies (e.g. Devos, Buelens, & Bouckenooghe, 2007; Mishra & Mishra, 1994; Freeman & Cameron, 1993) have suggested that only few organisations engage in a very limited downsizing and such organisations are found to have supportive culture, mainly, trust. Therefore, tests of planned contrasts were conducted to determine whether differences existed between groups of leaders who ideally preferred a very limited downsizing and those who preferred different downsizing strategies.
Similarly, tests of planned contrasts were conducted to determine whether differences existed between the groups of leaders who engaged in a very limited downsizing, and those who used different downsizing strategies.

3.10 Conclusion

This research sought to explore the links between the downsizing strategies in publicly funded Australian universities and the leaders’ characteristics (viz., personality, leadership styles and personal values) and the organisational culture (viz., bureaucratic, innovative and supportive culture). The quantitative research technique was considered as the best method to achieve this goal. The choice of research design, survey instruments including the rationale for using them, research ethics, sample, sampling strategy, data collection and processing procedures and demographic profile of the sample were discussed in detail. Further, it discussed statistical tools used for the data analysis within the context of the research questions. Finally, the limitations of the research method chosen for this research were explained.

Data from mid-level such as deans, directors of administration units and research centres in publicly funded Australian universities were expected to provide a better understanding of how they approach downsizing. The results from different analyses and survey instruments as described in this chapter was expected to enhance the understanding of the links between downsizing strategies in publicly funded Australian universities, leaders’ characteristics and organisational culture.

The use of factor analysis followed by cluster analyses in this research identified the clusters of leaders based on their ideal and practical downsizing strategies. Further, one-way ANOVAs were used to determine significant differences between clusters, thus
providing the description of characteristics’ profiles of leaders and organisational culture with different downsizing strategies. This research was intended to define the characteristics of leaders and organisational culture in regard to ideal and practical downsizing strategies. Given the multidimensional nature of leaders’ characteristics and organisational culture, researching such aspects in combination proved to be productive.

The next chapter discusses the data analysis and results.
CHAPTER 4
DATA ANALYSIS AND RESULTS

“Because we import more than we export, we may get some unusually good-looking data on the surface.” - Brian Jones, English Musician

4.1 Introduction

The main purpose of this research was to investigate the differences in leaders’ approaches to downsizing. This was expected to be accomplished under two situations, ideally and practically: first, by exploring the links between ideal downsizing strategies, and leaders’ characteristics (viz. leadership styles, personality and personal values) and the organisational culture dimensions (bureaucratic, innovative and supportive culture); second, by exploring the links between practical downsizing strategies and organisational culture dimensions (viz. bureaucratic, innovative and supportive culture).

The preceding chapters introduced the research problem, reviewed the relevant literature, stated the research questions, and set out the research method. The aggregate response data gathered from mid-level leaders in publicly funded Australian universities were statistically analysed through five stages using SPSS software, then descriptively interpreted. Analytical tables are utilized to report the research data from the collected raw scores generated by the survey instruments. This chapter presents the data analysis and results of the research in the following broad structure:

First, as part of a preliminary data analysis (section 4.2), research data were analysed to gain an understanding of the sample and of the data. Second, it was intended to gain a closer understanding of the nature of leaders’ responses towards downsizing actions in publicly funded Australian universities. Thus, descriptive statistical analysis, cross-
tabulations and chi-square analyses (section 4.3) formed the second stage of data analysis. Third stage constituted exploratory factor analyses (section 4.4) which was used to discover whether ten downsizing actions each, ideal and practical, could be reduced to a smaller number of more general or “inclusive” dimensions referred to as “downsizing strategies”, i.e. finding out the presence of any well-defined factor structure in ten downsizing actions. These analyses were used to answer the research question, RQ1: Is there a widespread orientation towards downsizing in publicly funded Australian universities?

Fourth, the leaders who received factor scores on each of the factors of downsizing strategies in factor analysis were used to cluster the leaders into strategic orientation groups based on the similar emphasis that leaders place on a particular downsizing strategy (section 4.5). In the final stage of data analysis, one-way ANOVAs were used. The main objective in using one-way ANOVAs was to determine whether differences existed between the mean responses of leaders’ clusters on leaders’ characteristics and organisational culture in the case of ideal downsizing strategies (section 4.6), and only organisational culture in the case of practical downsizing strategies (section 4.7). Where differences did exist, Hochberg’s GT2 post-hoc tests were used to determine statistically significant differences (p < .05) between individual pairs of clusters for answering the following research questions: RQ2: Are downsizing strategies associated with leaders’ characteristics and organisational culture under ideal condition in publicly funded Australian universities? RQ3: Are downsizing strategies associated with organisational culture under practical condition in publicly funded Australian universities?
Additionally, tests of planned contrasts were conducted to determine whether differences existed between group of leaders who ideally preferred a very limited downsizing and group of leaders who ideally preferred different downsizing strategies. Similarly, tests of planned contrasts were conducted to determine whether differences existed between the group of leaders who used very limited downsizing, and the group of leaders who used different downsizing strategies. Finally, this chapter ends with a conclusion through summarizing the data analysis and results (section 4.8). The next section discusses preliminary data analysis.

4.2 Preliminary Data Analysis

Pallant (2007) suggests that before commencing to analyse the data it is essential to check the data set for any errors, which may have been committed while keying in the data into the SPSS spreadsheet. Therefore, the entire data set was checked for scores that are out of range. First, minimum and maximum values were checked against the codebook and their appropriateness was ensured. Then the number of valid cases and missing cases were checked for correctness. As no such errors were found to exist, so it was decided to proceed with the process of preliminary data analyses prior to conducting of specific statistical analyses to address the research questions.

In line with the procedures recommended by Tabachnick and Fidell (2007), a series of preliminary analyses were undertaken to gain an understanding of the sample and of the data. Missing Data Analysis is discussed first, followed by data screening for any possible outliers, a check for normal distribution of scores, reliability analysis and validity testing of ideal and practical downsizing questionnaires. The following sections discuss these analyses in detail.
4.2.1 Missing Data Analysis

Missing Data Analysis was conducted to determine the extent and pattern of the missing data for Ideal and practical downsizing actions. First, the missing data analysis of ideal downsizing actions is discussed, and this is followed by the discussion on missing data analysis of practical downsizing actions.

Table 4.1 shows the summary statistics for the cases with valid values, including the percentage of cases with missing data on each item-variable of ideal downsizing actions.

**Table 4.1**
**Summary Statistics of Missing Data - Ideal Downsizing Actions**

<table>
<thead>
<tr>
<th>Ideal Downsizing Actions</th>
<th>Number of cases</th>
<th>Missing Data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Voluntary Redundancy</td>
<td>255</td>
<td>0</td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td>253</td>
<td>2</td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>248</td>
<td>7</td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>254</td>
<td>1</td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>254</td>
<td>1</td>
</tr>
<tr>
<td>Closure</td>
<td>254</td>
<td>1</td>
</tr>
<tr>
<td>Merger</td>
<td>252</td>
<td>3</td>
</tr>
<tr>
<td>Delayering</td>
<td>250</td>
<td>5</td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td>243</td>
<td>12</td>
</tr>
<tr>
<td>EFTSU intake reduction</td>
<td>245</td>
<td>10</td>
</tr>
</tbody>
</table>

Referring to Table 4.1, all of the item-variables of ideal downsizing actions have low levels of missing data and are acceptable (Hair et al., 2010). The highest amount of missing data is 12 cases for the item-variable “eliminate academic programs” (4.7 per cent). However, “eliminate academic programs” was not subjected to separate variance t
test because fewer than 5 per cent of the cases have missing values (Tabachnick & Fidell, 2007). The extent of the missing data was not sufficiently high enough to warrant a diagnosis of randomness of the missing data.

Table 4.2 shows the summary statistics for the cases with valid values, including the percentage of cases with missing data on each item-variable of practical downsizing actions.

**Table 4.2**

Summary Statistics of Missing Data for Practical Downsizing Actions

<table>
<thead>
<tr>
<th>Practical Downsizing Actions</th>
<th>Number of cases</th>
<th>Missing Data</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>Voluntary Redundancy</td>
<td>193</td>
<td>1</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td>192</td>
<td>2</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>190</td>
<td>4</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>193</td>
<td>1</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>193</td>
<td>1</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Closure</td>
<td>192</td>
<td>2</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Merger</td>
<td>193</td>
<td>1</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Delayering</td>
<td>192</td>
<td>2</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td>189</td>
<td>5</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>EFTSU intake reduction</td>
<td>184</td>
<td>10</td>
<td>5.2</td>
<td></td>
</tr>
</tbody>
</table>

Referring to Table 4.2, all of the item-variables of practical downsizing actions excluding “EFTSU intake reduction” have low levels of missing data and are acceptable (Hair et al., 2010). “EFTSU intake reduction” has 10 cases with missing data and was subjected to separate variance t test because more than 5 per cent of the cases have missing values (Tabachnick & Fidell, 2007). Separate variance t test indicated a systematic relationship between missingness on “EFTSU intake reduction” and other item-variables, $p$
(2-tail) < 0.05. This analysis suggests that although significant difference can be found due to missing data on one item-variable, the effects are limited to only this variable making it of marginal concern. Furthermore, MCAR missing data process (Missing completely at random) indicated a non-significant statistical level (p > 0.05) showing that the observed pattern does not differ from a random pattern. Thus no potential biases exist in the patterns of missing data.

Finally, pair-wise exclusion of cases indicated that missing data did not exceed the tolerance limit of 5 per cent (Tabachnick & Fidell, 2007) for any item-variable of ideal and practical downsizing actions, and the distribution pattern of the missing data were found to be at random. Next, data were checked for any possible outliers.

4.2.2 Outliers

The results of data screening of item-variables for both Ideal and practical downsizing actions revealed few outliers and then the genuineness of these scores was ascertained. In order to explore further, the item-wise descriptive statistics were studied in conjunction with histograms and boxplots for all the ten items each of ideal and practical downsizing actions.

In ideal downsizing actions, eight and six outliers were found in the item-variables, forced layoff and EFTSU intake reduction, respectively. Additionally, four outliers were found in the item-variable, merger.

Contrarily, in case of practical downsizing actions, four outliers were found in the item-variable, targeted redundancy. Seven outliers each were found in the item-variables, viz. proportionate staff cuts and eliminate academic programs. Also, four outliers each were found in the item-variables, viz. closure and delayering.
The mean values were studied to investigate the influence of these outlying cases for both ideal and practical downsizing actions. As suggested by Pallant (2007), the item-wise comparison was made between 5 per cent trimmed mean values with the original mean values to determine whether there is any difference between them. The two mean values (viz. 5 per cent trimmed mean and original mean values) for all items in both cases (ideal and practical downsizing) were found to be reasonably similar. Given this, and the fact that the values were not too different from the remaining distribution, it was decided to retain these outlying cases in the data file.

4.2.3 Normality of Distribution of Scores

A visual check of the histogram, normal and detrended normal plots of observed data values for ideal downsizing actions was conducted. It was found that the scores dropped away in a reasonably even slope for both ideal and practical downsizing actions. As suggested by Pallant (2007), if the scores drop away in a reasonably even slope then there is not much concern. All ideal downsizing actions, except forced layoff were found to be reasonable approximations to the normal distribution. The distribution of observed data values for forced layoff was found to be positively skewed. Therefore, in order to explore further, all item-variables were examined for normality using statistics such as skewness and kurtosis. Skewness was generally found to be acceptable at less than one for the majority of item-variables. Furthermore, the skewness for all item-variables of ideal downsizing actions was found to be not greater than ten, thus indicating the absence of severe non-normality (Weisstein, 2004). The results of the investigation therefore presented a moderate skewness for ideal downsizing actions. Moderate skewness suggests that transformation has only a minor effect (Gao, Mokhtarian, & Johnston, 2008).
Although, the distribution of scores for ideal downsizing actions presented both positive and negative skewness and kurtosis, neither of them was extreme. Pallant (2007) notes that many questionnaires and measures used in social sciences have scores that are skewed either positively or negatively. This does not present a problem with the questionnaire but rather reflects the underlying nature of the construct being measured. In this research, for example, the score of forced layoff in case of practical downsizing actions is positively skewed because most leaders have reported to have never used that downsizing action, so the scores were rather skewed positively. The present sample was reasonably large ($N = 255$) and with samples greater than 200, skewness and kurtosis are not generally considered as problematic (Tabachnick & Fidell, 2007).

Next, the simplest diagnostic tests for normality were done for all item-variables of practical downsizing actions. A visual check of the histogram, normal and detrended normal plots of observed data values for item-variables, viz. voluntary redundancy, voluntary early retirement, delayering, eliminate academic programs were found to be reasonable approximations to the normal distribution. However, the distribution of observed data values for item-variables, viz. targeted redundancy, proportionate staff cuts, forced layoff, closure, and EFTSU intake reduction were found to be positively skewed. Therefore, in order to explore further, all item-variables were examined for normality using skewness and kurtosis statistics. Skewness was generally found to be acceptable at less than one for the majority of item-variables. Furthermore, the skewness for all item-variables of practical downsizing actions was found to be not greater than ten, thus indicating the absence of severe non-normality (Weisstein, 2004). The results of the investigation therefore presented a moderate skewness for practical downsizing actions.
Moderate skewness suggests that transformation has only a minor effect (Gao, Mokhtarian, & Johnston, 2008).

By a similar measure, kurtosis was a problem with only two item-variables, viz. forced layoff and EFTSU intake reduction. In the current research, the leaders indicated a general tendency towards non-usage of downsizing actions such as forced layoffs and EFTSU intake reduction, so the non-normality was considered to reflect essential features of the constructs rather than a problem in the data set.

In addition to the above, normality of the distribution of scores of both ideal and practical downsizing actions was assessed for Shapiro-Wilks and Kolmogorov-Smirnov statistics. Pallant (2007) notes that a non-significant result i.e. $p$ value of more than 0.05 indicates normality. In this research, the $p$ value was found to be less than 0.05 for each item-variable suggesting violation of the assumption of normality. Pallant (2007) suggests that this is quite common in larger samples as Shapiro-Wilks and Kolmogorov-Smirnov tests are sensitive to such sample sizes and they usually indicate $p$ value less than 0.05. Under such circumstances, Tabachnick and Fidell (2007) suggest to apply a transformation to all item-variables to ensure a greater approximation of normality. However, any attempts in applying transformations for item-variables did not result in normality and therefore the item-variables were not transformed. It was decided to interpret the results with caution.

Next, the reliability analysis and validity of the Ideal and Practical Downsizing Survey Questionnaires have been discussed in the following sections.
4.2.4 Reliability Analysis of Ideal and Practical Downsizing Survey Questionnaires

First, reliability analysis was conducted for the Ideal Downsizing Survey Questionnaire in order to determine how reliable the ten-item measure of downsizing actions is. Results of the reliability analysis for the Ideal Downsizing Survey Questionnaire revealed that Cronbach’s Alpha is 0.70. Thus, internal consistency reliability of the Ideal Downsizing Survey Questionnaire used in this research is considered as “acceptable” (Sekaran and Bougie, 2003). Table 4.3 depicts the case processing summary of reliability analysis.

Table 4.3
Case Process Summary of Reliability Analysis - Ideal Downsizing Survey Questionnaire

<table>
<thead>
<tr>
<th>Total</th>
<th>Valid Cases</th>
<th>Per cent (%)</th>
<th>Excluded Cases</th>
<th>Per cent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>255</td>
<td>229</td>
<td>89.8</td>
<td>26</td>
<td>10.2</td>
</tr>
</tbody>
</table>

To find out the degree to which each item correlates with the total score, Item-Total Statistics were analysed for the Ideal Downsizing Survey Questionnaire and are presented in Table 4.4.
Table 4.4
Item-Total Statistics - Ideal Downsizing Survey Questionnaire

<table>
<thead>
<tr>
<th>Ideal Downsizing Actions</th>
<th>M_{id}</th>
<th>V_{id}</th>
<th>T_{c}</th>
<th>id</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary Redundancy</td>
<td>22.38</td>
<td>22.90</td>
<td>0.27</td>
<td>0.70</td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td>22.36</td>
<td>22.99</td>
<td>0.26</td>
<td>0.70</td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>23.51</td>
<td>20.99</td>
<td>0.35</td>
<td>0.69</td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>24.38</td>
<td>22.34</td>
<td>0.35</td>
<td>0.68</td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>24.72</td>
<td>22.36</td>
<td>0.39</td>
<td>0.68</td>
</tr>
<tr>
<td>Closure</td>
<td>24.14</td>
<td>20.59</td>
<td>0.57</td>
<td>0.65</td>
</tr>
<tr>
<td>Merger</td>
<td>23.26</td>
<td>21.68</td>
<td>0.45</td>
<td>0.67</td>
</tr>
<tr>
<td>Delayering</td>
<td>23.36</td>
<td>22.17</td>
<td>0.33</td>
<td>0.69</td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td>24.01</td>
<td>20.82</td>
<td>0.45</td>
<td>0.66</td>
</tr>
<tr>
<td>EFTSU intake reduction</td>
<td>24.48</td>
<td>22.98</td>
<td>0.24</td>
<td>0.70</td>
</tr>
</tbody>
</table>

M_{id} - Questionnaire Mean if item deleted; V_{id} - Questionnaire Variance if item deleted
T_{c} - Corrected item total correlation; id - Cronbach’s Alpha if item deleted

Questionnaire Statistics

<table>
<thead>
<tr>
<th>Mean</th>
<th>Variance</th>
<th>Std. Deviation</th>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.29</td>
<td>26.28</td>
<td>5.13</td>
<td>0.70</td>
<td>10</td>
</tr>
</tbody>
</table>

Summary of Item Statistics

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>Min</th>
<th>Max</th>
<th>R</th>
<th>Max / Min</th>
<th>V</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Means</td>
<td>2.63</td>
<td>1.57</td>
<td>3.93</td>
<td>2.36</td>
<td>2.50</td>
<td>0.70</td>
<td>10</td>
</tr>
<tr>
<td>Item Variances</td>
<td>0.96</td>
<td>0.72</td>
<td>1.43</td>
<td>0.71</td>
<td>1.98</td>
<td>0.04</td>
<td>10</td>
</tr>
<tr>
<td>Inter-item Correlations</td>
<td>0.20</td>
<td>-0.09</td>
<td>0.76</td>
<td>0.85</td>
<td>-8.61</td>
<td>0.03</td>
<td>10</td>
</tr>
</tbody>
</table>

M - Mean, Min - Minimum, Max - Maximum, R - Range, V - Variance, N - Number of Items

The corrected item-total correlation for the items, voluntary redundancy, voluntary early retirement, and EFTSU intake reduction is found to be less than 0.3. If a questionnaire’s overall Cronbach’s Alpha is less than 0.7, then Pallant (2007) recommends considering eliminating items with item-total correlations of less than 0.3 as such low
values indicate that the item is measuring something different from the questionnaire as a whole. The overall Cronbach’s Alpha for the Ideal Downsizing Survey Questionnaire is found to be 0.70, so there was no need to consider eliminating those items. All items appeared to be worthy of retention for subsequent analyses.

Next, the reliability analysis was conducted for the Practical Downsizing Survey Questionnaire in order to determine how reliable the ten-item measure is. Results of the reliability analysis revealed that Cronbach’s Alpha is 0.76. Thus, internal consistency of the Practical Downsizing Survey Questionnaire is considered as “acceptable” (Sekaran and Bougie, 2003). Table 4.5 depicts the case processing summary of reliability analysis.

Table 4.5
Case Process Summary of Reliability Analysis - Practical Downsizing Survey Questionnaire

<table>
<thead>
<tr>
<th>Total</th>
<th>Valid Cases</th>
<th>Per cent (%)</th>
<th>Excluded Cases</th>
<th>Per cent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>194</td>
<td>177</td>
<td>91.2</td>
<td>17</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Other than Cronbach’s’ Alpha, Hair et al. (2010) recommend a measure to assess internal consistency as item-to-total correlation. Therefore, to find out the degree to which each item correlates with the total score, Item-Total Statistics were analysed for the Practical Downsizing Survey Questionnaire and are presented in Table 4.6.
Table 4.6
Item-Total Statistics - Practical Downsizing Survey Questionnaire

<table>
<thead>
<tr>
<th>Practical Downsizing Actions</th>
<th>$M_{id}$</th>
<th>$V_{id}$</th>
<th>$T_c$</th>
<th>$\alpha_{id}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Voluntary Redundancy</td>
<td>15.37</td>
<td>26.19</td>
<td>0.44</td>
<td>0.74</td>
</tr>
<tr>
<td>2) Voluntary Early Retirement</td>
<td>15.63</td>
<td>28.27</td>
<td>0.38</td>
<td>0.75</td>
</tr>
<tr>
<td>3) Targeted Redundancy</td>
<td>15.99</td>
<td>28.31</td>
<td>0.47</td>
<td>0.74</td>
</tr>
<tr>
<td>4) Proportionate staff cuts</td>
<td>15.99</td>
<td>27.53</td>
<td>0.51</td>
<td>0.73</td>
</tr>
<tr>
<td>5) Forced Layoff</td>
<td>16.38</td>
<td>30.34</td>
<td>0.41</td>
<td>0.75</td>
</tr>
<tr>
<td>6) Closure</td>
<td>16.14</td>
<td>28.20</td>
<td>0.55</td>
<td>0.73</td>
</tr>
<tr>
<td>7) Merger</td>
<td>15.15</td>
<td>26.54</td>
<td>0.44</td>
<td>0.74</td>
</tr>
<tr>
<td>8) Delayering</td>
<td>15.95</td>
<td>27.70</td>
<td>0.51</td>
<td>0.73</td>
</tr>
<tr>
<td>9) Eliminate Academic Programs</td>
<td>15.86</td>
<td>28.11</td>
<td>0.40</td>
<td>0.75</td>
</tr>
<tr>
<td>10) EFTSU intake reduction</td>
<td>16.39</td>
<td>31.80</td>
<td>0.23</td>
<td>0.76</td>
</tr>
</tbody>
</table>

$M_{id}$ - Questionnaire Mean if item deleted; $V_{id}$ - Questionnaire Variance if item deleted
$T_c$ - Corrected item total correlation; $\alpha_{id}$ - Cronbach’s Alpha if item deleted

Questionnaire Statistics

<table>
<thead>
<tr>
<th>Mean</th>
<th>Variance</th>
<th>Std. Deviation</th>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.65</td>
<td>34.04</td>
<td>5.83</td>
<td>0.76</td>
<td>10</td>
</tr>
</tbody>
</table>

Summary of Item Statistics

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>Min</th>
<th>Max</th>
<th>R</th>
<th>Max / Min</th>
<th>V</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Means</td>
<td>1.77</td>
<td>1.26</td>
<td>2.50</td>
<td>1.24</td>
<td>1.99</td>
<td>0.16</td>
<td>10</td>
</tr>
<tr>
<td>Item Variances</td>
<td>1.07</td>
<td>0.48</td>
<td>1.82</td>
<td>1.34</td>
<td>3.80</td>
<td>0.20</td>
<td>10</td>
</tr>
<tr>
<td>Inter-item Correlations</td>
<td>0.25</td>
<td>0.03</td>
<td>0.48</td>
<td>0.46</td>
<td>19.67</td>
<td>0.01</td>
<td>10</td>
</tr>
</tbody>
</table>

M - Mean, Min - Minimum, Max - Maximum, R - Range, V - Variance, N - Number of Items

The corrected item-total correlation for the item, EFTSU intake reduction is found to be less than 0.3. However, the overall Cronbach’s Alpha for practical downsizing actions is found to be 0.76 which is greater than 0.7 and so there was no need to consider eliminating items with item-total correlations of less than 0.3. Therefore all items appeared to be worthy of retention for subsequent analyses.
These results suggested further that both Ideal and Practical Downsizing Survey Questionnaires were reliable. Burns (2000) suggests that test instruments and techniques can be very reliable, but may not be valid as measures of what they set out to measure. Therefore, it is important in this research that the Ideal and Practical Downsizing Survey Questionnaires be subjected to validity testing. The next section describes the techniques used to test the validity.

4.2.5 Validity Testing of Downsizing Survey Questionnaire

To establish the content validity of Ideal and Practical Downsizing Survey Questionnaires, literature on downsizing actions, specifically those used by leaders in Australian universities were reviewed to identify possible items to be included in the questionnaire. The correspondence between the individual items and the concept was assessed through experts’ validation method. The experts’ opinions were sought from one organisational unit leader working at a senior level and two leaders at the middle management level in a public Australian university, to provide their judgments on different downsizing actions in order to check whether they correspond with the concept or not. These leaders were not part of the survey population. Additionally, one senior academic in the business school of a publicly funded Australian university who had the practitioner’s knowledge of downsizing was consulted. This senior academic was also not part of the survey population. Due to the confidentiality issue, the researcher is privileged not to reveal their identities. With a certain modification of the survey questionnaire based on the experts’ suggestions, a reasonable degree of confidence of the content validity was achieved, thus establishing the content validity of the downsizing survey questionnaire. The modified survey instrument was sent across the survey population. Pre-testing before
formal administration of the survey was not considered necessary in this research for the following reasons:

- The questionnaire on ideal and practical downsizing actions contained widely known terms such as voluntary redundancy, voluntary early retirement and targeted redundancy, which are considered part of HR (Human Resources) Policies and Procedures and are made available to leaders by their respective universities.

- During the last two decades, there has been a widespread use of downsizing actions in publicly funded Australian universities.

- In order to measure the leaders’ characteristics and organisational culture this research used the previously published questionnaires (viz. LBDQ-XII, BFI-10, SSVS and OCI) which are found to have good reliability and validity.

The instrument’s ability to measure an item accurately and analyse was assessed through criterion-related validity. Grove and Savich (1979) have suggested that the use of a five-point Likert scale tends to provide roughly equal frequencies, whereas the use of a seven-point scale may provide quite lower frequencies, and a three-point scale may cause subjects’ frustration as not being able to discriminate finely enough. Furthermore, the five-point Likert scale is a popular scaling technique and is used widely in organisational research studies. The measurements in this research were conducted using a five-point Likert scale for all six variables, viz. ideal downsizing actions, practical downsizing actions, personality, Leadership Styles, Personal Values, and Organisational Culture.

Black (1999) notes that the construct validity is probably the most appropriate method of validity testing for a researcher-developed instrument. Further, he suggests that
how one ensures that an instrument measures what it is supposed to measure could be achieved in one of three ways (Mehrens & Lehmann, 1984; Murphy & David-Shofer, 2001), viz. logical or rational strategy, factor-analytic or homogeneous strategy and empirical strategy. Owing to the nature of research design adopted for the present study, the factor-analytic strategy was found to be the appropriate method for testing the construct validity for both ideal and practical downsizing survey questionnaires. Construct validity of latent variables used was assessed by Factor analysis to test how well the items selected for the dimensions of the variable define the construct. The dimensions or factors underlying a latent variable were established using an eigenvalue of greater than one as the dimension criterion.

Next, in order to gain a better understanding of the research data, the descriptive statistics were studied whose detailed discussion has been presented in the following sections.

4.3 **Descriptive Statistical Analysis**

Descriptive statistical analysis of downsizing actions was conducted in order to answer the research question (RQ₁), i.e. Is there a widespread orientation towards downsizing in publicly funded Australian universities? First, the descriptive statistics of ideal downsizing actions are discussed, and this is followed by the discussion on descriptive statistics of practical downsizing actions.
4.3.1 Descriptive Statistical Analysis of Ideal Downsizing Actions

Frequency distributions (Table 4.7) were used to determine the proportion of sample’s ideal downsizing actions in publicly funded Australian universities.

Table 4.7
Frequency Distributions - Ideal Downsizing Actions

<table>
<thead>
<tr>
<th>Ideal Downsizing Actions</th>
<th>Not at all f (P)</th>
<th>To a very little extent f (P)</th>
<th>To a little extent f (P)</th>
<th>To a large extent f (P)</th>
<th>To a very large extent f (P)</th>
<th>Total (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary Redundancy</td>
<td>4 (2)</td>
<td>21 (8)</td>
<td>40 (16)</td>
<td>114 (45)</td>
<td>76 (30)</td>
<td>255</td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td>7 (3)</td>
<td>15 (6)</td>
<td>44 (17)</td>
<td>120 (47)</td>
<td>67 (27)</td>
<td>253</td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>46 (19)</td>
<td>57 (23)</td>
<td>77 (31)</td>
<td>49 (20)</td>
<td>19 (8)</td>
<td>248</td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>104 (41)</td>
<td>84 (33)</td>
<td>52 (21)</td>
<td>12 (5)</td>
<td>2 (1)</td>
<td>254</td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>148 (58)</td>
<td>76 (30)</td>
<td>22 (9)</td>
<td>4 (2)</td>
<td>4 (2)</td>
<td>254</td>
</tr>
<tr>
<td>Closure</td>
<td>68 (27)</td>
<td>99 (39)</td>
<td>66 (26)</td>
<td>19 (8)</td>
<td>2 (1)</td>
<td>254</td>
</tr>
<tr>
<td>Merger</td>
<td>14 (6)</td>
<td>46 (18)</td>
<td>110 (44)</td>
<td>74 (29)</td>
<td>8 (3)</td>
<td>252</td>
</tr>
<tr>
<td>Delayering</td>
<td>24 (10)</td>
<td>46 (18)</td>
<td>112 (45)</td>
<td>56 (22)</td>
<td>12 (5)</td>
<td>250</td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td>69 (28)</td>
<td>75 (31)</td>
<td>70 (29)</td>
<td>24 (10)</td>
<td>5 (2)</td>
<td>243</td>
</tr>
<tr>
<td>Reduction in EFTSU intake</td>
<td>125 (51)</td>
<td>62 (25)</td>
<td>41 (17)</td>
<td>14 (6)</td>
<td>3 (1)</td>
<td>245</td>
</tr>
</tbody>
</table>

F - Count; P - Percent

Table 4.7 shows that more than a quarter of the sample ideally prefers downsizing actions, viz. voluntary redundancy and voluntary early retirement “to a very large extent”. Interestingly, more than half of the sample has indicated that forced layoffs and EFTSU intake reduction are not preferred at all.

As mentioned in the section 4.2.3, the distribution of scores for ideal downsizing actions for the sample contained reasonable variance and normality for use in subsequent analyses. Table 4.8 presents the descriptive statistics, viz. means and standard deviations for the ideal downsizing actions.
Table 4.8
Descriptive Statistics - Ideal Downsizing Actions

<table>
<thead>
<tr>
<th>Ideal Downsizing Actions</th>
<th>M</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary Redundancy</td>
<td>3.93</td>
<td>.96</td>
<td>1</td>
<td>5</td>
<td>255</td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td>3.89</td>
<td>.96</td>
<td>1</td>
<td>5</td>
<td>253</td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>2.75</td>
<td>1.20</td>
<td>1</td>
<td>5</td>
<td>248</td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>1.91</td>
<td>.93</td>
<td>1</td>
<td>5</td>
<td>254</td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>1.58</td>
<td>.84</td>
<td>1</td>
<td>5</td>
<td>254</td>
</tr>
<tr>
<td>Closure</td>
<td>2.17</td>
<td>.94</td>
<td>1</td>
<td>5</td>
<td>254</td>
</tr>
<tr>
<td>Merger</td>
<td>3.06</td>
<td>.91</td>
<td>1</td>
<td>5</td>
<td>252</td>
</tr>
<tr>
<td>Delayering</td>
<td>2.94</td>
<td>.99</td>
<td>1</td>
<td>5</td>
<td>250</td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td>2.26</td>
<td>1.04</td>
<td>1</td>
<td>5</td>
<td>243</td>
</tr>
<tr>
<td>Reduction in EFTSU intake</td>
<td>1.81</td>
<td>.99</td>
<td>1</td>
<td>5</td>
<td>245</td>
</tr>
</tbody>
</table>

M - Mean; SD - Standard Deviation; Min. - Minimum; Max. - Maximum; N - Respondents

Table 4.8 shows that the mean scores for ideal downsizing actions ranged from 1.58 to 3.93. The downsizing actions, viz. voluntary redundancy and voluntary early retirement have mean scores moderately high on a five point scale. The higher mean scores indicate a greater probability of downsizing actions being ideally preferred in publicly funded Australian universities. Also, the descriptive data suggests that the mean scores of voluntary redundancy are only marginally higher than voluntary early retirement. Among the listed downsizing actions, the two most preferred in publicly funded Australian universities are voluntary redundancy and voluntary early retirement and the two least preferred are forced layoff and reduction in EFTSU intake.
4.3.2 Descriptive Statistical Analysis of Practical Downsizing Actions

Frequency distributions (Table 4.9) were used to determine the proportion of sample’s practical downsizing actions.

Table 4.9

**Frequency Distributions - Practical Downsizing Actions**

<table>
<thead>
<tr>
<th>Practical Downsizing Actions</th>
<th>Not at all f (P)</th>
<th>To very little extent f (P)</th>
<th>To a little extent f (P)</th>
<th>To a large extent f (P)</th>
<th>To very large extent f (P)</th>
<th>Total (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary Redundancy</td>
<td>84 (44)</td>
<td>28 (15)</td>
<td>35 (18)</td>
<td>33 (17)</td>
<td>13 (7)</td>
<td>193</td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td>89 (46)</td>
<td>27 (14)</td>
<td>51 (27)</td>
<td>22 (12)</td>
<td>3 (2)</td>
<td>192</td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>112 (59)</td>
<td>37 (20)</td>
<td>27 (14)</td>
<td>13 (7)</td>
<td>1 (1)</td>
<td>190</td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>122 (63)</td>
<td>35 (18)</td>
<td>22 (11)</td>
<td>10 (5)</td>
<td>4 (2)</td>
<td>193</td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>161 (83)</td>
<td>15 (8)</td>
<td>12 (6)</td>
<td>4 (2)</td>
<td>1 (1)</td>
<td>193</td>
</tr>
<tr>
<td>Closure</td>
<td>127 (66)</td>
<td>32 (17)</td>
<td>23 (12)</td>
<td>10 (5)</td>
<td>0 (0)</td>
<td>192</td>
</tr>
<tr>
<td>Merger</td>
<td>61 (32)</td>
<td>31 (16)</td>
<td>51 (26)</td>
<td>36 (19)</td>
<td>14 (7)</td>
<td>193</td>
</tr>
<tr>
<td>Delayering</td>
<td>110 (57)</td>
<td>35 (18)</td>
<td>27 (14)</td>
<td>20 (10)</td>
<td>0 (0)</td>
<td>192</td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td>109 (58)</td>
<td>35 (19)</td>
<td>24 (13)</td>
<td>17 (9)</td>
<td>4 (2)</td>
<td>189</td>
</tr>
<tr>
<td>Reduction in EFTSU intake</td>
<td>156 (85)</td>
<td>14 (8)</td>
<td>10 (5)</td>
<td>3 (2)</td>
<td>1 (1)</td>
<td>184</td>
</tr>
</tbody>
</table>

f - Count; P - Percent

Table 4.9 shows that less than 10 per cent of the sample has used all downsizing actions (except closure and delayering) “to a very large extent”. The results indicate that none of the leaders have used closure and delayering as downsizing actions “to a very large extent”. More than half of the sample has reported that none of the listed downsizing actions (excluding merger, voluntary redundancy, and voluntary early retirement) have been used in the last three years.

As mentioned in the section 4.2.3, the distribution of scores for practical downsizing actions for the sample contained reasonable variance and normality for use in
subsequent analyses. Table 4.10 presents the descriptive statistics, viz. means and standard deviations for the practical downsizing actions.

**Table 4.10**

**Descriptive Statistics - Practical Downsizing Actions**

<table>
<thead>
<tr>
<th>Practical Downsizing Actions</th>
<th>M</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary Redundancy</td>
<td>2.29</td>
<td>1.35</td>
<td>1</td>
<td>5</td>
<td>193</td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td>2.08</td>
<td>1.15</td>
<td>1</td>
<td>5</td>
<td>192</td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>1.71</td>
<td>0.99</td>
<td>1</td>
<td>5</td>
<td>190</td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>1.65</td>
<td>1.01</td>
<td>1</td>
<td>5</td>
<td>193</td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>1.28</td>
<td>0.72</td>
<td>1</td>
<td>5</td>
<td>193</td>
</tr>
<tr>
<td>Closure</td>
<td>1.56</td>
<td>0.90</td>
<td>1</td>
<td>5</td>
<td>192</td>
</tr>
<tr>
<td>Merger</td>
<td>2.54</td>
<td>1.30</td>
<td>1</td>
<td>5</td>
<td>193</td>
</tr>
<tr>
<td>Delayering</td>
<td>1.78</td>
<td>1.04</td>
<td>1</td>
<td>5</td>
<td>192</td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td>1.79</td>
<td>1.10</td>
<td>1</td>
<td>5</td>
<td>189</td>
</tr>
<tr>
<td>EFTSU intake reduction</td>
<td>1.26</td>
<td>0.68</td>
<td>1</td>
<td>5</td>
<td>184</td>
</tr>
</tbody>
</table>

M - Mean; SD - Standard Deviation; Min. - Minimum; Max. - Maximum; N - Respondents

Referring to Table 4.10, the mean scores for practical downsizing actions ranged from 1.26 to 2.54. The lower mean scores (below average) indicate a lower probability of using these downsizing actions in publicly funded Australian universities. In other words, these downsizing actions have been less commonly used in publicly funded Australian universities.

The next section discusses the results of cross-tabulations and chi-square analysis.

**4.3.3 Cross-tabulations and Chi-square Analysis**

This section presents the results of the statistically significant cross-tabulations ($p < 0.05$) between ideal and practical downsizing actions and the leaders’ demographic characteristics. Only those cross-tabulations with the expected cell frequency greater than 5
or at least 80 per cent of the cells having expected frequencies of 5 or more and not less than 1 (Pallant, 2007; Field, 2009) have been reported.

4.3.3.1 Cross-tabulation and Chi-square Test - Ideal Targeted Redundancy by Gender

A cross-tabulation of Ideal Targeted Redundancy by Gender is shown in Table 4.11.

Table 4.11
Cross-tabulation - Ideal Targeted Redundancy by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>33</td>
<td>13</td>
<td>46</td>
</tr>
<tr>
<td>To very little extent</td>
<td>29</td>
<td>28</td>
<td>57</td>
</tr>
<tr>
<td>To a little extent</td>
<td>32</td>
<td>45</td>
<td>77</td>
</tr>
<tr>
<td>To a large extent</td>
<td>19</td>
<td>30</td>
<td>49</td>
</tr>
<tr>
<td>To very large extent</td>
<td>7</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>120</td>
<td>128</td>
<td>248</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 14.45, \( p = .006 \), N = 248

Of the 120 female leaders (48 per cent of the total) who responded, 28 per cent have not preferred Ideal Targeted Redundancy at all, 51 per cent have preferred it either to a little or very little extent and 21 per cent to a large extent or very large extent. Further, of the 128 male leaders (52 per cent of the total) who responded, 10 per cent have not preferred Ideal Targeted Redundancy at all, 57 per cent have preferred it either to a little or very little extent and 33 per cent to a large extent or very large extent. It reveals that more female leaders than male leaders have not preferred Ideal Targeted Redundancy at all.
Chi-square test results indicate that there is a significant association between Ideal Targeted Redundancy and Gender, \( \chi^2 (4, N = 248) = 14.45, p < .01 \). Male leaders are more likely to prefer Ideal Targeted Redundancy as a downsizing action than are female leaders.

### 4.3.3.2 Cross-tabulation and Chi-square Test - Practical Voluntary Redundancy by Gender

A cross-tabulation of Practical Voluntary Redundancy by Gender is shown in Table 4.12.

<table>
<thead>
<tr>
<th>Practical Voluntary Redundancy</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>48</td>
<td>36</td>
<td>84</td>
</tr>
<tr>
<td>To very little extent</td>
<td>10</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>To a little extent</td>
<td>14</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>To a large extent</td>
<td>10</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>To very large extent</td>
<td>4</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>86</strong></td>
<td><strong>107</strong></td>
<td><strong>193</strong></td>
</tr>
</tbody>
</table>

**Pearson Chi-Square = 10.28, p = .036, N = 193**

Of the 86 female leaders (45 per cent of the total) who responded, 56 per cent have not used Practical Voluntary Redundancy at all, 28 per cent have used it either to a little or very little extent and 16 per cent either to a large or very large extent. Further, 107 male leaders (55 per cent of the total) who responded, 34 per cent have not used Practical Voluntary Redundancy at all, 36 per cent have used it either to a little or very little extent and 30 per cent either to a large or very large extent. It reveals that more female leaders
than male leaders have not used Practical Voluntary Redundancy at all in the last three years.

Chi-square test results indicate that there is a significant association between Practical Voluntary Redundancy and Gender, $\chi^2 (4, N = 193) = 10.28$, $p < .05$. Male leaders are more likely to have used Practical Voluntary Redundancy as a downsizing action in the last three years than are female leaders.

**4.3.3.3 Cross-tabulation and Chi-square Test - Practical Closure by Current Position Title**

A cross-tabulation of Practical Closure by Current Position Title is shown in Table 4.13.

**Table 4.13**

<table>
<thead>
<tr>
<th>Current Position Title</th>
<th>Practical Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Academic / Research Position</td>
</tr>
<tr>
<td>Not at all</td>
<td>68</td>
</tr>
<tr>
<td>To very little extent</td>
<td>10</td>
</tr>
<tr>
<td>To a little extent</td>
<td>7</td>
</tr>
<tr>
<td>To a large extent</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>89</strong></td>
</tr>
</tbody>
</table>

**Pearson Chi-Square = 8.37, p = .039, N = 191**

Of the 89 leaders in academic/research position (47 per cent of the total) who responded, 76 per cent have not used Practical Closure at all, 19 per cent have used it
either to a little or very little extent and only five per cent to a large extent. Further, of the 
102 leaders in administration positions (53 per cent of the total) who responded, 57 per 
cent have not used Practical Closure at all, 37 per cent have used it either to a little or very 
little extent, and six per cent to a large extent. It reveals that more leaders in 
academic/research positions than in administration positions have not used Practical 
Closure at all in the last three years.

Chi-square test results indicate that there is a significant association between 
Closure and Current Position Title, $\chi^2 (3, N = 191) = 8.37, p < .05$. Leaders in 
administration positions are more likely to have used Practical Closure as a downsizing 
action in the last three years than are leaders in academic/research positions.

4.3.3.4 Cross-tabulation and Chi-square Test - Practical Merger by Current Position 
Title

A cross-tabulation of Practical Merger by Current Position Title is shown in Table 

<table>
<thead>
<tr>
<th>Current Position Title</th>
<th>Practical Merger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic / Research Position</td>
<td>Administration Position</td>
</tr>
<tr>
<td>Not at all</td>
<td>39</td>
</tr>
<tr>
<td>To very little extent</td>
<td>13</td>
</tr>
<tr>
<td>To a little extent</td>
<td>18</td>
</tr>
<tr>
<td>To a large extent</td>
<td>16</td>
</tr>
<tr>
<td>To very large extent</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 12.94, $p = .012$, N = 192

Of the 90 leaders in academic/research position (47 per cent of the total) who 
responded, 44 per cent have not used Practical Merger at all, 34 per cent have used it either 
to a little or very little extent and only 22 per cent either to a large or very large extent.
Further, of the 102 leaders in administration positions (53 per cent of the total) who responded, 21 per cent have not used Practical Merger at all, 50 per cent have used it either to a little or very little extent, and 29 per cent either to a large or very large extent. It reveals that more leaders in academic/research positions than in administration positions have not used Practical Merger at all in the last three years.

Chi-square test results indicate that there is a significant association between Practical Merger and Current Position Title, $\chi^2 (4, N = 192) = 12.94, p < .05$. Leaders in administration positions are more likely to have used Practical Merger as a downsizing action in the last three years than are leaders in academic/research positions.

4.3.3.5 Cross-tabulation and Chi-square Test - Practical Delayering by Current Position Title

A cross-tabulation of Practical Delayering by Current Position Title is shown in Table 4.15.

Table 4.15
Cross-tabulation - Practical Delayering by Current Position Title

<table>
<thead>
<tr>
<th>Current Position Title</th>
<th>Practical Delayering</th>
<th>Academic / Research Position</th>
<th>Administration Position</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>62</td>
<td>47</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>To very little extent</td>
<td>11</td>
<td>24</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>To a little extent</td>
<td>8</td>
<td>19</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>To a large extent</td>
<td>8</td>
<td>12</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>102</td>
<td>191</td>
<td></td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 11.34, $p = .010$, $N = 191$

Of the 89 leaders in academic/research position (47 per cent of the total) who responded, 70 per cent have not used Practical Delayering at all, 21 per cent have used it either to a little or very little extent and only nine per cent to a large extent. Further, of the 102 leaders in administration positions (53 per cent of the total) who responded, 46 per
cent have not used Practical Delayering at all, 42 per cent have used it either to a little or very little extent, and 12 per cent to a large extent. It reveals that more leaders in academic/research positions than in administration positions have not used Practical Delayering at all in the last three years.

Chi-square test results indicate that there is a significant association between Practical Delayering and Current Position Title, $\chi^2 (3, N = 191) = 11.34, p < .05$. Leaders in administration positions are more likely to have used Practical Delayering as a downsizing action in the last three years than are leaders in academic/research positions.

Finally, chi-square test results suggest that none of the downsizing actions are significantly associated with the leaders’ age, current positional tenure, experience in higher education sector, and broad field of organisational unit.

4.3.4 Answering the Research Question RQ1

The results of descriptive statistical analysis of ideal downsizing actions suggest that the two most preferred downsizing actions in publicly funded Australian universities include voluntary redundancy and voluntary early retirement and the two least preferred are forced layoff and reduction in EFTSU intake. However, the results of descriptive statistical analysis of practical downsizing indicate that none of the listed downsizing actions have been widely used in publicly funded Australian universities. Nonetheless, the results suggest that the two least used downsizing actions are forced layoff and EFTSU intake reduction.

The results of cross-tabulations and chi-square analyses indicate that the male leaders are more likely to prefer targeted redundancy as a downsizing action than are female leaders. However, the male leaders are more likely to have used voluntary
redundancy as a downsizing action in the last three years than are female leaders. Lastly, the results suggest that the leaders in administration positions are more likely to have used closure, merger, and delayering as downsizing actions than are leaders in academic / research positions in the last three years.

Next, a series of Exploratory Data Analyses (Exploratory Factor Analysis and Cluster Analysis) are discussed in the following sections.

4.4 Identifying Downsizing Strategies

Although not limited to a particular industry or sector, downsizing researchers have proposed several ways of categorising downsizing strategies. A detailed review of empirical and analytical typologies of downsizing has been presented in the Literature Review Chapter. The downsizing strategies resulting from such typologies have ranged from two strategies (convergent and re-orientation) to three strategies (workforce reduction, organisational redesign and systemic change) and to even five strategies (downsizing harshness continuum - no downsizing, alternative strategies, voluntary layoffs only, combination of voluntary and compulsory layoffs, and compulsory layoffs only).

Analytical typologies as suggested by many researchers (e.g. Freeman & Cameron, 1993; Kozlowski, 1993; DeWitt, 1998; Radcliffe et al., 2001) will be of little use unless they are subjected to rigorous empirical investigations and those empirical studies (e.g. Cameron, 1994; Dewettinck & Buyens, 2002) that have been conducted so far have resulted in no clear consensus on the underlying dimensions of downsizing. Therefore, the present research moved beyond describing what downsizing is, by advancing an empirical typology of downsizing. Based on the results of factor analysis, Ideal and practical downsizing strategies in publicly funded Australian universities were identified, thus
extending the answer to the research question, RQ1. Exploratory factor analysis was used to reduce ten downsizing actions to a manageable number of orthogonal factors (or factors) identified as downsizing strategies. A downsizing strategy therefore, in the present study refers to a set of downsizing actions. Next, the factor scores or estimates of scores on each of the factors were used to categorise the respondents into clusters by using Cluster Analysis. Further, given the exploratory nature of this research the intent of using factor analysis was to explore the research data and not to test the hypotheses. The following sections present the results of the exploratory factor analysis of ideal and practical downsizing actions.

### 4.4.1 Exploratory Factor Analysis of Ideal Downsizing

The correlation matrix (Table 4.16) for the ten ideal downsizing actions suggests a complex picture of 45 separate correlations. As a first step, a visual examination of the correlation matrix reveals a reasonable number of correlations in excess of 0.20 (Floyd & Widaman, 1995) and few considerably high. However, there are no correlations with greater than 0.9 (Field, 2009). Patterns in responses to item-variables of ideal downsizing actions were therefore anticipated (Tabachnick & Fidell, 2007). This provides an adequate basis for an empirical examination of adequacy for a factor analysis.
Table 4.16 Correlation Matrix – Ideal Downsizing Actions

<table>
<thead>
<tr>
<th></th>
<th>E₁</th>
<th>E₂</th>
<th>E₃</th>
<th>E₄</th>
<th>E₅</th>
<th>E₆</th>
<th>E₇</th>
<th>E₈</th>
<th>E₉</th>
<th>E₁₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary redundancy (E₁)</td>
<td>1.00</td>
<td>.68</td>
<td>- .03</td>
<td>.07</td>
<td>-.02</td>
<td>.11</td>
<td>.13</td>
<td>.06</td>
<td>.15</td>
<td>.11</td>
</tr>
<tr>
<td>Voluntary early retirement (E₂)</td>
<td>1.00</td>
<td></td>
<td>.06</td>
<td>.03</td>
<td>.07</td>
<td>.09</td>
<td>.10</td>
<td>.02</td>
<td>.29</td>
<td>.12</td>
</tr>
<tr>
<td>Targeted redundancy (E₃)</td>
<td>1.00</td>
<td>.25</td>
<td></td>
<td>.51</td>
<td>.44</td>
<td>.23</td>
<td>.17</td>
<td>.17</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Proportionate staff cuts (E₄)</td>
<td>1.00</td>
<td>.39</td>
<td></td>
<td>.33</td>
<td>.33</td>
<td>.25</td>
<td>.25</td>
<td>.11</td>
<td>.14</td>
<td>.07</td>
</tr>
<tr>
<td>Forced Layoff (E₅)</td>
<td>1.00</td>
<td>.55</td>
<td></td>
<td>.49</td>
<td>.29</td>
<td>.19</td>
<td>.13</td>
<td>.13</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Closure (E₆)</td>
<td>1.00</td>
<td></td>
<td>.52</td>
<td>.23</td>
<td></td>
<td>.33</td>
<td>.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merger (E₇)</td>
<td>1.00</td>
<td></td>
<td></td>
<td>.28</td>
<td></td>
<td></td>
<td>.27</td>
<td>.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delayering (E₈)</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eliminate academic programs (E₉)</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction in EFTSU intake (E₁₀)</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.45</td>
</tr>
</tbody>
</table>

Bolded values indicate correlations significant at 0.01

Table 4.17 shows the results of Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett’s Test of Sphericity. The KMO value is found to be .69 which falls into the range of being “mediocre” (Kaiser, 1974), and the sample size was considered as adequate for a factor analysis. Bartlett’s Test of Sphericity (1954) indicates
the presence of nonzero correlations and the test value is significant, i.e. the value of \( p \) is less than .001 (Field, 2009) and therefore factor analysis is considered as appropriate.

**Table 4.17**

<table>
<thead>
<tr>
<th>KMO Measure of Sampling Adequacy</th>
<th>0.69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bartlett’s Test of Sphericity</td>
<td></td>
</tr>
<tr>
<td>Approx. Chi-Square</td>
<td>590.74</td>
</tr>
<tr>
<td>df</td>
<td>45</td>
</tr>
<tr>
<td>( p )</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Collectively, the measures such as correlation coefficients, KMO Measure of Sampling Adequacy and Bartlett’s Test of Sphericity, all indicated that ten downsizing actions were appropriate for a factor analysis and the analysis could proceed to the next stage. Ten ideal downsizing actions were therefore, subjected to Principal Component Method.

A first quick estimate of the number of factors was obtained from the initial eigenvalues as part of an initial run with the principal components extraction. Results indicate that there are three factors with eigenvalues greater than one (i.e. one, two and three factors having eigenvalues of 2.92, 1.81 and 1.34, respectively), thus suspecting the possibility of a three-factor solution. The total variance explained by these three factors is 60.66 per cent.

The Scree Plot (Figure 4.1) however indicates that only two factors may be appropriate when considering the changes in eigenvalues (i.e. identifying the elbow in the Scree plot). These two factors represented only 47.24 per cent of the total variance explained which could not be considered as a substantial amount. Given the low value of
the total variance explained, the subjectivity involved in judging the discontinuity in
eigenvalues and the suspected possibility of under-extraction of factors, the two-factor
solution precluded its inclusion.

**Figure 4.1**
**Scree Plot of Ideal downsizing actions**

Not satisfied with the Scree Plot for determining the number of factors of
extraction, it was decided to use Horn’s Parallel Analysis criterion (Table 4.18).
Table 4.18
Horn’s Parallel Analysis - Ideal Downsizing Actions

<table>
<thead>
<tr>
<th>Eigenvalue</th>
<th>Random Eigenvalue (E_{PA})</th>
<th>Standard Deviation</th>
<th>Actual Eigenvalue (E_{PCA})</th>
<th>Decision to retain the factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.33</td>
<td>0.06</td>
<td>2.92</td>
<td>Accept</td>
</tr>
<tr>
<td>2</td>
<td>1.22</td>
<td>0.04</td>
<td>1.81</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>1.15</td>
<td>0.03</td>
<td>1.34</td>
<td>Accept</td>
</tr>
<tr>
<td>4</td>
<td>1.08</td>
<td>0.03</td>
<td>.84</td>
<td>Reject</td>
</tr>
<tr>
<td>5</td>
<td>1.02</td>
<td>0.03</td>
<td>.78</td>
<td>Reject</td>
</tr>
<tr>
<td>6</td>
<td>.96</td>
<td>0.03</td>
<td>.71</td>
<td>Reject</td>
</tr>
<tr>
<td>7</td>
<td>.90</td>
<td>0.03</td>
<td>.50</td>
<td>Reject</td>
</tr>
<tr>
<td>8</td>
<td>.85</td>
<td>0.03</td>
<td>.48</td>
<td>Reject</td>
</tr>
<tr>
<td>9</td>
<td>.78</td>
<td>0.03</td>
<td>.34</td>
<td>Reject</td>
</tr>
<tr>
<td>10</td>
<td>.72</td>
<td>0.04</td>
<td>.29</td>
<td>Reject</td>
</tr>
</tbody>
</table>

Number of variables: 10; Number of subjects: 255; Number of replications: 100
Random Eigenvalue - Criterion value from Parallel Analysis
Actual Eigenvalue - From Principal Factor Analysis
Decision to retain the factor: Accept, if E_{PCA} ≥ E_{PA}; Reject, if E_{PCA} ≤ E_{PA}

Table 4.18 reveals that only the first three factors qualify for retention. Referring to Table 4.18 and the initial eigenvalues obtained as part of an initial run with the principal components extraction, the total variance explained by the retention of the first three factors is 60.66 per cent. This is deemed appreciable and sufficient in terms of the total variance explained as approximately 60 per cent is the percentage of the total variance considered to be satisfactory in social sciences (Hair et al., 2010). Thus, acknowledging the Kaiser’s eigenvalue criterion, Parallel Analysis criterion, and percentage of variance criterion and also choosing the most interpretable solution, the three-factor solution was chosen for further analysis. With the three factors to be analysed, the next step is the interpretation of these factors.
4.4.1.1 Interpretation of Factors

All loadings were substantially above the threshold, making interpretation quite simple. Trial analyses were conducted using the Varimax rotation with two, three, four, and five factors to aid in the clear interpretation. The results of rotated solutions showed that except for the two-factor and three-factor solutions, all other factor matrices included several complex item-variables having a substantial number of cross loadings. The two-factor and three-factor solutions revealed the presence of simple structure (Thurstone, 1947).

First, the unrotated factor solution was examined in order to determine whether the use of the rotated solution was necessary. To begin the analysis, the percentage of variance explained by factors one, two, and three were found to be 29.17 per cent, 18.07 per cent and 13.42 per cent, respectively. The index for the overall solution shows that 60.66 per cent of the total variance explained is represented by the three-factor solution. Therefore, the index for this solution was considered as reasonably high and the item-variables were in fact highly related to each other.

The first factor accounted for the largest amount of variance of 29.17 per cent with seven downsizing actions having significant loading but three of them were found to have cross loadings. The second and third factors contained three downsizing actions each with significant loading but all three of them were found to have cross loadings between the two factors. Based on this factor-loading pattern with a relatively substantial number of cross loadings or lack of maximized loadings of each downsizing action on one factor, interpretation was found to be difficult and theoretically less meaningful.
Given that the unrotated factor matrix did not have a completely clean set of factor loadings, a Varimax rotation technique was found necessary in order to arrive at a simple structure of factor matrix. Table 4.19 presents the rotated factor matrix for ideal downsizing actions.

**Table 4.19**  
Rotated Factor Matrix - Ideal Downsizing Actions

<table>
<thead>
<tr>
<th>Ideal Downsizing actions</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>0.82</td>
</tr>
<tr>
<td>Closure</td>
<td>0.78</td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>0.71</td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>0.59</td>
</tr>
<tr>
<td>Merger</td>
<td>0.58</td>
</tr>
<tr>
<td>EFSTU intake reduction</td>
<td></td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td></td>
</tr>
<tr>
<td>Delaying</td>
<td></td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td></td>
</tr>
<tr>
<td>Voluntary Redundancy</td>
<td></td>
</tr>
<tr>
<td><strong>Eigenvalues</strong></td>
<td>2.57</td>
</tr>
<tr>
<td><strong>Per cent of variance</strong></td>
<td>25.74</td>
</tr>
<tr>
<td><strong>Cumulative per cent of variance</strong></td>
<td>25.74</td>
</tr>
</tbody>
</table>

Extraction method: Principal Component Analysis  
Rotation method: Varimax with Kaiser Normalisation  
Rotation converged in 4 iterations

In the rotated factor solution (Table 4.19) each of the downsizing actions has a significant loading on only one factor. Moreover, all loadings were found to be above 0.5, meaning that more than one half of the variance was accounted for by the loading on a single factor. Use of Comrey and Lee’s (1992) rule of thumb suggested that factor loadings ranged from good to excellent.
Referring to Table 4.19, the three-factor solution explained a total variance of 60.66 per cent, with factors one, two and three contributing 25.74 per cent, 17.62 per cent and 17.30 per cent variance, respectively. Therefore, it was decided to retain three factors for further investigation. The next section discusses the naming of three factors to identify the common themes in order to label them appropriately.

4.4.1.2 Naming the Factors

Exploratory Factor analysis of ideal downsizing actions yielded three distinctive orthogonal factors. All loadings were substantially above the threshold (i.e. +0.40) making interpretation quite simple. While it was realised that a satisfactory factor solution has been obtained the next attempt step was to assign some meaning to the factors in order to categorize the findings. This process involved substantive interpretation of the pattern of factor loadings for the item-variables, including their signs, in an effort to name each of the factors.

Referring to Table 4.19, a marked pattern of downsizing actions with significant loadings for each factor is evident. Factor one has five downsizing actions with significant loadings, and factor two and factor three have three and two loadings, respectively. All of them have significant loadings and positive signs.

Hair et al. (2010) suggest that variables with higher loadings influence to a greater extent the name selected to represent the factor. Therefore, each factor was named based on the downsizing actions with higher loadings. The naming exercise involved looking into the content of downsizing actions that load onto the same factor and thence identifying the common themes in order to label them appropriately.

Examination of the item-variables of ideal downsizing actions indicates that five of
them are loaded on the first factor. All five downsizing actions (forced layoff, closure, targeted redundancy, proportionate staff cuts and merger) while considered together represent a conceptually distinct aspect of forceful reduction of full-time equivalent staff numbers as well as number of organisational units. These downsizing actions are forcefully imposed by the leaders on the staff members. All downsizing actions that are loading on the first factor have a significant impact on the university sector through reduction in full-time equivalent staff numbers as well as number of organisational units. Therefore, this factor was labelled “Forced Downsizing”.

The downsizing actions, viz. reduction in EFTSU intake and elimination of academic programs that load heavily on the second factor relate to different aspects of reduction in equivalent full time students’ student load. Although delayering is significantly loaded on factor two, the variables with higher factor loadings require greater emphasis while labelling the factors (Hair et al., 2010). Therefore, factor two was labelled “Student Load Downsizing”. Lastly, the downsizing actions, viz. voluntary redundancy and voluntary early retirement that load heavily on the third factor represent a conceptually distinct aspect of voluntary reduction of full-time equivalent staff numbers. Therefore, this factor was labelled “Voluntary Downsizing.”

Whatever the labelling method may be, it is clear that factor analysis of ideal downsizing actions yielded three distinctive dimensions which are referred to as ideal downsizing strategies.

Finally as part of a validation of factor analysis of ideal downsizing actions, the two Varimax rotations were performed on split samples (two random sub-samples are not
necessarily equal in size). The results of Factor Analysis Validation using Split Sample Method are presented in the Table 4.20.

**Table 4.20**

**Factor Analysis Validation - Ideal Downsizing Actions**

<table>
<thead>
<tr>
<th>Ideal Downsizing actions</th>
<th>Factors&lt;sup&gt;a&lt;/sup&gt;</th>
<th></th>
<th>Factors&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sub-sample 1 (N* = 139)</td>
<td>Sub-sample 2 (N** = 116)</td>
<td></td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>0.82</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Closure</td>
<td>0.79</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>0.72</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>0.54</td>
<td>0.65</td>
<td></td>
</tr>
<tr>
<td>Merger</td>
<td>0.51</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>EFSTU intake reduction</td>
<td>0.82</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td>0.80</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>Delayering</td>
<td>0.56</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td>0.92</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Voluntary Redundancy</td>
<td>0.90</td>
<td>0.88</td>
<td></td>
</tr>
</tbody>
</table>

Extraction method: Principal Component Analysis
Rotation method: Varimax with Kaiser Normalisation
a - Rotation converged in 4 iterations
b - Rotation converged in 4 iterations
*Only cases for which split = 0 are used in the analysis phase
**Only cases for which split = 1 are used in the analysis phase

Referring to Table 4.20, the pattern of factor loadings for both validation sub-samples shows the same pattern of item-variables, though the second and third factors have switched places. It is the same as the pattern for the analysis obtained using the full sample (Table 4.19). In effect, the same analysis on two sub-samples of cases established the same results. This validation analysis supports a finding that the results of this factor analysis are generalisable to the population represented by this data set.
With the three-factor solution, it was ensured that the results were stable within the current sample. Next, the factor scores were computed that were used in subsequent analyses, viz. cluster analysis and one way ANOVAs. As this research required uncorrelated scores, so factor scores were produced using the Anderson-Rubin method.

An empirical typology of ideal downsizing strategies has been advanced based on the factor analysis of 255 responses of leaders in ten public universities having a diversified geographical spread in Australia. These leaders differed in the extent to which they ideally preferred their three downsizing strategies.

As with regards to the empirical typology of ideal downsizing strategies advanced in this research, the following three types of downsizing strategies were identified in ten publicly funded Australian universities which differed in the extent to which they ideally preferred them: Forced Downsizing, Student Load Downsizing, and Voluntary Downsizing.

Thus, answer to the RQ₁ was extended, i.e. ideally three downsizing strategies, viz. forced downsizing, student load downsizing and the voluntary downsizing are preferred in publicly funded Australian universities. The results of exploratory factor analysis of practical downsizing are discussed in the next section.

4.4.2 Exploratory Factor Analysis of Practical Downsizing

The distribution of scores of ten practical downsizing actions were examined for normality and found to have reasonably normal distribution.

The correlation matrix (Table 4.21) suggests that ten practical downsizing actions present a complex picture of 45 separate correlations.
Table 4.21 Correlation Matrix – Practical Downsizing Actions

<table>
<thead>
<tr>
<th>Downsizing Actions</th>
<th>E₁₀</th>
<th>E₉</th>
<th>E₈</th>
<th>E₇</th>
<th>E₆</th>
<th>E₅</th>
<th>E₄</th>
<th>E₃</th>
<th>E₂</th>
<th>E₁</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary redundancy (E₁)</td>
<td>1.00</td>
<td>.50</td>
<td>.43</td>
<td>.21</td>
<td>.20</td>
<td>.28</td>
<td>.21</td>
<td>.22</td>
<td>.21</td>
<td>.06</td>
</tr>
<tr>
<td>Voluntary early retirement (E₂)</td>
<td>1.00</td>
<td>.23</td>
<td>.29</td>
<td>.21</td>
<td>.14</td>
<td>.12</td>
<td>.23</td>
<td>.28</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>Targeted redundancy (E₃)</td>
<td>1.00</td>
<td>.33</td>
<td>.47</td>
<td>.41</td>
<td>.31</td>
<td>.22</td>
<td>.17</td>
<td>.22</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>Proportionate staff cuts (E₄)</td>
<td>1.00</td>
<td>.00</td>
<td>.35</td>
<td>.34</td>
<td>.36</td>
<td>.26</td>
<td>.24</td>
<td>.23</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>Forced Layoff (E₅)</td>
<td>1.00</td>
<td>.20</td>
<td>.35</td>
<td>.28</td>
<td>.36</td>
<td>.24</td>
<td>.23</td>
<td>.28</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Closure (E₆)</td>
<td>1.00</td>
<td>.42</td>
<td>.41</td>
<td>.28</td>
<td>.24</td>
<td>.23</td>
<td>.28</td>
<td>.19</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Merger (E₇)</td>
<td>1.00</td>
<td>.42</td>
<td>.41</td>
<td>.28</td>
<td>.24</td>
<td>.23</td>
<td>.28</td>
<td>.19</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Delayering (E₈)</td>
<td>1.00</td>
<td>.20</td>
<td>.34</td>
<td>.35</td>
<td>.36</td>
<td>.24</td>
<td>.23</td>
<td>.28</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Eliminate Academic Programs (E₉)</td>
<td>1.00</td>
<td>.20</td>
<td>.34</td>
<td>.35</td>
<td>.36</td>
<td>.24</td>
<td>.23</td>
<td>.28</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Reduction in EFTSU intake (E₁₀)</td>
<td>1.00</td>
<td>.20</td>
<td>.34</td>
<td>.35</td>
<td>.36</td>
<td>.24</td>
<td>.23</td>
<td>.28</td>
<td>.19</td>
<td></td>
</tr>
</tbody>
</table>

Bolded values indicate correlations significant at 0.01

As a first step, the visual examination of the correlation matrix reveals a reasonably large number of correlations in excess of .20 (Floyd and Widaman, 1995). However, there are no correlations with greater than 0.9 (Field, 2009). Patterns in responses to item-
variables of ideal downsizing actions were therefore anticipated (Tabachnick & Fidell, 2007). This provides an adequate basis for an empirical examination of adequacy for factor analysis.

Table 4.22 shows the results of Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett’s Test of Sphericity (1954).

<table>
<thead>
<tr>
<th>Table 4.22</th>
<th>KMO Measure and Bartlett’s Test - Practical Downsizing Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KMO Measure of Sampling Adequacy</strong></td>
<td>0.77</td>
</tr>
<tr>
<td><strong>Bartlett’s Test of Sphericity</strong></td>
<td></td>
</tr>
<tr>
<td>Approx. Chi-Square</td>
<td>395.98</td>
</tr>
<tr>
<td>df</td>
<td>45</td>
</tr>
<tr>
<td><strong>p</strong></td>
<td><strong>0.000</strong></td>
</tr>
</tbody>
</table>

The KMO value is found to be 0.77 which falls in the range of being “good” (Kaiser, 1974) and therefore the sample size was considered as adequate for factor analysis. Bartlett’s Test of Sphericity (1954) indicates the presence of nonzero correlations and the test value is highly significant, i.e. the value of \( p \) is less than .001 (Field, 2009) and therefore factor analysis is considered as appropriate.

Collectively, the measures, viz. correlation coefficients, KMO Measure of Sampling Adequacy and Bartlett’s Test of Sphericity, all indicated that ten practical downsizing actions were appropriate for the factor analysis so as to proceed to the next stage. The ten practical downsizing actions were subjected to Principal Component Method.

All ten possible factors of practical downsizing actions and their relative explanatory power as expressed by their initial eigenvalues were studied. A first quick
estimate of the number of factors was obtained from the initial eigenvalues as part of an initial run using Principal Components Method. Results indicated that there are only three factors with eigenvalues greater than one (Factors 1, 2, and 3 have eigenvalues of 3.37, 1.25 and 1.17, respectively), thus suspecting the possibility of a three-factor solution. The total variance explained by these three factors is 57.86 per cent.

The Scree Plot (Figure 4.2) however indicates that only two factors are appropriate when considering the changes in eigenvalues (i.e. identifying the elbow in the Scree plot).

**Figure 4.2**
Scree plot of Practical Downsizing Actions

![Scree Plot](image)

The two factors represented only 46.16 per cent of the total variance explained which could not be considered as a substantial amount of variance explained. Given the low value of total variance explained, subjectivity involved in judging the discontinuity in
eigenvalues and the suspected possibility of under-extraction of factors by two-factor solutions, this precluded the Scree plot’s inclusion.

Not satisfied with the Scree plot for determining the number of factors of extraction, it was decided to apply Horn’s PA or Parallel Analysis criterion. A systematic comparison was made between first eigenvalue obtained in SPSS for Principal Component Analysis and the corresponding eigenvalue from the random results generated by Parallel Analysis (Table 4.23).

**Table 4.23**

**Horn’s Parallel Analysis - Practical Downsizing Actions**

<table>
<thead>
<tr>
<th>Eigenvalue</th>
<th>Random Eigenvalue (E_{PA})</th>
<th>Standard Deviation</th>
<th>Actual Eigenvalue (E_{PCA})</th>
<th>Decision to retain the factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.37</td>
<td>.05</td>
<td>3.37</td>
<td>Accept</td>
</tr>
<tr>
<td>2</td>
<td>1.25</td>
<td>.04</td>
<td>1.25</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>1.17</td>
<td>.04</td>
<td>1.17</td>
<td>Accept</td>
</tr>
<tr>
<td>4</td>
<td>1.09</td>
<td>.03</td>
<td>.92</td>
<td>Reject</td>
</tr>
<tr>
<td>5</td>
<td>1.02</td>
<td>.03</td>
<td>.72</td>
<td>Reject</td>
</tr>
<tr>
<td>6</td>
<td>.95</td>
<td>.03</td>
<td>.66</td>
<td>Reject</td>
</tr>
<tr>
<td>7</td>
<td>.89</td>
<td>.03</td>
<td>.63</td>
<td>Reject</td>
</tr>
<tr>
<td>8</td>
<td>.82</td>
<td>.03</td>
<td>.47</td>
<td>Reject</td>
</tr>
<tr>
<td>9</td>
<td>.76</td>
<td>.04</td>
<td>.44</td>
<td>Reject</td>
</tr>
<tr>
<td>10</td>
<td>.67</td>
<td>.05</td>
<td>.38</td>
<td>Reject</td>
</tr>
</tbody>
</table>

Number of variables: 10; Number of subjects: 255; Number of replications: 100
Random Eigenvalue - Criterion value from Parallel Analysis
Actual Eigenvalue - From Principal Factor Analysis
Decision to retain the factor: Accept, if $E_{PCA} \geq E_{PA}$; Reject, if $E_{PCA} \leq E_{PA}$

Table 4.23 reveals that only the first three factors qualify for retention. This factor represents 57.86 per cent which is considered satisfactory.
To aid in the clear interpretation, trial analyses were conducted using Varimax rotation with one, two, three, four, and also five factors. The results of rotated solutions showed that except for the two-factor and three-factor solutions, all others included several complex item-variables having a substantial number of cross loadings. Two-factor as well as three-factor solutions revealed the presence of simple structure (Thurstone, 1947). However, the two-factor solution was excluded due to very few numbers of factors suspecting the possibility of under-extraction as well as lower total variance explained.

The four-factor and five-factor solutions had too many cross loadings and hence it posed difficulties for the interpretation. Thus, acknowledging the Kaiser’s eigenvalue criterion, the percentage of variance criterion and choosing the most interpretable solution, the three-factor solution was chosen for further analysis. The total variance explained by these three factors is 57.86 per cent which is nearer to 60 per cent, a percentage of total variance considered to be satisfactory in social sciences (Hair et al., 2010). These three factors represent 57.86 per cent of total variance explained by the ten practical downsizing actions which is deemed appreciable and sufficient in terms of the total variance explained. With the three factors to be analysed, the next step is the interpretation of these factors.

4.4.2.1 Interpretation of Factors

First the unrotated factor solution was examined in order to determine whether the use of a rotated solution was necessary. To begin the analysis, the percentages of variance explained were found to be 33.71 per cent, 12.45 per cent and 11.70 per cent for the factors one, two and three, respectively. The index for the overall solution shows that 57.86 per cent of the total variance explained is represented by the three-factor solution. Therefore, the index for this solution was considered as reasonably high and the item-variables were
in fact highly related to each other.

The first factor accounted for the largest amount of variance of 33.71 per cent with nine downsizing actions having significant loading but four of them (that is, voluntary redundancy, voluntary early retirement, merger, and eliminate academic programs) were found to have cross loadings. The second factor contained two downsizing actions (that is, reduction in EFTSU intake and eliminate academic programs) with significant loading but eliminate academic programs cross loaded on factors 1 and 2. The third factor also contained two downsizing actions (that is, voluntary redundancy and voluntary early retirement) with significant loading but both of them had cross loadings on factors 1 and 3. Based on this factor-loading pattern with a relatively substantial number of cross loadings or lack of maximized loadings of each downsizing action on one factor, interpretation was found to be difficult and theoretically less meaningful.

Given that the unrotated factor matrix did not have a completely clean set of factor loadings, a Varimax rotation technique was found necessary to arrive at a simple structure of factor matrix. Table 4.24 presents the rotated factor matrix for practical downsizing actions.
In the rotated factor solution (Table 4.24) each of the ten downsizing actions contained a significant loading on only one factor, except for “delayering” which cross loaded on factors one and three. Moreover, all loadings were found to have a value above 0.5, meaning that at least one-half of the variance was accounted for by the loading on a single factor. Lastly, one loading had a value less than 0.5 but of course above 0.4 (significant loading value).

Use of Comrey and Lee’s (1992) rule of thumb suggested that factor loadings ranged from fair to excellent. Referring to Table 4.24, the three-factor solution explained a total variance of 57.86 per cent with factors one, two and three contributing 25.82 per cent, 250
16.84 per cent and 15.20 per cent, respectively. Therefore, it was decided to retain the three factors for further investigation. The next section discusses the naming of these three factors by identifying the common themes in order to label them appropriately.

4.4.2.2 Naming the Factors

Exploratory Factor Analysis of practical downsizing actions yielded three distinctive orthogonal factors. All loadings are substantially above the threshold (i.e. +0.40) making interpretation quite simple. Referring to Table 4.24, a marked pattern of item-variables with significant loadings for each factor is evident. Factor one has six downsizing actions whereas factors two and three have two downsizing actions each. Delayering is cross-loaded on factors one and three. All of them have significant loadings and positive signs.

Examination of the item-variables of practical downsizing actions indicates that item-variables of the first factor (that is, closure, merger, targeted redundancy, forced layoffs, delayering, and proportionate staff cuts) represent a conceptually distinct aspect of university management’s “forced” reduction of their full-time equivalent staff numbers as well as organisational units. Although delayering is cross-loaded on factors three and one, it is heavily loaded onto factor one. Hair et al. (2010) suggest that variables with higher factor loadings require greater emphasis while labelling the factors. The downsizing actions, viz. closure, merger, targeted redundancy, forced layoffs, delayering, and proportionate staff cuts are initiated by the universities’ top managements and are considered to have a significant impact on the universities’ workforce size as well as number of organisational units. Therefore, this factor was labelled “Forced Downsizing.”
The downsizing actions (that is, voluntary early retirement and voluntary redundancy) that load heavily on the second factor represent a conceptually distinct aspect of “voluntary” reduction of full-time equivalent staff numbers. These downsizing actions are considered to have a significant impact on only the size of the workforce but not on the number of organisational units. Although, these downsizing actions are initiated by the universities’ top managements, they are not forceful in nature as compared to the previously mentioned strategy. Staff members are not forced by the management to accept or refuse the offer of redundancy and early retirement. Therefore, this factor was labelled “Voluntary Downsizing.” Lastly, the downsizing actions, viz. reduction in EFTSU intake and elimination of academic programs that loaded heavily on the third factor relate to different aspects of reduction in equivalent full time student load. Therefore, factor three was labelled “Student Load Downsizing.”

Whatsoever the labelling method may be, the exploratory factor analysis of ten practical downsizing actions has yielded three distinctive dimensions which are referred to as practical downsizing strategies in this research.

Finally as part of a validation of factor analysis of practical downsizing actions, the two Varimax rotations were performed on split samples (two random sub-samples are not necessarily equal in size) and were found to be comparable in terms of loadings for all ten downsizing actions (Table 4.25).
Table 4.25
Factor Analysis Validation - Practical Downsizing Actions

<table>
<thead>
<tr>
<th>Practical Downsizing Actions</th>
<th>Factors&lt;sup&gt;a&lt;/sup&gt;&lt;br&gt;Sub-sample 1 (N* = 110)</th>
<th>Factors&lt;sup&gt;b&lt;/sup&gt;&lt;br&gt;Sub-sample 2 (N** = 84)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closure</td>
<td>0.80</td>
<td>0.75</td>
</tr>
<tr>
<td>Merger</td>
<td>0.78</td>
<td>0.71</td>
</tr>
<tr>
<td>Targeted Redundancy</td>
<td>0.67</td>
<td>0.61</td>
</tr>
<tr>
<td>Forced Layoff</td>
<td>0.64</td>
<td>0.59</td>
</tr>
<tr>
<td>Delayering</td>
<td>0.61</td>
<td>0.46</td>
</tr>
<tr>
<td>Proportionate staff cuts</td>
<td>0.59</td>
<td>0.46</td>
</tr>
<tr>
<td>Voluntary Early Retirement</td>
<td>0.83</td>
<td>0.71</td>
</tr>
<tr>
<td>Voluntary Redundancy</td>
<td>0.79</td>
<td>0.62</td>
</tr>
<tr>
<td>EFSTU intake reduction</td>
<td>0.85</td>
<td>0.86</td>
</tr>
<tr>
<td>Eliminate Academic Programs</td>
<td>0.67</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Extraction method: Principal Component Analysis
Rotation method: Varimax with Kaiser Normalisation

<sup>a</sup>- Rotation converged in 6 iterations
<sup>b</sup>- Rotation converged in 7 iterations
*Only cases for which split = 0 are used in the analysis phase
**Only cases for which split = 1 are used in the analysis phase

Referring to Table 4.25, the pattern of factor loadings for both validation sub-samples shows the same pattern of item-variables. It is the same as the pattern for the analysis obtained using the full sample. In effect, the same analysis on two sub-samples of cases established the same results (Table 4.24). This validation analysis supports a finding that the results of this factor analysis are generalisable to the population represented by this data set.

With the three-factor solution, it was ensured that the results were stable within the current sample. Next, the factor scores were computed that were used in subsequent
analyses, viz. cluster analysis and one way ANOVAs. As this research required uncorrelated scores, so factor scores were produced using the Anderson-Rubin method.

An empirical typology of practical downsizing strategies has been developed based on the factor analysis of 194 valid responses from ten public universities having a diversified geographical spread across Australia. These leaders differed in the extent to which they practically used the three downsizing strategies. The following three types of downsizing strategies were identified in ten publicly funded Australian universities which differed in the extent to which they practically used them: Forced Downsizing, Voluntary Downsizing, and Student Load Downsizing.

Thus, answer to the RQ1 was extended further through identifying three practical downsizing strategies that are used in publicly-funded Australian universities. After discussing the results of Factor Analysis, it was decided to proceed with the Cluster Analyses in order to categorise the respondents into clusters before subjecting them to one-way ANOVA tests. The following sections discuss the results of Cluster Analyses.

4.5 Categorising Leaders based on Downsizing Strategies

The primary interest to use cluster analysis in this research was for grouping leaders into manageable clusters based on their ideal and practical downsizing strategies. The factor scores on each of the three factors in the factor analysis of ideal and practical downsizing strategies were used to categorise the respondents into clusters. The clusters thus formed were used in subsequent analyses, i.e. one-way ANOVAs for answering the research questions RQ2 and RQ3. In other words, factor scores for each of the 255 leaders in case of ideal downsizing and 194 leaders in case of practical downsizing were computed and provided the basis for a clustering procedure.
The categorization of leaders into segments that defined the basic character of group members provided an avenue for examining the associations between practical downsizing strategies and organisational culture types; ideal downsizing strategies, leaders’ characteristics (viz. leadership styles, personality and personal values), and organisational culture types (bureaucratic, innovative and supportive cultures).

In an effective segmentation, leaders were viewed not only as individuals, but also as members of relatively homogeneous groups portrayed through their common profiles. This enabled the understanding of what unique personal characteristics do leaders of each segment possess in regard to their ideal and practical downsizing strategies. Also, based on the leaders’ perceptions of their organisational culture what type of culture is likely to favour specific downsizing strategies. For example do leaders with characteristics such as task-oriented style, extrovert personality, conformism value and working in a bureaucratic culture tend to prefer a forced downsizing?

Cluster analysis with its objective of forming homogeneous groups that are distinct from one another as much as possible, provided a unique methodology for developing taxonomies of leader-downsizing types with maximal managerial relevance. It facilitated the development of a taxonomy that segments leaders into groups based on the similarity in their ideal and practical downsizing strategies.

The following sections discuss the different stages used to cluster analyse the leaders across ideal and practical downsizing strategies, the choices made in selecting a particular method or a criterion, and lastly the interpretation and profiling of the different clusters on the organisational culture types (bureaucratic, innovative and supportive...
cultures) and a set of leaders’ characteristics (viz. leadership styles, personality and personal values).

The results of cluster analysis across ideal downsizing strategies will be discussed first, which is followed by a discussion on results of cluster analysis across practical downsizing strategies.

4.5.1 Cluster Analyses across Ideal Downsizing Strategies

The following are the three strongly uncorrelated variables (downsizing strategies) obtained through factor analysis and included in the cluster analysis: Forced Downsizing, Student Load Downsizing, and Voluntary Downsizing.

These three downsizing strategies were used to cluster the leaders into strategic orientation groups based on the similar emphasis that leaders place on a particular downsizing strategy.

The data in this research involved leaders’ perceptual measures of ideal and practical downsizing actions, leaders’ characteristics (viz. leadership styles, personality and personal values) and organisational culture types (bureaucratic, innovative and supportive cultures). The main interest was to explain the differences in approaches to ideal downsizing in terms of leaders’ characteristics and organisational culture; and, to explain the differences in approaches to ideal downsizing in terms of only organisational culture. This formed the basis for the differences in ideal downsizing strategies. In that case, a manageable number of clusters from a strategic and tactical perspective would be more than two but no more than five or six.

The dendogram suggested the three, four and five cluster solutions to be suitable. However, the stopping rule applied was based on assessing the changes in the
heterogeneity between cluster solutions. Due to the largeness of the sample size the dendogram appeared to be unwieldy and therefore it is not reproduced here. However, the dendogram generally displays the same pattern as shown in the agglomeration schedule (ref Table 4.26). The agglomeration schedule provided information for each of the stages of the clustering process. Table 4.26 shows a portion of the agglomeration schedule produced by the hierarchical cluster results.

Table 4.26

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cluster Combined</th>
<th>Coefficients</th>
<th>Stage Cluster First Appears</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cluster 1</td>
<td>Cluster 2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>112</td>
<td>147</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>33</td>
<td>0.00</td>
</tr>
<tr>
<td>106</td>
<td>112</td>
<td>123</td>
<td>4.20</td>
</tr>
<tr>
<td>206</td>
<td>6</td>
<td>112</td>
<td>82.31</td>
</tr>
<tr>
<td>215</td>
<td>6</td>
<td>39</td>
<td>138.04</td>
</tr>
<tr>
<td>224</td>
<td>6</td>
<td>12</td>
<td>303.55</td>
</tr>
<tr>
<td>225</td>
<td>1</td>
<td>5</td>
<td>351.71</td>
</tr>
<tr>
<td>226</td>
<td>2</td>
<td>6</td>
<td>449.47</td>
</tr>
<tr>
<td>227</td>
<td>2</td>
<td>9</td>
<td>564.38</td>
</tr>
<tr>
<td>228</td>
<td>1</td>
<td>2</td>
<td>700.29</td>
</tr>
</tbody>
</table>

* Stages 3 - 105, 107 - 205, 207 - 214, and 216 - 223 have been omitted from the display due to space constraints in presentation.

Referring to Table 4.26, at stage one, clusters 112 and 147 are the first to join with an agglomeration coefficient of only zero. In this case, both clusters are in reality individual observations. This cluster is again seen in stage 106 when case (now cluster) 112 joins case 123. The hierarchical process concluded at stage number 228. At this last
stage, the result is that all 229 cases are now in a single large cluster and this stage has an agglomeration coefficient of 700.29 which is much larger than the coefficient in stage one.

In order to determine potential number of clusters the changes in heterogeneity between cluster solutions was assessed. Since no more than six clusters are desired, a bottom portion of the agglomeration schedule as shown in Table 4.27 was helpful in determining an appropriate number of clusters to examine further. Table 4.27 indicates how much the heterogeneity increases while moving from one stage to the next stage.

Table 4.27

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cluster Combined</th>
<th>Coefficients</th>
<th>Number of Clusters after combining</th>
<th>Differences</th>
<th>Proportionate Increase in Heterogeneity to next stage (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cluster 1</td>
<td>Cluster 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>222</td>
<td>9</td>
<td>16</td>
<td>241.28</td>
<td>7</td>
<td>27.22</td>
</tr>
<tr>
<td>223</td>
<td>2</td>
<td>13</td>
<td>268.50</td>
<td>6</td>
<td>35.05</td>
</tr>
<tr>
<td>224</td>
<td>6</td>
<td>12</td>
<td>303.55</td>
<td>5</td>
<td>48.16</td>
</tr>
<tr>
<td>225</td>
<td>1</td>
<td>5</td>
<td>351.71</td>
<td>4</td>
<td>97.76</td>
</tr>
<tr>
<td>226</td>
<td>2</td>
<td>6</td>
<td>449.47</td>
<td>3</td>
<td>114.91</td>
</tr>
<tr>
<td>227</td>
<td>2</td>
<td>9</td>
<td>564.38</td>
<td>2</td>
<td>135.91</td>
</tr>
<tr>
<td>228</td>
<td>1</td>
<td>2</td>
<td>700.29</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

Referring to Table 4.27, the agglomeration coefficient shows rather large increases in moving from stages 225 to 226 (351.71 versus 449.47), stages 226 to 227 (449.47 versus 564.38), and stages 227 to 228 (564.38 versus 700.29). The average proportionate increase for all stages shown (222 to 228) is 19.61 percent which serves as a rough guide in determining what a large increase is. Stage 228 results from condensing a two-cluster solution to a one-cluster solution. That is, all 229 cases are in a single cluster in stage 228. A two-cluster solution represents limited value in meeting the present research objectives.
Thus, a two-cluster solution was not chosen.

The movements between stages 224, 225, and 226 also are associated with relatively large increases in heterogeneity (that is, 15.87 percent, 27.80 percent, and 25.57 percent, respectively). The largest proportionate increase (moving from stage 225 to 226) of 27.80 percent results in moving from the four-cluster solution to the three-cluster solution. This means that the cluster solution associated with four clusters is associated with proportionately less heterogeneity than is the three-cluster solution. Additionally, there is a relatively large increase in the agglomeration coefficient while moving from a five-cluster to a four-cluster solution (15.87 percent). Therefore, based on the changes in the agglomeration coefficients, the cluster solutions, viz. three, four, and five were considered as plausible candidates for executing non-hierarchical cluster analysis so as to develop optimal cluster solutions.

The three, four, and five cluster solutions were compared in terms of cluster stability as well as applicability to the research question (RQ2) in order to select a single solution as the final cluster solution. The four-cluster solution was found to be the most appropriate as compared to the three and five cluster solutions.

The next task was to quickly check the distinctiveness using F statistics from ANOVA test (Table 4.28), i.e. to find out whether there are significant differences ($p < 0.05$) between the four clusters on each of the three ideal downsizing strategies.
Table 4.28

F statistics for four-cluster solution - Ideal Downsizing Strategies

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cluster</th>
<th>Error</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Square</td>
<td>df</td>
<td>Mean Square</td>
<td>df</td>
</tr>
<tr>
<td>Factor 1 - Forced Downsizing</td>
<td>36.37</td>
<td>3</td>
<td>0.54</td>
<td>225</td>
</tr>
<tr>
<td>Factor 2 - Student Load Downsizing</td>
<td>45.61</td>
<td>3</td>
<td>0.42</td>
<td>225</td>
</tr>
<tr>
<td>Factor 3 - Voluntary Downsizing</td>
<td>41.12</td>
<td>3</td>
<td>0.51</td>
<td>225</td>
</tr>
</tbody>
</table>

The F tests were used for descriptive purposes only as part of a cluster analysis, because clusters have been chosen to maximize the differences among cases in different clusters. Results of ANOVA (Table 4.28) show that there are significant differences (at \( p < 0.05 \)) between four clusters on all three ideal downsizing strategies. Thus, the significant F statistics provided initial evidence that each of the four clusters is distinctive.

The next stage of cluster analysis involved tests to confirm the validity of the four-cluster solution, while ensuring the same has practical significance. Most observations were found to be grouped with the same cases they clustered with in the first K-Means solution - a result that supports the validity of a four-cluster solution. The results of the cluster stability test showed that the four-cluster solution is not specific to the sample but could be generalised beyond the sample. Table 4.29 provides a summary of the clusters of strategic orientations that emerged from the cluster analysis.
Table 4.29
K-Means Cluster Analysis - Ideal Downsizing Strategies

<table>
<thead>
<tr>
<th>Factors</th>
<th>Clusters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Factor 1 - Forced Downsizing</td>
<td>-0.71</td>
</tr>
<tr>
<td>Factor 2 - Student Load Downsizing</td>
<td>-0.32</td>
</tr>
<tr>
<td>Factor 3 - Voluntary Downsizing</td>
<td>-1.26</td>
</tr>
<tr>
<td>Number of cases in each cluster</td>
<td>41</td>
</tr>
</tbody>
</table>

**Cluster 1 - Leaders who prefer a very limited downsizing**

This is the third largest (18 per cent of the valid sample) among all clusters and comprises 41 leaders. This cluster is undifferentiated on all three downsizing strategies and is completely distinguished from other clusters, as these leaders tend to ideally prefer none of the downsizing strategies or at most tend to prefer a very limited downsizing. However, it remains unclear that whether these leaders prefer upsizing or any downsizing actions other than those listed in the survey questionnaire. Given the limitation of the research goals and design, the survey questionnaire did not capture such information.

**Cluster 2 - Leaders who prefer Student Load Downsizing**

This cluster comprises 71 leaders (31 per cent of the valid sample) and is mainly distinguished by a relatively higher mean for the student load downsizing. Also, cluster 2 has the highest mean among all clusters for the same downsizing strategy. Therefore, it is interpreted that leaders grouped into cluster 2 ideally tend to prefer student load downsizing by reducing EFTSU intake and eliminating academic programs.
Cluster 3 - Leaders who prefer Forced Downsizing

This is the smallest (14 per cent of the valid sample) among all clusters and comprises 33 leaders. It is most distinguished by a relatively higher mean for forced downsizing. Also, cluster 3 has the highest mean among all clusters for the same downsizing strategy. Thus, it indicates that leaders grouped into cluster 3 ideally tend to prefer forced downsizing through downsizing actions such as forced layoff, proportionate staff cuts, targeted redundancy, closure and merger.

Cluster 4 - Leaders who prefer Voluntary Downsizing

This is the largest (37 per cent of the valid sample) among all clusters and comprises 84 leaders. It is most distinguished by a relatively higher mean for voluntary downsizing. Thus, ideally the leaders grouped into this cluster are characterized by a tendency to voluntary redundancy and voluntary early retirement as downsizing actions.

The description of these four clusters of leaders who tend to prefer one or the other strategy of downsizing provides evidence that leaders clearly differ in their type and use of downsizing strategies under ideal conditions. Further it is interesting to note that there was one cluster, i.e. Cluster 1 that was undifferentiated on all three downsizing strategies. This shows that leaders under ideal conditions may not necessarily prefer any given downsizing strategies. It means these leaders may prefer some innovative downsizing strategies which have not been captured by the present survey. Nonetheless, it was concluded from the cluster analysis that strategically oriented leaders tend to prefer only an exclusive single downsizing strategy.

The cluster analyses (hierarchical and non-hierarchical) were found to be successful in performing a distinctive segmentation of leaders. The process not only
created homogeneous groupings of leaders based on their ideal downsizing strategies, but also found that these clusters met the tests of cluster stability and distinctiveness, which are all necessary for achieving practical significance (Hair et al., 2010). Therefore, the four-cluster solution was considered for subsequent analyses, i.e. One-way ANOVAs. Next, the results of cluster analysis across practical downsizing strategies are discussed.

4.5.2 Cluster Analyses across Practical Downsizing Strategies

The following are the three strongly uncorrelated variables obtained through factor analysis of practical downsizing strategies and included in the cluster analysis: Forced Downsizing, Voluntary Downsizing, and Student Load Downsizing.

These three downsizing strategies were used to cluster the leaders into strategic orientation groups based on the similar emphasis that leaders place on a particular downsizing strategy.

The data in this research involved perceptual measures of practical downsizing actions and organisational culture dimensions (that is, bureaucratic, innovative and supportive cultures). The interest was to explain the differences in leaders’ approaches to downsizing in terms of organisational culture. This formed the basis for the differences in practical downsizing strategies. In that case, a manageable number of clusters from a strategic and tactical perspective would be more than two but no more than five or six.

The dendogram suggested the three, four and five cluster solutions to be suitable. However, the stopping rule applied was based on assessing the changes in the heterogeneity between cluster solutions. Due to the largeness of the sample size the dendogram appeared to be unwieldy and therefore it is not reproduced here. However, the dendogram generally displays the same pattern as shown in the agglomeration schedule
The agglomeration schedule provided information for each of the stages of the clustering process. Table 4.30 shows a portion of the agglomeration schedule produced by the hierarchical cluster results.

**Table 4.30**

**Agglomeration Schedule** - Practical Downsizing Strategies

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cluster Combined</th>
<th>Coefficients</th>
<th>Stage Cluster First Appears</th>
<th>Next Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cluster 1</td>
<td>Cluster 2</td>
<td></td>
<td>Cluster 1</td>
</tr>
<tr>
<td>1</td>
<td>153</td>
<td>172</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
<td>166</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. .</td>
<td>.</td>
</tr>
<tr>
<td>27</td>
<td>132</td>
<td>153</td>
<td>0.06</td>
<td>0</td>
</tr>
<tr>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. .</td>
<td>.</td>
</tr>
<tr>
<td>36</td>
<td>77</td>
<td>132</td>
<td>0.23</td>
<td>12</td>
</tr>
<tr>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. .</td>
<td>.</td>
</tr>
<tr>
<td>107</td>
<td>77</td>
<td>115</td>
<td>6.58</td>
<td>36</td>
</tr>
<tr>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. .</td>
<td>.</td>
</tr>
<tr>
<td>137</td>
<td>25</td>
<td>77</td>
<td>21.14</td>
<td>114</td>
</tr>
<tr>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. .</td>
<td>.</td>
</tr>
<tr>
<td>161</td>
<td>1</td>
<td>25</td>
<td>74.35</td>
<td>146</td>
</tr>
<tr>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>. .</td>
<td>.</td>
</tr>
<tr>
<td>166</td>
<td>1</td>
<td>12</td>
<td>113.69</td>
<td>161</td>
</tr>
<tr>
<td>172</td>
<td>1</td>
<td>7</td>
<td>216.23</td>
<td>166</td>
</tr>
<tr>
<td>173</td>
<td>3</td>
<td>11</td>
<td>246.33</td>
<td>163</td>
</tr>
<tr>
<td>174</td>
<td>6</td>
<td>32</td>
<td>315.62</td>
<td>171</td>
</tr>
<tr>
<td>175</td>
<td>1</td>
<td>3</td>
<td>417.01</td>
<td>172</td>
</tr>
<tr>
<td>176</td>
<td>1</td>
<td>6</td>
<td>524.26</td>
<td>175</td>
</tr>
</tbody>
</table>

**Stages 3 - 26, 28 - 35, 37 - 106, 108 - 136, 138 - 160, and 162 - 165 have been omitted from the display due to space constraints in presentation.**

Referring to Table 4.30, at stage one, clusters 153 and 172 are the first to join with an agglomeration coefficient of only zero. In this case, both clusters are in reality individual observations. This cluster is again seen in stage 27 when case (now cluster) 132 joins case 153. The hierarchical process concluded at stage number 176. At this last stage,
the result is that all 177 cases are now in a single large cluster and this stage has an agglomeration coefficient of 524.26 which is much larger than the coefficient in stage one.

In order to determine potential number of clusters the changes in heterogeneity between cluster solutions was assessed. Since no more than six clusters are desired, a bottom portion of the agglomeration schedule as shown in Table 4.31 was helpful in determining an appropriate number of clusters to examine further. Table 4.31 indicates how much the heterogeneity increases while moving from one stage to the next stage.

Table 4.31
Bottom portion of the Agglomeration Schedule - Practical Downsizing Strategies

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cluster Combined Coefficients</th>
<th>Number of Clusters after combining</th>
<th>Differences</th>
<th>Proportionate Increase in Heterogeneity to next stage (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cluster 1</td>
<td>Cluster 2</td>
<td>Coefficients</td>
<td>Number of Clusters after combining</td>
</tr>
<tr>
<td>170</td>
<td>7</td>
<td>8</td>
<td>162.99</td>
<td>7</td>
</tr>
<tr>
<td>171</td>
<td>6</td>
<td>10</td>
<td>187.05</td>
<td>6</td>
</tr>
<tr>
<td>172</td>
<td>1</td>
<td>7</td>
<td>216.23</td>
<td>5</td>
</tr>
<tr>
<td>173</td>
<td>3</td>
<td>11</td>
<td>246.33</td>
<td>4</td>
</tr>
<tr>
<td>174</td>
<td>6</td>
<td>32</td>
<td>315.62</td>
<td>3</td>
</tr>
<tr>
<td>175</td>
<td>1</td>
<td>3</td>
<td>417.01</td>
<td>2</td>
</tr>
<tr>
<td>176</td>
<td>1</td>
<td>6</td>
<td>524.26</td>
<td>1</td>
</tr>
</tbody>
</table>

Referring to Table 4.31, the agglomeration coefficient shows rather large increases in moving from stages 173 to 174 (246.33 versus 315.62), stages 174 to 175 (315.62 versus 417.01), and stages 175 to 176 (417.01 versus 524.26). The average proportionate increase for all stages shown (170 to 176) is 21.71 percent which serves as a rough guide in determining what a large increase is. Stage 176 results from condensing a two-cluster solution to a one-cluster solution. That is, all 177 cases are in a single cluster in stage 176. A two-cluster solution represents limited value in meeting the present research objectives.
Thus, a two-cluster solution was not chosen.

The movements between stages 172, 173, and 174 also are associated with relatively large increases in heterogeneity (that is, 13.92 percent, 28.13 percent, and 32.12 percent, respectively). The largest proportionate increase (moving from stage 174 to 175) of 32.12 percent results in moving from the three-cluster solution to the two-cluster solution. This means that the cluster solution associated with three clusters is associated with proportionately less heterogeneity than is the two-cluster solution. Additionally, there is a relatively large increase in the agglomeration coefficient while moving from a four-cluster to a three-cluster solution (28.13 percent) and a five-cluster to a four-cluster solution (13.92 percent). Therefore, based on the changes in the agglomeration coefficients, the cluster solutions, viz. three, four, and five were considered as plausible candidates for executing non-hierarchical cluster analysis so as to develop optimal cluster solutions.

The three, four, and five cluster solutions were compared in terms of cluster stability as well as applicability to the research question (RQ₃) in order to select a single solution as the final cluster solution. The four-cluster solution was found to be most appropriate as compared to the three and five cluster solutions. The next task was to quickly check the distinctiveness using F statistics from ANOVA test (Table 4.32), i.e. to find out whether there are significant differences ($p < 0.05$) between the four clusters on the three practical downsizing strategies.
The F statistics were used for the descriptive purposes only as part of a cluster analysis, because clusters have been chosen to maximize the differences among cases in different clusters. Results of ANOVA (Table 4.32) suggest that there are significant differences ($p < 0.05$) between the four clusters on all three practical downsizing strategies. Thus, the significant F statistics provided initial evidence that each of the four clusters is distinctive.

The next stage of cluster analysis involved tests to confirm the validity of the four-cluster solution while ensuring the same has practical significance. Most observations were found to be grouped with the same cases they clustered within the first K-Means solution - a result that supports the validity of a four-cluster solution. The results of the cluster stability test showed that the four-cluster solution is not specific to the sample but could be generalised beyond the sample. Table 4.33 provides a summary of the clusters of downsizing strategic orientations that emerged from the cluster analysis.
Table 4.33
K-Means Cluster Analysis - Practical Downsizing Strategies

<table>
<thead>
<tr>
<th>Factors</th>
<th>Clusters</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Factor 1 - Forced Downsizing</td>
<td>-0.08</td>
<td>1.62</td>
<td>-0.49</td>
<td>-0.38</td>
</tr>
<tr>
<td>Factor 2 - Voluntary Downsizing</td>
<td>-0.07</td>
<td>0.10</td>
<td>1.12</td>
<td>-0.70</td>
</tr>
<tr>
<td>Factor 3 - Student Load Downsizing</td>
<td>2.64</td>
<td>-0.20</td>
<td>0.14</td>
<td>-0.30</td>
</tr>
<tr>
<td>Number of cases in each cluster</td>
<td>14</td>
<td>30</td>
<td>48</td>
<td>85</td>
</tr>
</tbody>
</table>

Cluster 1 - Leaders who use Student Load Downsizing

This is the smallest cluster (8 per cent of total sample), having only 14 leaders and is most distinguished by the relatively higher means for student load downsizing. Thus, it indicates that leaders grouped into Cluster 1 tend to use only student load downsizing. Also, Cluster 1 has the highest mean among all clusters for student load downsizing. These leaders realise downsizing only by using a reduction in EFTSU intake and eliminating academic programs.

Cluster 2 - Leaders who use Forced Downsizing

This is the third largest cluster (17 per cent of the valid sample) that comprises of 30 leaders and is most distinguished by a relatively higher mean for the downsizing strategy of forced downsizing. Therefore, it is interpreted that leaders grouped into Cluster 2 tend to use only forced downsizing (e.g. closure, merger, targeted redundancy, and forced layoff).

Cluster 3 - Leaders who use Voluntary Downsizing

This cluster consists of 48 leaders (27 per cent of total sample) and is most distinguished by relatively higher means for voluntary downsizing. Thus, the leaders
grouped into this cluster are characterized by a tendency to use only the downsizing actions such as voluntary redundancy and voluntary early retirement.

**Cluster 4 - Leaders who engage in a very limited downsizing**

This is the largest (48 per cent of the valid sample) among all clusters. It comprises 85 leaders. This cluster is undifferentiated on all three downsizing strategies and is completely distinguished from other clusters as these leaders tend to engage in a very limited downsizing. However, it remains unclear that whether these leaders use upsizing or downsizing actions other than those listed in the survey questionnaire (Appendix F). Given the limitation of the research goals and design, the survey questionnaire designed for the present study did not capture such information.

The description of these four clusters of leaders who tend to prefer one or the other strategy of downsizing, provides evidence that the leaders clearly differ in their type and use of downsizing strategies under practical conditions. Further, it is interesting to note that there is one cluster, i.e. Cluster 4 that is undifferentiated on all three downsizing strategies. This shows that leaders under practical conditions would not necessarily use any given downsizing strategies. It means these leaders could use some innovative downsizing strategies which have not been captured by the present survey research. Nonetheless, it was concluded from the cluster analysis that strategically oriented leaders tend to use an exclusive single downsizing strategy. However, the interpretation of this result should be made cautiously as 48 per cent of the sample represented by the Cluster 4 has engaged in a very limited downsizing.

The cluster analyses (hierarchical and non-hierarchical) were found to be successful in performing a segmentation of leaders. The process not only created homogeneous
groupings of leaders based on their practical downsizing strategies, but also found that
these clusters met the tests of cluster stability and distinctiveness, which are all necessary
for achieving practical significance (Hair et al., 2010). Therefore, the four-cluster solution
was considered for subsequent analyses, viz. One-way ANOVAs.

Next, using one-way ANOVAs, a comparison among the four clusters was
conducted on a set of 15 item-variables of three types of organisational culture (viz.
bureaucratic, innovative and supportive culture) in regard to practical downsizing
strategies. Likewise, a comparison among the four clusters was conducted on a set of 40
item-variables of leaders’ characteristics (viz. personality, preferred styles and personal
values) and 15 item-variables of three types of organisational culture (viz. bureaucratic,
innovative and supportive culture) in regard to ideal downsizing strategies. The detailed
results of one-way ANOVA tests are discussed in the following sections. The results of
One-way ANOVAs - practical downsizing strategies and organisational culture will be
discussed first, which is followed by a discussion on results of One-way ANOVAs - ideal
downsizing strategies, leaders’ characteristics and organisational culture.

4.6 Exploring the links of Ideal Downsizing Strategies with Leaders’
Characteristics and Organisational Culture

One-way Analyses of Variance were specifically used to determine whether
leaders’ characteristics and organisational culture could explain the differences in the
downsizing strategies. The present study used the method to cluster cases on independent
variables and then to compare cluster differences on the dependent variable using one-way
ANOVA (Rapkin & Luke, 1993). Thus, the item-variables of leaders’ characteristics and
organisational culture were used as dependent variables and the four clusters as the
independent variables. However, it needs to be noted that there is no implied causal relationship between these variables.

The final goal was to compare four clusters on 15 item-variables of organisational culture dimensions (bureaucratic, innovative and supportive culture) and 40 item-variables of leaders’ characteristics (viz. 20 item-variables of leadership styles, 10 item-variables each in personality and personal values). The importance of identifying these variables is in assessing both practical significance and the theoretical basis of the identified clusters.

All variables were measured on an interval scale. In terms of assumption of homogeneity of variance, the Levene’s test of homogeneity for the leaders’ characteristics revealed only 3 out of 40 item-variables violated the assumption. As for organisational culture only 2 out of 15 item-variables violated the assumption. However, the ratio of the largest to smallest size group in ANOVA was found to be much below 4:1, and the Hartley’s (1950) $F_{\text{max}}$ ratio for all items was much below 10:1. Thus, homogeneity of variances was assumed not to be a problem (Hartley, 1950; Tabachnick & Fidell, 2007; Garson, 2009).

Garson (2009), Field (2009), and Pallant (2007) suggest that the failure to meet the assumption of homogeneity of variances is not fatal to ANOVA, which is relatively robust, particularly when clusters are of equal sample size. However, the cluster sizes in the present research are found to be markedly different, by which the Levene’s test results become unacceptable (Garson, 2009) and therefore use of Welch’s F-ratios is suggested. Table 4.34 presents the means, standard deviations and Welch’s F-ratios for the significant item-variables only.
Table 4.34
Results of one-way ANOVAs for significant item-variables by Cluster - Ideal Downsizing Strategies

<table>
<thead>
<tr>
<th>Item-variables of Leaders’ Characteristics</th>
<th>Clusters</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do little things to make it pleasant to be a team member</td>
<td>1</td>
<td>4.05</td>
<td>3.63</td>
<td>3.72</td>
<td>3.89</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.84)</td>
<td>(.74)</td>
<td>(.96)</td>
<td>(.88)</td>
<td></td>
</tr>
<tr>
<td>2. Act with consulting the team</td>
<td>2</td>
<td>4.00</td>
<td>3.61</td>
<td>3.58</td>
<td>3.68</td>
<td>2.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.78)</td>
<td>(.67)</td>
<td>(.71)</td>
<td>(.81)</td>
<td></td>
</tr>
<tr>
<td>3. Stimulation</td>
<td>3</td>
<td>3.39</td>
<td>3.53</td>
<td>3.70</td>
<td>3.32</td>
<td>2.74</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.83)</td>
<td>(.74)</td>
<td>(.64)</td>
<td>(.75)</td>
<td></td>
</tr>
</tbody>
</table>

Significant differences were found among the means of Cluster 1 (leaders who prefer a very limited downsizing), Cluster 2 (leaders who prefer student load downsizing), Cluster 3 (leaders who prefer forced downsizing) and Cluster 4 (leaders who prefer voluntary downsizing) based on one-way ANOVAs. More specifically, the results of one-way ANOVA tests revealed significant differences ($p < 0.05$) across the Clusters 1, 2, 3, and 4 for only 2 out of 20 item-variables of leadership styles, viz. “do little things to make it pleasant to be a team member”, $F (3, 93.42) = 2.75, p < .05$; “act with consulting the team” $F (3, 96.55) = 2.71, p < .05$; and, for only one item-variable of personal values, i.e. “stimulation” $F (3, 98.64) = 2.74, p < .05$. Furthermore, none of the 15 item-variables of organisational culture was significantly differentiated ($p < 0.05$) by the same clusters.

A post-hoc analysis followed the significant ($p < 0.05$) results of ANOVA to explore the differences between each of the clusters. The results of Hochberg’s (1974) GT2
post-hoc test show the significant difference ($p < 0.05$) between pairs of clusters (1 - 2, 1 - 3, 1 - 4, 2 - 3, etc.) and are presented in Table 4.35. Only the item-variables for which statistical differences between pairs of clusters were found are reported in Table 4.35.

Table 4.35
Overview of differences between cluster pairs for significant item-variables - Ideal Downsizing Strategies

<table>
<thead>
<tr>
<th>Item-variables of Leaders’ Characteristics</th>
<th>Cluster Pairs</th>
<th>Mean difference</th>
<th>Standard error</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make my attitudes clear to the team</td>
<td>3-4</td>
<td>0.31</td>
<td>0.12</td>
<td>0.048</td>
</tr>
<tr>
<td>Act with consulting the team</td>
<td>1-2</td>
<td>0.39</td>
<td>0.15</td>
<td>0.048</td>
</tr>
</tbody>
</table>

A closer examination of the pair-wise comparisons of clusters revealed the following differences (Table 4.36).

Table 4.36
Comparison of Means of Leaders’ Characteristics among four clusters - Ideal Downsizing Strategies

<table>
<thead>
<tr>
<th>Item-variables of Leaders’ characteristics</th>
<th>1 (n₁ = 41)</th>
<th>2 (n₂ = 71)</th>
<th>3 (n₃ = 33)</th>
<th>4 (n₄ = 84)</th>
<th>D*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make my attitudes clear to the team</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.05 (.44)</td>
<td>4.13 (.58)</td>
<td>4.33 (.59)</td>
<td>4.02 (.58)</td>
<td>3 &gt; 4</td>
</tr>
<tr>
<td>Act with consulting the team</td>
<td>4.00 (.78)</td>
<td>3.61 (.67)</td>
<td>3.58 (.71)</td>
<td>3.68 (.81)</td>
<td>1 &gt; 2</td>
</tr>
</tbody>
</table>

D* - Clusters that differ significantly ($p < .05$): Results of Hochberg’s GT2 post-hoc tests

Hochberg’s GT2 Post-hoc tests reveal that two item-variables of leadership styles, viz. “make my attitudes clear to the team” and “act with consulting the team” significantly differentiate ($p < 0.05$) across the four clusters: Cluster 1 (leaders who prefer a very limited
downsizing), Cluster 2 (leaders prefer student load downsizing), Cluster 3 (leaders who prefer forced downsizing), and Cluster 4 (leaders who prefer voluntary downsizing), respectively through their cluster means. No pair of clusters is significantly different ($p < 0.05$) on any other item-variables of leadership styles. Also, no pair of clusters is significantly different ($p < 0.05$) on any item-variables of personality, personal values, and organisational culture. Interestingly, no pair of clusters is distinguished ($p < 0.05$) by the item-variable of personal value “stimulation”, though it is demarcated implicitly by the foregoing omnibus one-way ANOVA.

The Hochberg’s GT2 post-hoc test results concern the overall mean for the clusters on leaders’ characteristics item-variables, viz. “make my attitudes clear to the team”, and “act with consulting the team”. The means range from 4.02 to 4.33 for the item-variable “make my attitudes clear to the team” (Table 4.36). This indicates that the perceptions of groups of leaders comprising Cluster 3 and Cluster 4 as measured by the task-oriented dimension of the leadership styles, generally was rated as “often” to “always” on a five-point Likert scale of Stogdill’s (1963) LBDQ-XII. Similarly, for the item-variable “act with consulting the team” the means range from 3.58 to 4.00. This indicates that the perceptions of groups of leaders comprising Cluster 1 and Cluster 2 as measured by the people-oriented dimension of the leadership styles, generally was rated as “occasionally” to “often” on a five-point Likert scale of Stogdill’s (1963) LBDQ-XII. Next, the results of Hochberg’s GT2 post-hoc test were used to interpret the Clusters 1, 2, 3, and 4, so as to develop a descriptive profile of each cluster.
4.6.1 Descriptive Profiles of Clusters - Ideal Downsizing Strategies

The clusters identified in this study demonstrate the heterogeneity inherent in the ideal downsizing strategies. Overall, the results of one-way ANOVA suggest that the leaders who prefer a very limited downsizing, student load downsizing, forced downsizing, and voluntary downsizing strategies, all differ significantly on two characteristics of people-oriented style (that is, “do little things to make it pleasant to be a team member” and “act with consulting the team”), and one personal value (that is, “stimulation”). The leaders of Cluster 1, i.e. who prefer a very limited downsizing scored highest among all clusters on “do little things to make it pleasant to be a team member” as well as “act with consulting the team”. The leaders of Cluster 2, i.e. who prefer student load downsizing scored lowest on “do little things to make it pleasant to be a team member”. Not surprisingly, the leaders of Cluster 3, i.e. who prefer forced downsizing scored lowest among all clusters on “act with consulting the team” but highest on “stimulation”. Lastly, the leaders of Cluster 4, i.e. who prefer voluntary downsizing scored lowest on “stimulation”.

The results of post-hoc analysis suggest that the Cluster 1 has significantly higher score than Cluster 2 on “act with consulting the team”. Furthermore, Cluster 3 scored significantly higher than Cluster 4 on “make my attitudes clear to the team”. The following descriptive profiles of individual clusters reveal further details.

Cluster 1 - Leaders who prefer a very limited downsizing

The leaders in Cluster 1 (n1 = 41; 18 per cent of the valid sample) is completely distinguished from others as these leaders tend to prefer a very limited downsizing. This cluster forms the second largest group among all clusters. Hochberg’s GT2 tests indicated
that the item-variable “act with consulting the team” significantly differentiates \((p < 0.05)\) this cluster and Cluster 2. The leaders of Cluster 1 scored significantly higher than Cluster 2 on “act with consulting the team” and also highest among all clusters. This suggests that the leaders who prefer a very limited downsizing have a higher tendency to act with consulting the team, that is, they tend to exhibit a characteristic of high people-oriented style.

**Cluster 2 - Leaders who prefer student load downsizing**

The leaders in Cluster 2 \((n_2 = 71; 31\text{ per cent of the valid sample})\) tend to prefer ideally the student load downsizing. Unlike members of Cluster 1, these leaders scored significantly lower on “act with consulting the team” and relatively lower compared to other clusters. This indicates that the leaders who prefer student load downsizing have a lower tendency to act with consulting the team, that is, they tend to exhibit a characteristic of low people-oriented style.

**Cluster 3 - Leaders who prefer forced downsizing**

The leaders in Cluster 3 \((n_3 = 33; 14\text{ per cent of the valid sample})\) ideally tend to prefer forced downsizing. This cluster forms the smallest group as compared to all other clusters. Hochberg’s GT2 tests indicated that the item-variable “make my attitudes clear to the team” significantly differentiates \((p < 0.05)\) this cluster and Cluster 4. These leaders scored significantly higher than Cluster 4 on “make my attitudes clear to the team” and highest among all clusters. This indicates that the leaders who prefer forced downsizing have a higher tendency to make their attitudes clear to the team, that is, they tend to exhibit a characteristic of high task-oriented style.
Cluster 4 - Leaders who prefer voluntary downsizing

The leaders in Cluster 4 (n_4 = 84; 37 per cent of the valid sample) tend to prefer ideally voluntary downsizing. This cluster forms the largest group as compared to all other clusters. Unlike leaders of Cluster 3, these individuals scored significantly lower on “make my attitudes clear to the team” and lowest among all clusters. This indicates that the leaders who prefer voluntary downsizing have a lower tendency to make their attitudes clear to the team, that is, they tend to exhibit a characteristic of low task-oriented style.

Finally, the tests of planned contrasts were performed between two groups, viz. Cluster 1 and Clusters 2, 3, & 4 to find out whether significant differences exist between leaders who prefer a very limited downsizing (this cluster coded with -3) and those who prefer different downsizing strategies (all three clusters coded with 1). Only one planned comparison was made and therefore the p value for the multiple comparisons was not corrected for Type 1 error. Table 4.37 displays the results of planned contrasts for ideal downsizing strategies.

Table 4.37
Results of Planned Contrasts - Ideal Downsizing Strategies

<table>
<thead>
<tr>
<th>Item-variables of Leaders’ characteristics</th>
<th>Value of Contrasts</th>
<th>Standard error</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain definite standards of performance</td>
<td>-0.68</td>
<td>0.34</td>
<td>-1.99</td>
<td>224</td>
<td>0.047</td>
</tr>
<tr>
<td>Do little things to make it pleasant to be a team member</td>
<td>-0.90</td>
<td>0.44</td>
<td>-2.03</td>
<td>224</td>
<td>0.043</td>
</tr>
<tr>
<td>Act with consulting the team</td>
<td>-1.14</td>
<td>0.40</td>
<td>-2.87</td>
<td>224</td>
<td>0.004</td>
</tr>
</tbody>
</table>

p - 2-tailed

In referring to Table 4.37, the results of planned contrasts between two groups, viz. Cluster 1 and Clusters 2, 3, & 4 indicated that they are significantly different on the
variable- items of leadership styles, viz. “maintain definite standards of performance” \( [F (224) = -1.99, p < 0.05 \text{ (one-tailed)}] \), “do little things to make it pleasant to be a team member” \( [F (224) = -2.03, p < 0.05 \text{ (one-tailed)}] \), and “act with consulting the team” \( [F (224) = -2.87, p < 0.01 \text{ (one-tailed)}] \). The first item-variable represents characteristic of a task-oriented style, whereas the other two item-variables represent characteristics of a people-oriented style.

The cluster means indicate that leaders of Cluster 1 scored significantly higher (mean value of 4.05) on “do little things to make it pleasant to be a team member” than the Clusters 2, 3, & 4 combined (mean values of 3.63, 3.72, & 3.89, respectively). Similarly, leaders of Cluster 1 scored significantly higher (mean value of 4.00) than the Clusters 2, 3, & 4 combined (mean values of 3.61, 3.58, & 3.68, respectively) on “act with consulting the team”. This suggests that the leaders who prefer a very limited downsizing have a significantly higher tendency to do little things to make it pleasant to be a team member and to act with consulting the team, compared to leaders who prefer different downsizing strategies.

Interestingly, the cluster means also indicate that the leaders of Cluster 1 scored significantly higher (mean value of 4.22) on “maintain definite standards of performance” than the Clusters 2, 3, & 4 combined (mean values of 4.00, 4.00, 3.98, respectively). This suggests that leaders who prefer a very limited downsizing have a significantly higher tendency to maintain definite standards of performance, compared to leaders who prefer different downsizing strategies.

Overall, the results of planned contrasts indicate that the group of leaders who prefer a very limited downsizing have a higher tendency to exhibit the characteristics of
both people-oriented and task-oriented styles compared to those who prefer different downsizing strategies. Surprisingly, none of the item-variables of personality, personal values, and organisational culture significantly differentiate the two groups, viz. Cluster 1 and Clusters 2, 3, & 4 combined.

4.6.2 Answering the Research Question RQ2

Overall, the results of one-way ANOVA tests suggested that the leaders who prefer a very limited downsizing, student load downsizing, forced downsizing, and voluntary downsizing differed significantly on only 3 out of 40 item-variables of leaders’ characteristics, viz. do little things to make it pleasant to be a team member and to act with consulting the team (characteristics of a people-oriented style), and stimulation (a personal value that indicates excitement, novelty, and challenge in life). However, these groups of leaders (clusters 1, 2, 3, & 4) did not differ significantly on any of the 15 item-variables of organisational culture.

These significant results of ANOVA were followed by post-hoc analysis to explore the differences between each of the clusters. The results suggested that the leaders who prefer a very limited downsizing have a higher tendency to act with consulting the team (a characteristic of people-oriented style), whereas leaders who prefer student load downsizing have a lower tendency to act with consulting the team. The results further suggest that the leaders who prefer forced downsizing have a higher tendency to make their attitudes clear to the team members (a characteristic of task-oriented style), whereas, leaders who prefer voluntary downsizing have a lower tendency to make their attitudes clear to the team.
Finally, the tests of planned contrasts were conducted to find out whether significant differences exist between two groups of leaders, that is, leaders who prefer a very limited downsizing (cluster 1) and those who prefer different downsizing strategies (clusters 2, 3, & 4 combined). The results indicated that the former group is having a higher tendency to do little things to make it pleasant to be a team member and to act with consulting the team, which are the characteristics of people-oriented style. Interestingly, the group of leaders who prefer a very limited downsizing are also having a higher tendency to maintain definite standards of performance - a characteristic of a task-oriented style.

Overall, the results suggest the existence of a systematic link between ideal downsizing strategies and leaders’ characteristics, that is, only leadership styles. However, it cannot be considered potential because only three out of 20 item-variables that represent two leadership styles (people-oriented and task-oriented styles) are found to differentiate significantly across the four clusters. Moreover, the leaders who prefer forced downsizing, voluntary downsizing, student load downsizing and also those who prefer a very limited downsizing did not differentiate significantly (at \( p < 0.05 \)) on all item-variables of personality, personal values, and organisational culture. Thus, research question RQ₂ is answered. Table 4.38 summarises the description of the four clusters and levels of analysis.
### Table 4.38
Descriptive Summary of Ideal Downsizing Clusters

<table>
<thead>
<tr>
<th>Level of Analysis</th>
<th>IDEAL DOWNSIZING CLUSTERS</th>
<th>One-way ANOVA</th>
<th>LEADERSHIP STYLES</th>
<th>Post-hoc Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Group of leaders who prefer a very limited downsizing</strong></td>
<td>Higher tendency to do little things to make it pleasant to be a team member and act with consulting the team.</td>
<td>Higher tendency to act with consulting their team (a characteristic of high people-oriented style).</td>
<td>Higher tendency to make their attitudes clear to the team members (a characteristic of high task-oriented style).</td>
</tr>
<tr>
<td></td>
<td><strong>Combined group of leaders who prefer student load downsizing, forced downsizing, and voluntary downsizing</strong></td>
<td>Lower tendency to do little things to make it pleasant to be a team member.</td>
<td>Lower tendency to act with consulting their team (a characteristic of low people-oriented style).</td>
<td>Lower tendency to make their attitudes clear to the team members (a characteristic of low task-oriented style).</td>
</tr>
</tbody>
</table>

### Table 4.38 (Continued...)

<table>
<thead>
<tr>
<th>Level of Analysis</th>
<th>IDEAL DOWNSIZING CLUSTERS</th>
<th>Planned contrasts</th>
<th>LEADERSHIP STYLES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Group of leaders who prefer a very limited downsizing</strong></td>
<td>Higher tendency to do little things to make it pleasant to be a team member, act with consulting the team (characteristics of people-oriented style) and to maintain definite standards of performance (a characteristic of task-oriented style).</td>
<td><strong>Combined group of leaders who prefer student load downsizing, forced downsizing, and voluntary downsizing</strong></td>
</tr>
</tbody>
</table>
4.7 Exploring the links of Practical Downsizing Strategies with Organisational Culture

One-way ANOVAs (One-way Analyses of Variance) were specifically used to determine whether organisational culture could explain the differences in the practical downsizing strategies. The present study used the method to cluster cases on independent variables and then to compare cluster differences on the dependent variable using one-way ANOVAs (Rapkin & Luke, 1993). Thus, the item-variables of organisational culture were used as dependent variables and the four clusters as the independent variables. However, it needs to be noted that there is no implied causal relationship between these variables.

The final goal was to compare four clusters on 15 item-variables of the organisational culture dimensions (bureaucratic, innovative and supportive culture). The importance of identifying these variables is in assessing both practical significance and the theoretical basis of the identified clusters.

All practical downsizing strategies were measured on an interval scale. In terms of the assumption of homogeneity of variance, the Levene’s (1960) test of homogeneity revealed that only 3 out of 15 item-variables of organisational culture (that is, personal freedom, sociable, and trusting) violated the assumption. In addition the ratio of the largest to smallest size group in ANOVAs was found to be above 4:1. However, the Hartley’s (1950) $F_{\text{max}}$ ratio (the ratio of the variance in the largest group to the variance in the smallest group) for those item-variables was much below 3:1. Thus, homogeneity of variances was assumed not to be a problem (Hartley, 1950; Tabachnick & Fidell, 2007; Garson, 2009).
Field (2009) and Pallant (2007) suggest that the failure to meet the assumption of homogeneity of variances is not fatal to ANOVA, which is relatively robust, particularly when groups are of equal sample size (Garson, 2009). However, in this research, the clusters sizes are found to be markedly different by which the Levene’s test results become unacceptable (Garson, 2009) and therefore use of Welch’s (1951) F-ratios is suggested.

Table 4.39 presents the means, standard deviations and Welch’s (1951) F-ratio for the significant item-variables only.

**Table 4.39**

Results of One-way ANOVAs for significant item-variables by Cluster - Practical Downsizing Strategies

<table>
<thead>
<tr>
<th>Item-variables of organisational culture</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk-taking</td>
<td>3.29 (.47)</td>
<td>3.13 (.73)</td>
<td>2.79 (.80)</td>
<td>2.88 (.74)</td>
<td>3.73</td>
<td>.016</td>
</tr>
<tr>
<td>Stimulating</td>
<td>3.64 (.75)</td>
<td>3.57 (.82)</td>
<td>3.60 (.79)</td>
<td>3.96 (.74)</td>
<td>3.29</td>
<td>.028</td>
</tr>
<tr>
<td>Personal freedom</td>
<td>4.00 (.68)</td>
<td>3.33 (.88)</td>
<td>3.63 (.91)</td>
<td>3.81 (.70)</td>
<td>3.26</td>
<td>.030</td>
</tr>
<tr>
<td>Sociable</td>
<td>4.00 (.56)</td>
<td>3.83 (.79)</td>
<td>3.65 (.64)</td>
<td>4.00 (.62)</td>
<td>3.40</td>
<td>.025</td>
</tr>
<tr>
<td>Trusting</td>
<td>3.93 (.62)</td>
<td>3.80 (.76)</td>
<td>3.42 (.87)</td>
<td>3.88 (.64)</td>
<td>3.66</td>
<td>.019</td>
</tr>
</tbody>
</table>

The results of one-way ANOVAs revealed significant differences ($p < 0.05$) across the Clusters 1 (leaders who use student load downsizing), 2 (leaders who use forced downsizing), 3 (leaders who use voluntary downsizing), and 4 (leaders who engage in a very limited downsizing) for only 5 out of 15 item-variables of organisational culture, i.e. risk-taking, $F (3, 54.11) = 3.73, p < .05$; stimulating, $F (3, 47.94) = 3.29, p < .05$; personal
freedom, F (3, 47.88) = 3.26, \( p < .05 \); sociable, F (3, 48.51) = 3.40, \( p < .05 \); trusting, F (3, 48.26) = 3.66, \( p < .05 \).

A post-hoc analysis followed the significant results (\( p < 0.05 \)) of ANOVA in order to explore the differences between each of the clusters. The results of Hochberg’s (1974) GT2 post-hoc test show the significant difference (\( p < 0.05 \)) between pairs of clusters (1 - 2, 1 - 3, 1 - 4, 2 - 3, etc.) and are presented in Table 4.40. Only the item-variables for which the statistical difference between clusters obtained is reported.

**Table 4.40**

**Overview of differences between cluster pairs for significant item-variables - Practical Downsizing Strategies**

<table>
<thead>
<tr>
<th>Item-variables of Organisational Culture</th>
<th>Cluster Pairs</th>
<th>Mean Difference</th>
<th>Standard Error</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal freedom</td>
<td>4 - 2</td>
<td>0.48</td>
<td>0.17</td>
<td>0.030</td>
</tr>
<tr>
<td>Sociable</td>
<td>4 - 3</td>
<td>0.35</td>
<td>0.12</td>
<td>0.017</td>
</tr>
<tr>
<td>Trusting</td>
<td>4 - 3</td>
<td>0.46</td>
<td>0.13</td>
<td>0.003</td>
</tr>
</tbody>
</table>

A closer examination of the pair-wise comparisons of clusters revealed the following differences (Table 4.41).
Table 4.41
Comparison of means of Organisational Culture among four clusters - Practical Downsizing Strategies

<table>
<thead>
<tr>
<th>Item-variables of Organisational Culture</th>
<th>Clusters</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 (n = 14)</td>
<td>2 (n = 30)</td>
<td>3 (n = 48)</td>
<td>4 (n = 85)</td>
</tr>
<tr>
<td>Personal freedom</td>
<td>M (4.00, .68)</td>
<td>M (3.33, .88)</td>
<td>M (3.63, .91)</td>
<td>M (3.81, .70)</td>
</tr>
<tr>
<td>Sociable</td>
<td>M (4.00, .56)</td>
<td>M (3.83, .79)</td>
<td>M (3.65, .64)</td>
<td>M (4.00, .62)</td>
</tr>
<tr>
<td>Trusting</td>
<td>M (3.93, .62)</td>
<td>M (3.80, .76)</td>
<td>M (3.42, .87)</td>
<td>M (3.88, .64)</td>
</tr>
</tbody>
</table>

D* - Clusters that differ significantly (p < .05): Results of Hochberg’s GT2 post-hoc tests

In referring to Table 4.41, Hochberg’s GT2 Post-hoc tests reveal that three item-variables of organisational culture, viz. personal freedom, sociable, and trusting significantly differentiate (p < 0.05) across the three clusters: Cluster 2 (leaders who use forced downsizing) and Cluster 3 (leaders who use voluntary downsizing), and Cluster 4 (leaders who engage in a very limited downsizing), respectively through their cluster means. No pair of clusters is significantly different (p < 0.05) on any other item-variable of organisational culture. Interestingly, no pair of clusters is distinguished (p < 0.05) by the item-variables of organisational culture “risk-taking” and “stimulating”, though it is demarcated implicitly by the foregoing omnibus one-way ANOVA.

The Hochberg’s GT2 post-hoc test results concern the overall mean for the clusters on organisational culture item-variables, viz. personal freedom, sociable, and trusting. The means range from 3.33 to 4.00 for the item-variable “personal freedom” (Table 4.41). This indicates that the perceptions of groups of leaders comprising Cluster 2 and Cluster 4 as measured by the supportive culture dimension of organisational culture, generally was
rated as “a little extent” to almost “a large extent” on a five-point Likert scale of Wallach’s (1983) Organisational Culture Index. Similarly, for the item-variables “sociable” and “trusting” the means range from 3.65 to 4.00, and 3.42 to 3.93, respectively. This indicates that the perceptions of groups of leaders comprising Cluster 3 and Cluster 4 as measured by the supportive culture dimension of organisational culture, generally was rated as “a little extent” to almost “a large extent” on a five-point Likert scale of Wallach’s (1983) Organisational Culture Index. Next, the results of Hochberg’s GT2 post-hoc test were used to interpret the Clusters 1, 2, 3, and 4, so as to develop a descriptive profile of each cluster.

4.7.1 Descriptive Profiles of Clusters - Practical Downsizing Strategies

The clusters identified in this study demonstrate the heterogeneity inherent in the ideal downsizing strategies. Overall, the results of one-way ANOVA suggest that the leaders who use student load downsizing, forced downsizing, voluntary downsizing, and a very limited downsizing, all differ significantly on two characteristics of innovative culture (that is, risk-taking and stimulating), and three characteristics of supportive culture (that is, personal freedom, sociable, and trusting). The leaders of Cluster 1, i.e. who use student load downsizing scored highest among all clusters on risk-taking, personal freedom, sociable, and trusting, that is, they tend to have a culture in their organisations which is more likely characterised by risk-taking, personal freedom, sociable, and trusting. Not surprisingly, the leaders of Cluster 2, i.e. who use forced downsizing scored lowest on personal freedom, however, it is interesting to note that these leaders also scored lowest on stimulating (i.e. a characteristic of innovative culture - exciting and dynamic). This suggests that they tend to have a culture in their organisations which is less likely characterised by personal freedom as well as stimulating. The leaders of Cluster 3, i.e. who
use voluntary downsizing scored lowest on risk-taking, sociable, and trusting, that is, they tend to have a culture in their organisations which is more likely characterised by risk-taking, sociable, and trusting. The leaders of Cluster 4, i.e. who engage in a very limited downsizing scored highest on sociable and stimulating. This suggests that they tend to have a culture in their organisations which is more likely characterised by sociable and stimulating.

The results of post-hoc analysis suggest that the Cluster 4 has significantly higher scores than Cluster 3 on sociable as well as trusting. Similarly, Cluster 4 has also scored significantly higher than Cluster 2 on personal freedom. The following descriptive profiles of individual clusters reveal further details.

**Cluster 1 - Leaders who use student load downsizing**

The leaders in Cluster 1 (n = 14; 8 per cent of the valid sample) tend to use student load downsizing. As compared to all other clusters, this cluster forms the smallest group. Interestingly, there is no significant difference (p < .05) between the leaders of Cluster 1 and Clusters 2, 3, & 4 on any of the 15 item-variables of organisational culture. It needs to be emphasised here that the analysis was limited by not being able to link between leaders and their organisational culture.

**Cluster 2 - Leaders who use forced downsizing**

The leaders in Cluster 2 (n = 30; 17 per cent of the valid sample) tend to use forced downsizing. The leaders of this cluster and Cluster 4 are significantly differentiated (p < 0.05) on only personal freedom. These leaders scored significantly lower on the same item-variable and also lowest compared to other clusters, meaning that they tend to have a culture in their organisations that is less likely characterised by a personal freedom.
Cluster 3 - Leaders who use voluntary downsizing

The leaders in Cluster 3 (n₃ = 48; 27 per cent of the valid sample) tend to use voluntary downsizing. This cluster forms the second largest group among all clusters. The leaders of this cluster and Cluster 4 are significantly differentiated (p < 0.05) on both sociable and trusting. These leaders scored significantly lower on sociable as well as trusting, and also lowest for both item-variables compared to other clusters. This suggests that such leaders tend to have a culture in their organisations that is less likely characterised by sociable and trusting.

Cluster 4 - Leaders who engage in a very limited downsizing

The leaders in Cluster 4 (n₄ = 85; 48 per cent of the valid sample) are completely distinguished from others as these leaders tend to engage in a very limited downsizing. This cluster forms the largest group of leaders among all clusters. The leaders of this cluster and Cluster 2 are significantly differentiated (p < 0.05) on personal freedom. Also, the leaders of Cluster 4 and Cluster 3 are significantly differentiated (p < 0.05) on both sociable and trusting. Unlike leaders of Clusters 2 and 3, these individuals scored significantly higher on the personal freedom, trusting, and sociable and relatively higher on the same variables compared to other clusters. This indicates that they tend to have a culture in their organisations that is more likely characterised by a personal freedom, sociable and trust.

Finally, the tests of planned contrasts were performed between two groups, viz. Cluster 4 and Clusters 1, 2, & 3 combined, to find out whether significant differences exist between leaders who engaged in a very limited downsizing (this cluster coded with -3) and those who used different downsizing strategies (all three clusters coded with 1). Only one
planned comparison was made and therefore the \( p \) value for planned contrasts was not corrected for Type 1 error. Table 4.42 presents the results of planned contrasts for practical downsizing strategies.

**Table 4.42**

**Results of Planned Contrasts - Practical Downsizing Strategies**

<table>
<thead>
<tr>
<th>Item-variables</th>
<th>Organisational Culture</th>
<th>Value of Contrasts</th>
<th>Standard Error</th>
<th>( t )</th>
<th>df</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results-oriented</td>
<td>Results-orientated</td>
<td>-0.66</td>
<td>0.32</td>
<td>-2.04</td>
<td>173</td>
<td>0.043</td>
</tr>
<tr>
<td></td>
<td>Stimulating</td>
<td>-1.08</td>
<td>0.37</td>
<td>-2.92</td>
<td>172</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>Power-oriented</td>
<td>0.89</td>
<td>0.41</td>
<td>2.15</td>
<td>173</td>
<td>0.033</td>
</tr>
</tbody>
</table>

In referring to Table 4.42, the results of planned contrasts revealed that only three item-variables of organisational culture, viz. results-oriented, \( F (173) = -2.04, p < 0.05 \) (one-tailed); stimulating, \( F (172) = -2.92, p < 0.01 \) (one-tailed); and power-oriented, \( F (173) = 2.15, p < 0.05 \) (one-tailed)] significantly differentiate the two groups, i.e. Cluster 4, and Clusters 1, 2, & 3 combined. The results-oriented and stimulating item-variables represent characteristics of an innovative culture, whereas power-oriented item-variable represents the characteristic of a bureaucratic culture.

The cluster means indicate that the leaders of Cluster 4 scored significantly higher (mean value of 4.16) on results-oriented than the Clusters 1, 2, & 3 combined (mean values of 3.93, 3.97, & 3.94, respectively). Similarly, leaders of Cluster 4 scored significantly higher (mean value of 3.96) on stimulating than the Clusters 1, 2, & 3 combined (mean values of 3.64, 3.57, & 3.60, respectively). This suggests that the leaders who engaged in a very limited downsizing tend to have a culture that is more likely characterised by results-oriented as well as stimulating, indicating more innovativeness in their organisations.
However, the cluster means also indicate that the leaders of Cluster 4 scored significantly lower (mean value of 2.47) on power-oriented than the Clusters 1, 2, & 3 combined (mean values of 2.57, 2.67, 2.60, respectively). This suggests that the leaders who engage in a very limited downsizing tend to have a culture that is less likely characterised by power-orientedness, indicating a less bureaucracy in their organisations. Interestingly, none of the item-variables of supportive culture dimension significantly differentiate the two groups, viz. Clusters 1, 2, & 3, and Cluster 4.

4.7.2 Answering the Research Question RQ₃

Overall, the results of one-way ANOVA tests suggested that the leaders who engage in a very limited downsizing, student load downsizing, forced downsizing, and voluntary downsizing differed significantly on only 5 out of 15 item-variables of organisational culture, viz. risk-taking and stimulating (characteristics of an innovative culture), sociable, personal freedom, and trusting (characteristics of a supportive culture). However, these groups of leaders (clusters 1, 2, 3, & 4) did not differ significantly on any other item-variables of organisational culture, viz. results-oriented, creative, challenging, and relationship-oriented, (characteristics of an innovative culture); structured, ordered, regulated, established, and power-oriented (characteristics of a bureaucratic culture); and, safe and relationship-oriented (characteristics of a supportive culture).

These significant results of ANOVA were followed by post-hoc analysis to explore the differences between each of the clusters. The results suggested that the leaders who use forced downsizing tend to have a culture that is less likely characterised by a personal freedom, indicating a less supportive culture in their organisations. Results also suggest that the leaders who use voluntary downsizing tend to have a culture that is less likely
characterised by sociable and trusting, whereas leaders who engage in a very limited downsizing tend to have a culture that is more likely characterised by personal freedom, sociable and trusting. The results of the present research further indicated that the leaders who use student load downsizing do not differentiate significantly (at $p < 0.05$) on any of the organisational culture dimensions.

Finally, the tests of planned contrasts were conducted to find out whether significant differences exist between two groups of leaders, that is, leaders who prefer a very limited downsizing (cluster 4) and those who prefer different downsizing strategies (clusters 1, 2, & 3 combined). The results indicated that the former group tend to have a culture that is significantly more likely characterised by both results-oriented and stimulating, which suggests more innovativeness in their organisational culture. Results also suggest that such a group of leaders tend to have a culture that is significantly less likely characterised by power-orientedness, which means less bureaucracy in their organisations.

The overall results suggest the existence of a systematic link between different practical downsizing strategies (that is, forced downsizing, voluntary downsizing, and student load downsizing) and the organisational culture, only supportive culture dimension. It could be considered potential because three out of five item-variables that represent supportive culture (that is, personal freedom, sociable, and trusting) are found to differentiate significantly across the three clusters (refer results of post-hoc analysis). However, such findings need a cautious interpretation because none of the clusters differentiated significantly ($p < 0.05$) on the other two items of the supportive culture dimension (that is, relationship-oriented, and safe). Likewise, none of the clusters
differentiated significantly \((p < 0.05)\) on any item-variables of innovative culture (that is, risk-taking, results-oriented, creative, stimulating, and challenging) and bureaucratic culture (that is, structured, ordered, regulated, established, and power-oriented). In addition, only two out of five item-variables that represent innovative culture (that is, results-oriented and stimulating), and one out of five item-variables that represent bureaucratic culture (that is, power-oriented) differentiate significantly across the two groups of leaders, that is, who engage in a very limited downsizing and those who use different downsizing strategies (refer test results of planned contrasts). Thus, research question RQ\(_3\) is answered. Table 4.43 provides a summarised description of the four clusters and levels of analysis.

**Table 4.43**  
Descriptive Summary of Practical Downsizing Clusters

<table>
<thead>
<tr>
<th>Level of Analysis</th>
<th>PRACTICAL DOWNSIZING CLUSTERS</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leaders who use student load downsizing</strong></td>
<td>More likely characterised by risk-taking, personal freedom, sociable, and trusting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Leaders who use forced downsizing</strong></td>
<td>Less likely characterised by personal freedom, and stimulating.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Leaders who use voluntary downsizing</strong></td>
<td>More likely characterised by risk-taking, sociable, and trusting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Leaders who engage in a very limited downsizing</strong></td>
<td>More likely characterised by stimulating and sociable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>One-way ANOVA</strong></td>
<td><strong>ORGANISATIONAL CULTURE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No significant difference.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tend to have a culture that is less likely characterised by a personal freedom.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tend to have a culture that is less likely characterised by sociable and trusting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tend to have a culture that is more likely characterised by a personal freedom, sociable and trusting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.43 (Continued...)

<table>
<thead>
<tr>
<th>Level of Analysis</th>
<th>PRACTICAL DOWNSIZING CLUSTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Combined group of leaders who use student load downsizing, forced downsizing, and voluntary downsizing</td>
</tr>
<tr>
<td>Planned contrasts</td>
<td>ORGANISATIONAL CULTURE</td>
</tr>
<tr>
<td></td>
<td>Less likely characterised by results-oriented and stimulating and more likely power-oriented.</td>
</tr>
</tbody>
</table>

The next section presents the conclusion of the present research.

4.8 Conclusion

In this chapter, the results have been discussed. The analysis of the data was conducted in six stages, viz. preliminary data analysis, descriptive statistical analysis, cross-tabulations and chi-square analyses, exploratory analysis, cluster analysis, and one-way ANOVAs. The findings of this research appear to justify the cautious supposition that leaders’ characteristics and organisational culture cannot completely explain the differences in approaches to downsizing. More specifically, a systematic links exist between ideal downsizing strategies and leadership styles (viz. people-oriented and task-oriented); and also practical downsizing strategies and organisational culture (only supportive culture dimension). However, the differences between ideal downsizing strategies and all dimensions of personality and personal value are not significant. Similarly, the differences between practical downsizing strategies and two organisational cultural dimensions, viz. innovative and bureaucratic culture, are also not significant.
In summary, the present analysis contributed to a better understanding of the underlying factors explaining downsizing behaviour in two different ways: first, by adding “limited characteristics of leadership styles” (that is, people-oriented and task-oriented styles) as a possibly relevant factor, it was able to explain why some mid-level leaders in publicly funded Australian universities differ in their approaches to downsizing under ideal conditions. Second, “limited characteristics of organisational culture dimensions” (that is, supportive, innovative, and bureaucratic culture) was found to be a possibly relevant factor that could explain why such leaders differ in their approaches to downsizing under practical conditions. The next chapter presents the discussion and conclusions of this research.
CHAPTER 5

DISCUSSION

“You can’t shrink your way to greatness”
- Tom Peters, CEO, TAP Info Services

5.1 Introduction

This study was primarily driven by the central research question: Why would leaders differ in their approaches to downsizing? Within the downsizing literature, much less attention has been devoted to the differences between downsizing strategies than their causes and consequences. Only a few researchers (e.g., Mishra & Mishra, 1994; Dahl & Nesheim, 1998; Rust et al., 2002; Adner & Helfat, 2003; DeRue et al., 2005) have identified several factors that could explain the differences in the downsizing strategies. The role of some factors (e.g., mutual trust within a top management team and between the business unit and customers and suppliers, team composition and structure, managerial ideologies, regulative and normative environments) has been empirically evidenced and that of others (e.g. managerial capabilities, differences in national cultures and cultural values) has been only alluded to, without being followed up by actual research. However, in the literature there are no studies found which could empirically demonstrate what individual characteristics might distinguish leaders from others while pursuing different downsizing strategies – more specifically, what styles leaders prefer to use, what kind of unique personality they possess, what kind of personal values they hold, and what type of culture they have in their organisations. This research therefore, posited that differences in downsizing strategies could be explained by the differences in leaders’ characteristics (viz.
leadership styles, personality, and personal values) and organisational culture dimensions (that is, supportive, innovative, and bureaucratic culture).

The preceding analysis (Chapter 4) demonstrated that a systematic link exists between these variables. Key findings are discussed in the light of current and past literature which is followed by discussion on implications, limitations, and directions for future research. Finally, the conclusions of the present research have been presented.

5.2 Key Findings

While conducting an empirical investigation to answer the central research question (why would leaders differ in their approaches to downsizing?), the present research examined whether the downsizing strategies in publicly funded Australian universities are influenced by the leaders’ characteristics and the type of culture in their organisations under two different premises, viz. under ideal and practical conditions.

First and foremost, two empirical typologies of ideal and practical downsizing have been developed. From these downsizing typologies, fresh empirical evidence has been put forward to suggest the presence of a systematic linkage between ideal downsizing strategies and leadership styles; and practical downsizing strategies and supportive culture.

Based on the literature review, three dimensions of organisational culture (bureaucratic, innovative and supportive culture) and three characteristics of leaders, viz. leadership styles (viz. people-oriented and task-oriented styles), personality (viz. openness, conscientiousness, extrovertism, agreeableness, neuroticism), personal values (viz. Power, Achievement, Hedonism, Stimulation, Self-Direction, Universalism, Benevolence, Tradition, Conformity, and Security) were suggested to underpin the differences in approaches to downsizing in publicly funded Australian universities. Thus, a contingency
perspective was used to explain the differences in approaches to downsizing under ideal conditions in terms of leaders’ characteristics and organisational culture; and differences in approaches to downsizing under practical conditions in terms of only organisational culture. However, it has not been strongly supported by the overall findings of the present study. For example leaders who preferred downsizing strategies under ideal conditions did not differentiate significantly on any of the five dimensions of personality and ten personal values. In addition, such leaders did not differentiate significantly on all three dimensions of organisational culture. Similarly, leaders who use student load downsizing did not differentiate significantly on all three dimensions of organisational culture. By expanding our knowledge of downsizing phenomena it was able to contribute an additional analysis of some of the potentially distinctive facts of downsizing strategies. The following sections discuss these key findings with respect to the three research questions that were formulated in the literature review chapter.

5.2.1 Widespread orientation towards downsizing in publicly funded Australian universities

A widespread orientation in the present research refers to the way in which mid-level leaders mostly pursue downsizing under ideal as well as practical conditions in a given list of downsizing actions. Results of the present survey of mid-level leaders in publicly funded Australian universities indicated voluntary redundancy and voluntary early retirement as their most preferred downsizing actions. Furthermore, leaders reported that they would pursue other downsizing actions, viz. merger of sub-units, delayering, targeted redundancy, eliminating academic programs, closure of sub-units, proportionate staff-cuts, reduction in EFTSU intake, and forced layoffs, in a descending order of preference under
ideal conditions. Surprisingly, these leaders indicated a lower probability (below average) of having used all ten downsizing actions in the last three years.

The widespread preference towards voluntary redundancy and voluntary early retirement by the mid-level leaders of publicly funded Australian universities seems consistent with the previous studies (e.g. Jensen & Morgan, 2009; Hugo, 2005; Adams & Rytmeister, 2001) that have reported its popularity as a downsizing action in the last decade. For instance, recently one of the largest universities reported to have shed 180 full-time equivalent staff members through an offer of voluntary redundancy. Most recently, 356 full-time equivalent staff numbers were reduced through voluntary redundancy at another large university.

It appears that mid-level leaders in publicly funded Australian universities have understood that downsizing actions such as voluntary redundancy and voluntary early retirement are driven by a ‘short-term implementation’ (Cameron et al., 1991) which is beneficial to their organisations. At the same time, the staff members who choose to consider such downsizing actions also benefit in terms of finances. This suggests a symbiotic relationship between organisations and their members.

Most downsizing research has not paid attention to possible demographic differences in leaders. Although leaders’ demographic characteristics such as age, positional tenure, and functional background have been investigated in relation to downsizing, the gender differences have remained unexplored areas of research. Most gender-leadership studies (e.g. Carless, 1998; Eagly, Karau, Miner, & Johnson, 1994; Bass & Avolio, 1994) consistently suggest that men are perceived as dominating and task-oriented, whereas women are more nurturing, caring, and sensitive. Such differences in
characteristics are frequently attributed to socialisation process and are usually reflected in their actions such as downsizing. For example, the characteristics such as nurturing, caring, and sensitive could reflect in limited downsizing strategies, whereas dominating and task-oriented attributes in forced downsizing (e.g. targeted redundancy, forced layoffs) and voluntary downsizing (e.g. voluntary redundancy, voluntary early retirement). The results of crosstabs and chi-square tests in the present study offers an empirical support for such a contemplation by suggesting that male leaders are more likely to prefer targeted redundancy than are female leaders under ideal conditions. However, under practical conditions, male leaders are more likely to use voluntary redundancy than are female leaders.

Several researchers (e.g. Budros, 2000; McKinley, Zhao, & Rust, 2000; Hallock, 1998; Hambrick & Mason, 1984) have contemplated that experienced leaders are more disinclined towards negativities associated with the organisational change such as downsizing. For example, the empirical findings of an extensive study conducted by Budros (2004) in 100 largest North American industrial and non-industrial organisations suggested that the younger leaders and leaders with a long positional tenure are more likely to use workforce reduction in the early stages of downsizing, whereas leaders with a finance and accounting background are more likely to engage in staff reduction at later stages of downsizing. In contrast, the research study conducted in 550 North American organisations by Hallock (1998) revealed that the leaders’ age and positional tenure did not have any significant association with the adoption of downsizing.

In consistent with the findings of Hallock (1998), the results of present research suggest that none of the ideal and practical downsizing actions are significantly associated
with the leaders’ age, current positional tenure, experience in higher education sector, and broad field of organisational unit. However, such a comparison of findings needs caution as the present sample consisted of mid-level leaders whereas previous research (Budros, 2004; Hallock, 1998) focused on leaders at the top management level (e.g. CEOs). Also, previous studies were conducted in different industry sectors such as commercial banks, insurance, retail, transportation and utility.

Furthering the discussion, the leaders in administration positions have a different functional background compared to leaders in academic / research positions and therefore ideological differences are apparent. For example, leaders from administration background would view their organisational units as current assets bought and held for sale in the near future to generate income on short-term price differences, whereas leaders in academic/research background would view their schools or faculties or research centers as intangible assets. Researchers such as Fligstein (1985), and Davis and Stout (1992) have emphasised such a view which is empirically supported through Budros’s (2004) research findings. Consistent with the previous literature, the results of the present research suggest that the leaders in administrative positions are more likely to have used closure, merger, and delayering than are leaders in academic / research positions in the last three years. The next section discusses empirical typologies of ideal and practical downsizing.

5.2.2 Empirical Typologies of Ideal and Practical Downsizing

Exploratory Factor Analysis using Principal Components Method provided several key insights into the structure of the variables as well as options for data reduction. Ideal and practical downsizing actions of ten each were selected and included in a survey questionnaire that received valid responses from 255 leaders in publicly funded Australian
universities. Of the 255 leaders, 61 were identified as those who used practically none of the listed downsizing actions in the last three years. Therefore, these cases were deleted from the sample size of 255 valid and useable responses and only 194 cases were used for subsequent analyses of practical downsizing actions.

Three types each in ideal and practical downsizing strategies emerged. These dimensions are interpreted further. First, concerning the structure of the variables, clearly three separate and distinctive types of downsizing are ideally preferred by mid-level leaders in publicly funded Australian universities. Interestingly, the same three downsizing types are also identified as being practically used by mid-level leaders in the last three years. These downsizing types encompass a wide range of elements in the approaches to downsizing, from forced downsizing to voluntary downsizing and even to student load downsizing.

Based on the quantitative analysis in the present research, empirical typologies of ideal and practical downsizing have been developed, and these provide a more distinctive view on different downsizing strategies. The findings suggest that mid-level leaders in publicly funded Australian universities pursue the following three types of ideal as well as practical downsizing: Forced Downsizing (e.g. closure), Voluntary Downsizing (e.g. voluntary redundancy), and Student Load Downsizing (e.g. EFTSU intake reduction).

The first type of downsizing strategy, forced downsizing, explicitly aims at the forcible reduction of head count through forced layoffs, targeted redundancies, mergers and closures of sub-units. It needs to be noted that forced downsizing is used mainly by smaller as well as larger universities where the number of schools or departments becomes unviable to continue and therefore downsizing actions such as mergers and closures are the
preferred options by the leaders. For instance, one of the largest universities in Australia closed its overseas campus in 2007. Similarly, one of the smallest universities closed its engineering school in 2003.

The second type of downsizing strategy, voluntary downsizing, is also targeted at head count reduction but is governed by the choice offered to the staff members to quit their jobs. Voluntary downsizing is mainly accomplished through voluntary redundancies, and voluntary early retirements. As highlighted previously (refer section 2.2.1 of chapter 2) voluntary redundancy and voluntary early retirements have become frequently used downsizing actions in Australian universities. Thus, voluntary redundancy has become a norm rather than an exception in Australian universities. For instance, many large universities in Australia have been substantially reducing their full-time equivalent staff numbers through voluntary redundancy, and voluntary early retirement in the last few years. Similarly, smaller universities have also adopted the same strategies in recent times.

The third strategy of downsizing, student load downsizing, is mainly aimed at reducing the number of academic programs and students due to reduced demands, rather than focusing on head count reduction which is a characteristic of the other two downsizing strategies discussed above. For example academic programs such as Masters and Graduate Diploma were ceased at one of the smallest Australian universities in 2005.

The literature on downsizing suggests that leaders adopt various types of downsizing strategies (e.g., Iverson & Zatzick, 2007; DeRue et al., 2005; Cameron et al., 1991; Freeman, 1994; DeWitt, 1993; Dewettinck & Buyens, 2002; Kozlowski et al., 1993; Greenhalgh et al., 1988). The present inquiry into how leaders differ in their approaches to downsizing supports the existence of ideal and practical types of three each. This tripartite
categorisation contrasts with the other downsizing typologies (e.g. DeWitt, 1993; Cameron, 1991; Dewettinck & Buyens, 2002; Iverson & Zatzick, 2007) and calls for a closer inspection of quantitative differences.

In consistency with the Cameron et al.’s (1991) empirical typology of downsizing (i.e. workforce reduction, organisational redesign, and systemic change), the present research also identified three types of downsizing strategies. The first two types of downsizing strategies (viz. forced downsizing and voluntary downsizing) aimed at head count reduction which is similar to that identified by Cameron et al. (1991). The present research however, makes a clear distinction between head count reduction by force (e.g. forced layoff, targeted redundancy) and through voluntary means (e.g., voluntary redundancy, voluntary early retirement). This leads us to ponder how leaders at the middle management level perceive downsizing - is it imposed by the managements on their staff members or is it chosen voluntarily by their staff members when there is an opportunity to do so? Furthermore, forced and voluntary downsizing could be identified with the Radcliffe et al.’s (2001) classic downsizing approach which emphasises cost cutting.

Cameron et al. (1991) has identified organisational redesign as distinct from the other two strategies, viz. workforce reduction and systemic change. Given the nature of the research design and the downsizing definition adopted in the present research, it could not identify the systemic change strategy of downsizing as found by Cameron et al. (1991). However, the present research identified the organisation redesign strategy as part of a forced downsizing. Similarly, both integrate hierarchy and eliminate hierarchy downsizing strategies of team composition and structures as referred by DeRue et al. (2005) align with voluntary downsizing.
Taking the discussion further, Cameron et al.’s (1991) distinction between three types of downsizing strategies is characterized by the time frame. Similarly, Dewettinck and Buyens’s (2002) two-dimensional categorization of downsizing strategies is also characterized by the time frame (reactive to proactive) rather than the focus of reorientation practices towards the internal or external labour markets. However, the distinction between the three strategies of downsizing identified in the present research is characterized by how downsizing is realised - is it forcefully imposed by the management (forced downsizing) or chosen voluntarily by the staff members (voluntary downsizing), or is it governed by the market forces (student load downsizing)? Therefore, within the present empirical typologies of ideal and practical downsizing, it is suggested that the point of control during downsizing continually shifts between leaders, followers, and external forces. This substantiates the leadership definition adopted in the present research (refer section 2.3.1 of chapter 2).

Furthermore, both forced and voluntary downsizing strategies could be identified as either proactive or reactive which is consistent with the Koslowzki et al.’s (1993) downsizing typology. Unlike the other two downsizing strategies identified in the present study, student load downsizing is found to be unique to the university types and only reactive in nature (e.g. academic programs are eliminated when there is limited or no demand). However, while using student load downsizing, the universities are required to reflect on their mission, strategy, and systems as they are affected. For instance, when there is a limited demand for Information Technology and other technical courses, the technologically oriented universities have to face a conflict between their mission, strategies and systems. As a result, universities have to re-organise their business activities.
to match with their strengths. This could involve downsizing through eliminating few current academic programs and reducing the student intake. It mainly emphasises ‘managerial refocusing on some operations of the firm at the expense of others’ (Radcliffe et al., 2001, p. 12). This further suggests that the student load downsizing could be closely identified with the Freeman’s (1994) reorientation approach to downsizing. Similarly, student load downsizing also represents Love and Nohria’s (2005) broad scope downsizing and Radcliffe et al.’s (2001) strategic downsizing approach as the universities’ strategic domain is affected. Furthermore, consistent with Iverson and Zatzick’s (2007) downsizing harshness continuum, forced downsizing is at the high harsh end whereas student load downsizing is moderately harsh, and voluntary downsizing is less harsh.

Although a reasonable sample size (18 per cent) stated that they would prefer a very limited downsizing under ideal conditions, nearly half of the sample (48 per cent) reported to have engaged in a very limited downsizing under practical conditions. Therefore, it is difficult to make a conclusion whether mid-level leaders in publicly funded Australian universities under practical conditions use the same strategies of downsizing as they would prefer under ideal conditions.

Furthermore, the results of cluster analysis indicate that strategically oriented leaders ideally tend to prefer only an exclusive single downsizing strategy. Interestingly, the same is true in case of practical downsizing strategies as the results show that leaders have used only an exclusive single downsizing strategy. This is inconsistent with the findings of Cameron et al. (1991) as the results of the present study clearly demonstrate that like in any other industries, leaders in the universities don’t use dual strategy of
downsizing, for example voluntary downsizing and student load downsizing through focusing on optional workforce reduction as well as eliminating academic programs.

The tripartite typologies of ideal and practical downsizing that emerged from the present study made it possible to empirically distinguish between different downsizing strategies. This gives an opportunity to develop a better understanding of downsizing strategies in addition to empirical typologies of downsizing (e.g. Cameron et al., 1991; Dewettinck & Buyens, 2002) and the theoretical typologies (e.g. Kozlowski et al., 1993; Freeman, 1994; DeWitt, 1998; Golembiewski, 1999; Radcliffe et al., 2001; Love and Nohria, 2005; Iverson & Zatzick, 2007) established in the extant literature.

5.2.3 Links of Ideal Downsizing Strategies with the Leaders’ Characteristics and Organisational Culture in publicly funded Australian universities

Although leaders at the middle management level are mainly responsible for the implementation of downsizing strategies but not decision-making, they do arbitrate and indeed often suggest to the top management the goals and tasks associated within most contexts of downsizing. Owing to differences in leaders’ characteristics and the organisational culture in which they work, such internal forces of change are central to downsizing. It is imperative to mention that this line of rationale suggests that leaders at the middle management level working under similar conditions in their business environment could respond differently to downsizing.

A few researchers in the past (Carmeli & Sheaffer, 2009; Rust et al., 2002; Budros, 1999) have empirically established that leaders’ characteristics are influencing factors of downsizing. However, the present research contrasts with such findings. More specifically, the results of the present research suggest very limited systematic linkages between ideal
downsizing strategies and leaders’ characteristics (very limited item-variables of leadership styles). Furthermore, downsizing strategies did not differentiate significantly on any of the individual item-variables of big-five personality dimensions and ten types of personal values. Also, the ideal downsizing strategies did not differentiate significantly on any of the fifteen individual item-variables representing three dimensions of organisational culture (that is, bureaucratic, innovative and supportive culture).

Based on their research findings, Vakola, Tsaousis, and Nikolaou (2004) speculated that the five-factor model of personality would be a very interesting issue to investigate in the selection of change agents who are in fact mid-level leaders. Similarly, Hambrick and Mason (2005) emphasised that personality could possibly influence the extent to which leaders perceive the challenges of their job demand (e.g. downsizing). However, the findings of the present research do not lend support to such speculations.

In the present research context, the DeRue et al.’s (2005) study is highly relevant. DeRue et al.’s (2005) study showed the existence of a systematic linkage between downsizing strategies (viz. maintain, integrate and eliminate hierarchies) and leaders’ personality (viz. conscientiousness, emotional stability and extrovertism). The findings of the present research however, indicated no significant differences between downsizing strategies (viz. forced downsizing, voluntary downsizing and student load downsizing) on the leaders’ big-five personality dimensions (viz. openness, conscientiousness, extrovertism agreeableness and neuroticism). The reason could be DeRue et al.’s (2005) study was conducted in a tightly controlled computer simulated laboratory atmosphere with undergraduate students in an American university. Thus, any extension of findings to the actual leaders involved in the serious business of implementing downsizing strategies
requires caution. Moreover, DeRue et al. (2005) categorised the downsizing strategies using a conceptual base rather than empirical means. Thus, owing to the differences in the research method and typology of downsizing strategies used in the present research with that of DeRue et al.’s (2005) research, it is suggested that a cautious contrasting is mandated before making any strong conclusions.

The findings of the present research further suggest that the leaders who ideally prefer student load downsizing have a lower tendency to act with consulting their team - a characteristic of low people-oriented style. Mid-level leaders feel that they are committed towards their organisations but realise the responsibility towards their people (Sahdev, 2004). Such leaders intend to secure jobs, however, their main focus is mainly on eliminating academic programs and EFTSU intake reduction rather than reducing the full-time equivalent staff numbers in universities. Thus, when a demand for certain academic programs lessens, there is an increased tendency of these leaders to prefer student load downsizing through elimination of academic programs and student numbers. The irony involved in such an exercise is that leaders may interpret downsizing as the avoidance of job losses which may or may not be perceptible to them.

Not surprisingly the present findings suggest that leaders who prefer a very limited downsizing have a higher tendency to act with consulting their team - a characteristic of high people-oriented style. This indicates that such leaders have greater concern for their staff members. Thus, results of present research lend support to the GLS model (Greenhalgh, Lawrence, & Sutton, 1988) of workforce reduction which suggests that espoused employee-oriented values will lead to a preference for less severe workforce reduction strategies. Similarly, the results of the present study also confirm Budros’s
(1999) proposition, i.e. people-oriented leaders have a lower tendency to use downsizing. Such results are particularly interesting because the worthiness of relationships is a characteristic of a people-oriented style that favours the interests of staff members. The logic underlying this line of reasoning helps to explain the findings - mid-level leaders in publicly funded Australian universities who tend to exhibit a characteristic of people-oriented style are likely to view downsizing as a way to safeguard the interests of their staff members by preserving the academic capability of the universities.

Furthermore, the results of present research suggest that leaders who prefer forced downsizing have a higher tendency to make their attitudes clear to the team members - a characteristic of high task-oriented style. In contrast, leaders who prefer voluntary downsizing have a lower tendency to make their attitudes clear to the team members - a characteristic of low task-oriented style. Such a finding suggests that those leaders focus their energies mainly on downsizing tasks associated with the headcount reduction, be it forced or voluntary, instead of valuing relationships. Such leaders could be considered as ‘employment downsizers’ (Cascio et al., 1997).

The results of planned contrasts suggest that the group of leaders who prefer a very limited downsizing have a higher tendency to exhibit characteristics of people-oriented style (do little things to make it pleasant to be a team member and act with consulting the team) as well as task-oriented style (maintain definite standards of performance) compared to those who prefer different downsizing strategies (that is, student load downsizing, forced downsizing, and voluntary downsizing). Although the group of leaders who prefer a very limited downsizing are significantly more likely to exhibit both task-oriented and people-oriented styles, they are all ‘internal leaders’ (Hillel, 2006), that is, they have the tendency not only to maintain
specific standards of performance but also to do little things to make it pleasant to be a
team member, and act with consulting the team. In other words, such a group of leaders are
more focused on managing internal environment rather than external environment during
downsizing.

One of the interesting findings of the present research suggests that the
organisational culture does not make a significant difference to any of the ideal downsizing
strategies. The reason may be partly that there is an ideality of the situation where leaders
are free from cultural influences while they prefer to implement different downsizing
strategies.

The conceptual model (Figure 2.1) arising from the literature review was
cmparatively complex, in the sense that it considered various item-variables of leaders’
characteristics (leadership styles, personality and personal values) and organisational
culture dimensions (bureaucratic, innovative and supportive culture). However, the
empirical findings of this research demonstrate that differences in the downsizing
strategies under ideal conditions cannot be completely explained by the differences in
leaders’ characteristics and organisational culture dimensions. As a consequence, the
findings of the present research suggest the following empirical model of ideal downsizing
(Figure 5.1).
Figure 5.1  Empirical Model of Ideal Downsizing

The present research findings are important as a few researchers (e.g. Carmeli & Sheaffer, 2009; Gandolfi, 2007; Budros, 1999) have conducted empirical investigations and others (e.g. Adner & Helfat, 2003; Greenhalgh, Lawrence, & Sutton, 1988; Hambrick & Mason, 2005) have only alluded to the influence of a few types of leaders’ characteristics (e.g. dynamic capabilities, emotional intelligence, managerial background characteristics) and organisational culture on downsizing. However, the present research is
one of the first empirical studies to challenge those allusions. These results are particularly interesting given the importance of the hierarchical level (mid-level) occupied by the present study’s sample during downsizing.

5.2.4 Links of Practical Downsizing Strategies with the Organisational Culture in publicly funded Australian universities

The literature on the association between downsizing strategies and organisational culture is very limited and that which exists (e.g. Radcliffe, 2001; Hickok, 2002) does not offer any empirical support to those propositions. The findings of the present research contribute to the ongoing scepticism towards such an association by examining the link between different types of downsizing strategies and organisational culture under practical conditions in publicly funded Australian universities.

As noted in the literature review chapter (refer section 2.4.4), scholars have theorised about different aspects of the association between downsizing and organisational culture, and overall, much of the existing literature centres on whether a particular organisational culture influences downsizing approaches. The present research deviates from the past studies by suggesting a systematic link between practical downsizing and organisational culture dimensions which varies depending on the method used to implement it. This provides a more practical and perceptive approach to the topic of downsizing research. More specifically, the present findings suggest the existence of a limited systematic linkage between practical downsizing strategies and organisational culture (only personal freedom, sociable, trusting - characteristics of a supportive culture; results oriented and stimulating - characteristics of innovative culture, and power-oriented - a characteristic of bureaucratic culture) through a quantitative research method. Thus,
findings of the present research offer support for such a link which was suspected by Radcliffe et al. (2001). Specifically, the findings of the present research suggest that the leaders who engage in a very limited downsizing tend to have a culture that is more likely characterised by a personal freedom, sociable and trusting. However, interestingly the present findings reveal that the leaders who use student load downsizing do not differentiate significantly on any dimensions of organisational culture.

A supportive culture is characterized by a personal freedom, sociable (friendly) and trust which insists on ‘open’ and ‘harmonious environment’ (Wallach, 1983, p. 33) in an organisation. It is more congruent with the reorientation approach to downsizing as identified by Freeman and Cameron (1993). Reorientation approach focuses on ‘flexibility’ and ‘adaptability’ (Freeman and Cameron, 1993, p. 23) which would help reduce the resistance towards downsizing. Furthermore, trust has also been frequently emphasised by few researchers (e.g. Mishra & Mishra, 1994; Cascio, 2005) as a crucial factor for a successful downsizing.

Most importantly, the findings relating to use of voluntary downsizing suggests the presence of a culture that is less likely characterised by sociable and trusting. Not surprisingly, the findings also suggest that the leaders who use forced downsizing tend to have a culture that is less likely characterised by a personal freedom which indicates a less supportive culture in their organisations. This reflects that the downsizing in publicly funded Australian universities could be less conducive for people who are friendly and credulous. In other words, publicly funded Australian universities could be constrained by the control and power like other public sector organisations. The reason may be partly that there is less acceptable supportive cultural fit between the academic/research activities, the
marketing endeavours, and academic support services such as student services, human resources, media and information systems. Voluntary downsizing affect these organisational entities and therefore is influenced by the less supportive culture.

Unlike publicly funded Australian universities, other Australian public sector organisations have used retrenchments (involuntary downsizing) instead of voluntary downsizing to reduce their staff strengths. For instance the Australian Taxation Office has reported to have retrenched 307 staff members during 2009-2010 (Manheim, 2011, 14th June). Likewise, other public sector organisations such as Centrelink, Australian Defence, and Customs have reduced 504, 91, and 97 employees, respectively, through retrenchments during 2009-2010 (Manheim, 2011, 14th June). Furthermore, Australian Productivity Commission (2004) has pointed that the reduction in number of disabled employees in Australian Public Service was mainly due to downsizing of lower level administrative positions. This could possibly raise scepticism about the presence of a less acceptable supportive cultural fit between their functional units, which would be in consistent with the present research findings. However, such a speculation would remain inconclusive due to unexplored differences in use of downsizing approaches between publicly funded Australian universities and other Australian public sector organisations.

The results of the present research are also more or less consistent with the findings of Currie (2005, p. 11) who reported that publicly funded Australian universities are mostly bureaucratic in culture as described by ‘a formal and structured place where the head is an administrator and the emphasis is on running smoothly, following rules and procedures, and maintaining stability.’ In addition, the results of the present research support the findings of Harman (2002) and Meek (2003) which suggested the presence of
more directive modes of managing academics by the deans and heads of departments, and an increase in the power, authority and role of administrators. However, the research findings of an Australian public sector study conducted by Kloot and Martin (2007) suggest that the clan-based culture (that is, supportive and facilitative) was overassertive in Victorian local government organisations which had experienced considerable downsizing. This is inconsistent with the present research findings.

Interestingly, the results of post-hoc analysis suggest that none of the three types of practical downsizing strategies differentiated significantly on any of the individual item-variables of innovative and bureaucratic culture dimensions. However, the tests of planned contrasts suggest that the group of leaders who engage in a very limited downsizing tend to have a culture that is more likely characterised by results-oriented and stimulating (characteristics of an innovative culture) and less likely a power-orientedness (a characteristic of bureaucratic culture), compared to a combined group of leaders who use different downsizing strategies (that is, student load downsizing, forced downsizing, and voluntary downsizing). These results suggest that the group of leaders who engage in a very limited downsizing are found to be exciting and dynamic, constantly maintaining a stimulating environment, and according to Cascio (2005, p.43) they could be termed as “responsible restructurers”. They view their staff members as sources of innovation (Cascio, 2005). In consistent with previous studies (e.g. Mishra & Mishra, 1994) the leaders’ limiting the use of downsizing, demonstrates that they continuously strive to explore innovative strategies which in turn leads to increased willingness of their staff members to generate self-initiatives in the event of downsizing. The results of the present research further offer a reasonable support to the findings of Mellahi and Wilkinson (2008) that the way leaders implement downsizing is associated
with innovation.

It is recalled that the conceptual model (Figure 2.2) arising from the literature review was comparatively complex, in the sense that it considered three different dimensions of organisational culture (that is, bureaucratic, innovative and supportive culture). However, the empirical findings of the present investigation found that differences in the approaches to practical downsizing cannot be fully explained by all three dimensions of organisational culture. As a result, the following empirical model of practical downsizing is suggested (Figure 5.2).

![Empirical Model of Practical Downsizing](image)

**Figure 5.2  Empirical Model of Practical Downsizing**

The extant research on downsizing establishes that the leaders’ role in downsizing is significant but provides limited guidance on how best to approach implementing and managing downsizing strategies. The present research provided a new direction by
examining specific possibilities and showing that in practice the appropriateness of a specific downsizing type is methodically influenced by the supportive culture in their organisations, whereas ideally it is influenced by the leadership styles (people-oriented and task-oriented). More specifically, the evidence in this research shows that within a single large industry such as publicly funded Australian universities where leaders face similar conditions in their business environment, the personal freedom, sociable, and trusting characteristics of supportive culture play a significant role in the differences to downsizing approaches (refer results of post-hoc analysis). However, ideally the organisational culture does not make any difference in the approaches to downsizing but definitely a few characteristics of task-oriented and people-oriented styles play a significant role. Finally, the present study extends the limited research on downsizing and organisational culture (Radcliffe et al., 2001; Freeman & Cameron, 1993) by examining a wider range of downsizing actions and by demonstrating that any generalisation beyond a theoretical speculation needs to be made carefully.

5.3 Implications

While present investigation is preliminary in nature, the results have interesting implications for the theory and practice of downsizing. The present inquiry into how leaders approach downsizing supports the existence of three types of each, ideal and practical downsizing (viz. forced downsizing, student load downsizing and voluntary downsizing). Australian universities could devise plans revolving around these three downsizing strategies instead of dealing with many separate downsizing actions. This tripartite classification adds to the already existing empirical typologies of downsizing (e.g. Cameron et al., 1991; DeRue et al., 2005). It not only helps make sense and provide some
order for the downsizing phenomena but also helps to define what may be the underlying structure in the downsizing phenomena by building a theory of how things work.

From an intra-organisational perspective, the typologies of ideal and practical downsizing could provide human resource directors of Australian universities with an opportunity to focus their view on these three strategies and their long term as well as short term implications while implementing downsizing. From a theoretical standpoint, the conceptual bases of the extant evidence about the role of internal factors, specifically the leaders’ characteristics and organisational culture in downsizing has been reviewed and two conceptual models (that is, ideal downsizing and practical downsizing) were designed. These models were expected to help assess the complex factors that shape this unpopular business practice. From these conceptual models, the previous limited evidence was taken into account to put forward the possible link between ideal downsizing strategies, and leaders’ characteristics and organisational culture; and, practical downsizing strategies and organisational culture. However, the empirical models of ideal and practical downsizing developed from this study suggested weak support for the existence of such links. First, the results of post-hoc tests suggested that the differences in approaches to ideal downsizing could be systematically accounted for in only one characteristic each of task-oriented style (make their attitudes clear to the team members) and people-oriented leadership style (act with consulting their team members) but none of the dimensions of personality, personal values, and organisational culture. Additionally, the results of test of planned contrasts demonstrated the differences between preferences to a very limited downsizing and different downsizing strategies are significant on only two characteristics of people-oriented leadership style (act with consulting their team members and do little things to
make it pleasant to be team members) and one characteristic of task-oriented style (maintain definite standards of performance). Second, the differences in approaches to practical downsizing could be systematically accounted for only three characteristics of supportive culture (that is, personal freedom, sociable, and trusting). Furthermore, the results of test of planned contrasts demonstrated the differences between engaging in a very limited downsizing and different downsizing strategies are significant on only two characteristics of innovative culture (results-oriented and stimulating) and one characteristic of bureaucratic culture (power-oriented).

From a practical perspective, for leaders, the results of this research suggest that there is a possible link between their leadership style and their tendencies toward certain downsizing strategies, though such a link is not potentially strong. While considering the weakness of such a systemic link, the findings of this research have limited implications for the leaders who could possibly benefit from increasing their awareness to their own leadership style while favouring a certain type of downsizing strategies. In other words, leaders could possibly benefit from greater awareness of the choice of styles that is available to them, learning to enact more effective styles even if it is not their initial tendency. Thus, it could help leaders understand their own tendency to prefer a particular downsizing strategy. For example, when there is an emphasis on a range of downsizing strategies by the top management of an organisation, a mid-level leader who is aware of her/his orientation towards a task-oriented style would deliberately prefer to engage forced downsizing strategy.

This study suggests leadership style as a criterion that leaders would possibly consider while preferring different downsizing strategies. These results may help leaders
rethink whether their preference to certain downsizing strategies is based on their leadership styles that they have observed to be the most successful in their organisations. If the top management team knew what leadership style is preferred by the mid-level leaders, it might be possible to predict differences in those leaders’ willingness to undertake certain downsizing strategies. Nonetheless, caution needs to be shown because one of the main purposes of this research has been to explain differences in approaches to ideal downsizing that account for leaders’ characteristics and organisational culture, and not to prescribe the strategies organisations should use.

From an organisational perspective, the linkages revealed in this study between practical downsizing strategies and supportive culture suggests another way for organisations to employ mid-level leaders that fit the organisational culture and downsizing strategies. However, caution needs to be exercised while interpreting the findings of this study because none of the cultural dimensions (bureaucratic, innovative and supportive culture) were differentiated by the leaders who used student load downsizing. Also, none of the clusters differentiated significantly \( p < 0.05 \) on the other two items of the supportive culture dimension (that is, relationship-oriented, and safe). In addition, results of post-hoc analysis indicated none of the clusters differentiated significantly \( p < 0.05 \) on any item-variables of the innovative culture dimension (that is, risk-taking, results-oriented, creative, stimulating, and challenging) and bureaucratic culture dimension (that is, structured, ordered, regulated, established, and power-oriented).

The real value of this research is for mid-level leaders to possibly see themselves in one of the two classical leadership styles (task-oriented and people-oriented) and determine if there is any congruence between their leadership style and their preferences towards
certain downsizing strategies. However, it needs to be cautioned that such congruence could not be considered potentially promising due to weak linkages demonstrated by the post-hoc test results relating to ideal downsizing strategies.

It needs to be acknowledge that mid-level leaders are only required to implement the downsizing strategy that suits their organisation’s interests, though they may not be directly involved in devising such strategies, as the decisions associated with downsizing strategies are usually made by the top management leaders. However, if there is a mismatch between their leadership style and their preferences towards certain downsizing strategies, it is suggested that they strive to change their style so that it is appropriate for the type of downsizing which their organisations pursue. Such an exercise seems to be ethically challenging. The other options for such leaders are seeking any other alternate positions of their interests in the same organisation or to relinquish their positions as a last resort.

The leadership styles could be used not only to select downsizing agents but also to select staff members for the positions that innately necessitate downsizing in the future. However, the ethical implication of such actions could be disconcerting. The major challenge would be in answering questions such as: Is it ethical for leaders to manipulate their leadership styles in order to endorse downsizing strategies that they believe to be successful? What would be the responsibilities of researchers into downsizing? At this juncture such questions have not cropped up due to insufficient knowledge of downsizing for the conditioning of leaders’ individual characteristics and organisational culture. However, it has been raised here to sensitise the complexities associated with ethicalities of downsizing.
5.4 Limitations

Before further consideration of the observations of the present study, several limitations need to be mentioned. First, the data on downsizing, leaders’ characteristics and organisational culture were measured at one moment in time. It would have been even better if the opportunity was there to examine changes in time as well. However, this was not made possible by the universities that participated in the research. Thus, cross-sectional design limits the extent to which conclusions can be drawn and also there is a familiar set of limitations on inferring causality. Furthermore, due to confidentiality issues the returned responses could not be linked to those universities that participated.

Several researchers (e.g. Cameron, 1994; Cascio, 2005) have suggested that a longitudinal method should be employed to analyse the downsizing. Given the time limitations of a thesis work of this kind and downsizing as a sensitive research topic, the difficulties are well known and widely acknowledged. Furthermore, the present study used only quantitative techniques. There have been criticisms that this highly quantitative approach fails to provide insights into the leaders’ actual behaviours (Kouzes & Posner, 1998; Kets de Vries, 1995; House, 1995).

Second, the data were collected using a self-report type of questionnaire, which could lead to apprehension relating to common method bias. Third, due to the sensitivity of the downsizing topic, many universities were hesitant to give permission to contact their staff members, which resulted in limiting the sample size. Fourth, the examination of downsizing strategies, leaders’ individual characteristics and organisational culture was over a large but nevertheless limited range of organizational levels. The findings speak
more about downsizing strategies, leadership styles, supportive culture as they are manifest in the middle management positions.

It may have been possible that somewhat different results might have emerged if the leaders at the top management level had been examined. It could be argued that if the present research had been extended to more senior level positions such as Pro Vice-Chancellors, Deputy Vice-Chancellors and Vice-Chancellors, the downsizers may have become more predominant than the non-downsizers.

The fact that survey respondents were limited to mid-level leaders presents both advantages and challenges. On the one hand, the management, mainly the middle management level represented in this study, may not be a representative sample of the leaders in the universities studied. Previous research has demonstrated that top management is considerably more positive about downsizing in their organisations than staff at lower levels. On the other hand, it is the management, especially middle management that must support, if they cannot initiate, any major downsizing efforts on the part of their organisations. Following the same logic, downsizing strategies measured at this level will be most predictive of the future behaviour of the organisations.

The results of the present research indicate that nearly half (more precisely, 48 per cent) of the sample engaged in a very limited downsizing in the last three years. However, this does not mean that such leaders have not used any type of downsizing to a very large extent. There is a possibility of leaders having used other downsizing actions which have not been considered in this research. For example hiring freeze, pare contingent staff members, unpaid vacations or unpaid leave of absence are some of the few other downsizing actions.
Furthermore, leaders were only asked to indicate if they had used downsizing in the last three years. Information on the nature of downsizing such as level or magnitude or size (e.g. 5 per cent or 10 per cent of staff or student numbers or academic programs or organisational units), recentness and number of downsizings (e.g. once or twice or thrice downsizing in the last three years) that had occurred during this period, were not collected as those criteria were not the focus of this research. The present research cannot directly address this or other related issues of neither including executive-level leaders in the sample nor considering few other downsizing actions.

On similar lines, it should be recognized that the research data relating to downsizing strategies, leaders’ characteristics and organisational culture were obtained in a single industry, i.e. the publicly funded Australian universities sector. Given the exploratory nature of the present study, it needs to be noted that a plausible explanation could be offered for the different approaches to ideal and practical downsizing in ten publicly funded Australian universities, but it is difficult to provide a basis for a strong inference. Also, more effort is needed in order to understand the typologies of ideal and practical downsizing identified in the present study. In other words, the generalisability of results needs to be done cautiously.

As universities which participated in this research have different group affiliations, any major differences in the operating conditions of the business environment is likely to be apparently considerable. The additional sample could have been restricted to a larger sample of leaders from only one type of university rather than a number of different types. However, the present research has a greater value in including representative universities of all types in the broad sample for the sake of the comprehensiveness of the survey.
The middle management was clearly defined in the present study and leaders were contacted based on the generic positions they held. However, some leaders’ comments on returned surveys and e-mails from others addressed to the researcher highlight the existing confusion surrounding what constitutes middle management in a university sector. As one leader wrote on the survey he returned, ‘I am not in a position to answer most of these questions as the director of a small centre consisting primarily of academic staff attached to the school.’ Another leader sent an e-mail stating, ‘I am in an advisory position, though I hold a designation of director’. One more leader wrote, ‘I am not in a position to implement any of the listed downsizing actions.’ These responses reveal the ambiguities and diversification associated with the assigning of official designations to leaders by their universities. Therefore, elimination of ineligible cases was obvious and hence the reduction of the sample size. A relatively larger sample size could have allowed greater confidence on research findings, though the present sample size is reasonably large for applying multivariate statistical techniques and making inferences in terms of generalisation capability of the results. It is relatively modest in comparison to the population it represents. Nonetheless, it needs to be acknowledged that the present study is an exploratory research and therefore generalisation is not the primary concern.

Given the varied organisational structures of different universities in Australia, the choice of the sample of leaders in the middle management ranks of each university as a whole meant that leaders having relatively varied position titles were being compared. Another approach would be to choose only leaders having position titles common to all universities (e.g. heads of schools). However, since two research questions (RQ2 and RQ3) focused on the comparison of leaders at the broadest level, a representative sample in all
the functional units of universities was preferred. An effort has been made in the analysis of research data to indicate the relative representativeness of the sample actually obtained. However, care must be exercised in drawing any far reaching conclusions.

Finally, it should be recognized that the descriptive profiles of clusters identified in the present research do not provide an absolute description of the kind of leader-organisational culture types found while leaders pursue different downsizing strategies in publicly funded Australian universities.

5.5 Directions for Future Research

The findings of this investigation could be of use in directing future research endeavours. The empirically developed ideal and practical downsizing typologies could be helpful in establishing expectations for patterns in behaviour that could subsequently be studied further.

Although this research tried to pick the two extremes in terms of leadership styles to illustrate possible differences in ideal downsizing strategies, it would be interesting to examine whether any other leadership styles (e.g. narcissistic style, autocratic style) could explain the differences in ideal downsizing strategies. For example, leaders who prefer forced downsizing could be more likely to be narcissistic. Thus, future research is needed to extend the systematic link between ideal downsizing strategies and other leadership styles. Similarly, the empirical findings suggest that further research would benefit from attention not only to supportive culture but also to other cultural dimensions as highlighted in the literature review chapter (e.g. Collegial, Managerial, Developmental, and Negotiating, Safeguarding Culture, Consensus Orientation, and Sustainability Orientation) while leaders differ in their approaches to downsizing.
Several interesting issues emerged from the research. For example, the leaders who used student load downsizing in practice (Cluster 1) were not significantly differentiated by any of the dimensions of organisational culture. Furthermore, the leaders who ideally preferred any of the downsizing strategies (that is, forced downsizing, voluntary downsizing, and student load downsizing) did not differentiate on their personality and personal values, and organisational culture dimensions (that is, bureaucratic, innovative, and supportive). If the leaders’ personality, personal values, and organisational culture cannot explain the differences in ideal downsizing strategies, then a question arises: what other factors could explain such differences? This is a key research question that can only be resolved over time.

The present study asked mid-level leaders to identify if they had used a particular downsizing action in the last three years. It is possible that issues related to the downsizing itself, such as how downsizing actions were implemented (i.e. frequency and magnitude of downsizing in the last one, two or three years) could reveal more about the systematic links between downsizing strategies, their characteristics and organisational culture. Future research is needed to investigate the role that these downsizing-related factors play in differed approaches to downsizing.

This research provides a fresh perspective by suggesting that ideally, the task-oriented and people-oriented styles narrow a leaders’ viewpoint which in turn causes their short sightedness leading them to pursue a particular downsizing strategy. Also, the present research suggests that practically the supportive culture would be conducive for pursuing a certain downsizing strategy. The importance of leaders interpreting downsizing as avoidance of job losses which may or may not be perceptible to them are probably intrinsic
in observance to people-oriented style. It would be an interesting topic for future investigation.

The results of this research do not completely corroborate the conceptual models which were designed at the beginning of this study (refer figures 2.1 and 2.2 of chapter 2). Nonetheless, it has generated managerially relevant hypotheses which are worthy of pursuit in future research. For example there is no significant difference between ideal downsizing strategies and leaders’ personality; there is no significant difference between ideal downsizing strategies and leaders’ personal values; there is no significant difference between ideal downsizing strategies and organisational culture; and, there is no significant difference between student load downsizing and organisational culture under practical conditions.

An interesting finding with downsizing implications may be in the generality of the use of different downsizing strategies. For example, leaders who in practice did not engage in downsizing are influenced by a culture that is more likely characterised by a personal freedom, sociable and trusting. However, the leaders who used forced downsizing tend to have a culture that is less likely characterised by a personal freedom which indicates a less supportive culture. Is this downsizing behaviour of leaders specific to the leader - culture sphere of influence or is it a general characteristic of leaders in publicly funded Australian universities? Also, future research would benefit from studying the differences in downsizing strategies through identifying or linking leaders with their respective organisations, though such an investigation could involve confidentiality issues that need to be taken care.
Furthermore, are the three types of downsizing strategies, viz. forced downsizing, student load downsizing and voluntary downsizing characteristic only of publicly funded Australian universities? Since the results of this study are based only on the perceptions of mid-level leaders of a universities sector, care should be taken in considering them as generalisable and applicable to other levels of management in different education sectors (viz. TAFE or Polytechnic education, and primary and secondary school education). However, given the presence of very limited number of research studies in the downsizing literature, the proposed downsizing typologies should be considered as a extended step towards a more empirical investigation of categorising downsizing strategies.

The empirical models that have been developed use a limited set of constructs, viz. leaders’ characteristics - leadership styles (task-oriented and people-oriented styles), personality (openness, conscientiousness, extrovertism, agreeableness, and neuroticism), personal values (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, security) and organisational culture dimensions (viz. bureaucratic, innovative and supportive culture). Thus, it could be expected that other constructs such as communication, emotional intelligence, role ambiguity, locus of control and competency could be identified in different industries and countries.

Given the multidimensional nature of leaders’ characteristics and organisational culture, researching such aspects in combination rather than considering them individually could prove to be interesting and productive. Furthermore, only publicly funded Australian universities were studied in this research, so it would be interesting to conduct similar research in the universities of other countries. Given that downsizing research has been
largely conducted in the American industries including universities, a cross-cultural analysis of downsizing strategies would be a worthy topic for future research.

5.6 Conclusions

The literature on downsizing research (e.g. Cameron et al., 1991; DeWitt, 1998; Freeman & Cameron, 1993; Dewettinck & Buyens, 2002; DeRue et al., 2005) shows that there have been many past attempts to define useful categorisation of generic strategies of downsizing. However, very little empirical work has been undertaken in this direction.

Through a postal survey, the present investigation gathered data from 255 mid-level leaders across ten publicly funded Australian universities and then analysed using exploratory factor analysis, cluster analyses and one-way ANOVAs. The complexities involved in the differences of downsizing strategies due to leaders’ characteristics and organisational culture were methodically captured under two premises, ideal and practical.

An exploratory factor analysis approach was used in the present research to reduce the data and also provide an exploratory factor model for identifying and analysing the empirical typologies of downsizing that are prevalent in publicly funded Australian universities. Ideally and practically, three types of downsizing strategies, viz. forced downsizing, voluntary downsizing, and student load downsizing were identified.

Before interpreting the results of factor analysis, a point that must be seriously considered is that the extent of downsizing was rated by the mid-level leaders of publicly funded Australian universities, because these leaders have the knowledge of the impact that these strategies can have on their respective universities in particular and the university sector in general. Also, it needs to be mentioned that responses were gathered during the Global Financial Crisis. Furthermore, the perceptual measure of downsizing
strategies was solely based on the leaders’ broader understanding of the downsizing phenomenon and their universities’ prevalent policies as applicable to such strategies. Thus, any generalisation of the typologies of downsizing that resulted from this research to other industry sectors is required to be made carefully. This does not mean that the methodological framework of this research cannot be applied to other industry sectors, but rather the sampling frame should consist of respondents from the industry in which the research is being conducted. As the principal component method was used in this research, so the conclusions are restricted to the sample collected. The generalisation of the results could be achieved only if the analysis using different samples reveals the same factor structure (Field, 2009).

For the reasons outlined above, the dimensions that emerged from the factor analysis may not necessarily be meaningful when they are considered from a purely downsizing perspective. Theoretically, some deviations of important variables that belong to specific dimensions were observed, and also there are some unexplainable loadings of variables to certain dimensions. However, if the results are interpreted collectively having in mind the sensitive nature of downsizing, the university sector related research and the theme under investigation, then the results obtained are more meaningful and their interpretation is greatly facilitated.

Based on the three types of ideal downsizing strategies, four clusters were derived and analysed across leaders’ characteristics and organisational culture. Similarly, based on three practical downsizing strategies, four clusters were derived and analysed across organisational culture.

Different clusters exhibited significantly different downsizing strategies. From the
cluster analysis, it was concluded that strategically oriented leaders under ideal conditions tend to prefer only a mutually exclusive single downsizing strategy. Similarly, when it comes to practice of downsizing, such leaders tend to use only a mutually exclusive single downsizing strategy. The cluster analysis revealed that there existed one cluster each in ideal and practical downsizing which remained undifferentiated, i.e. having no clear strategic orientation. The leaders grouped into this cluster engaged in a very limited downsizing.

Most importantly, the findings of this research suggest that ideally the leadership styles (viz. people-oriented and task-oriented styles) do matter while downsizing, but not leaders’ personality and personal values and also the type of culture in their organisations. However, when it comes to the practice of downsizing the supportive culture does matter for leaders who use either voluntary downsizing or forced downsizing, or those who engage in a very limited downsizing. Interestingly, organisational culture was not significantly differentiated by the leaders who use student load downsizing.

These findings add to the growing body of theoretical and empirical literature on downsizing by suggesting that differences in downsizing strategies could be methodically explained by the leadership styles and supportive culture in addition to team composition and structure (DeRue et al., 2005) and dynamic managerial capabilities (Adner & Helfat, 2003). Such results suggest that within a university sector, where leaders face similar conditions in their business environment, a possible link exists between downsizing strategies, and leadership styles and supportive culture.

This research makes following three key contributions to the theory and practice of downsizing. It has developed: 1. Empirical typologies of ideal and practical downsizing; 2.
Empirical model of differences in approaches to ideal downsizing that account for only limited characteristics of people-oriented and task-oriented leadership styles; and, 3. Empirical model of differences in approaches to practical downsizing that account for only limited characteristics of supportive culture. Therefore, the present research addresses a gap in the downsizing literature concerning leadership styles and supportive culture as explanatory factors for the differences in approaches to downsizing.

Although the leaders’ characteristics and organisational culture perspective presented in this thesis treats empirical research on downsizing in a unique way, this framework should not be interpreted as adversative to the existing perspectives (viz. economic, institutional and socio-cognitive perspectives). Rather it needs to be considered as part of a complex range of leaders’ likely preferences of certain downsizing strategies.

The study findings should be interpreted with caution for a number of reasons. First, the results are specific to mid-level leaders in publicly funded Australian universities. Second, practical downsizing actions were measured retrospectively. Relying on retrospective evaluations can be challenging in portraying the dynamic aspects of leaders’ responses. Third, the classification of leaders was based on downsizing strategies using cluster analysis, a data analysis technique known for not generating a single, definitive solution (Punj & Stewart, 1983).

This research has produced valuable knowledge about the downsizing strategies that are currently preferred as well as used by leaders at the middle management level in publicly funded Australian universities. Beyond mere links between ideal downsizing strategies and leadership styles, and practical downsizing strategies and the supportive
culture, the findings of this research underscore the disparity and sometimes ambiguous influences that they can have.

Finally, this research was able to investigate the factors that identify the association between practical downsizing strategies and supportive culture, and ideal downsizing strategies and leadership styles. However, it was beyond the scope of the present research to include several other potentially important factors that may throw more light on the association. For example the leaders’ multiple intelligences (viz. emotional, social and cognitive intelligence) could possibly explain the differences in downsizing strategies. Future studies would benefit from taking such factors into consideration.

In summary, the fact that leaders’ differ in their approaches to downsizing is an important aspect of industry life. This study contributes to our knowledge of downsizing strategies in that it advances ideal and practical downsizing typologies from which it offers an explanation for the differences in ideal downsizing strategies in terms only leadership styles, but not personality, personal values and organisational culture. It also demonstrates that the differences in practical downsizing strategies are selectively explained in terms of supportive culture.

These results were obtained from a sample of 255 mid-level leaders in case of ideal downsizing and 194 leaders in case of practical downsizing, working at the level of deans, heads of schools, directors and managers in ten publicly funded universities (comprised of both smaller and larger universities) spread across different states of Australia. These mid-level leaders are represented by a wide range of age, experience, gender, position titles, and fields of organisational units. Thus, the findings should be applicable to most leaders as
downsizing strategies are not just a function of a specific university’s or country’s norms, though caution in extending the findings needs to be exercised.
Appendix A

Human Research Ethics Committee Approval Letter

(Please Turn Over)
Human Research Ethics Committee
Committee Approval Form

Principal Investigator/Supervisor: Associate Professor Nasir Budrous Brisbane Campus
Co-Investigators: Dr Ann Bramwell Brisbane Campus
Student Researcher: Mr. B. M. Santosh Brisbane Campus

Ethics approval has been granted for the following project:
Do Organisational Leaders' Characteristics and Organisational Culture matter while downsizing? A Study of Australian Universities. (Downsizing in Australian Universities)
for the period: 6 June 2008 to 31 October 2008
Human Research Ethics Committee (HREC) Register Number: Q20070830

The following standard conditions as stipulated in the National Statement on Ethical Conduct in Research Involving Humans (2007) apply:

(i) that Principal Investigators / Supervisors provide, on the form supplied by the Human Research Ethics Committee, annual reports on matters such as:
   - security of records
   - compliance with approved consent procedures and documentation
   - compliance with special conditions, and

(ii) that researchers report to the HREC immediately any matter that might affect the ethical acceptability of the protocol, such as:
   - proposed changes to the protocol
   - unforeseen circumstances or events
   - adverse effects on participants

The HREC will conduct an audit each year of all projects deemed to be of more than low risk. There will also be random audits of a sample of projects considered to be of negligible risk and low risk on all campuses each year.

Within one month of the conclusion of the project, researchers are required to complete a Final Report Form and submit it to the local Research Services Officer.

If the project continues for more than one year, researchers are required to complete an Annual Progress Report Form and submit it to the local Research Services Officer within one month of the anniversary date of the ethics approval.

Signed: ________________________  Date: 6 June 2008
(Research Services Officer, McAuley Campus)

(Committee Approval dot @21/11/2007)
Appendix B

Human Research Ethics Committee Approval of Extension

From: QLD Ethics <QLD_Ethics@mcauley.acu.edu.au>
To: nasir butrous <n.butrous@mcauley.acu.edu.au>, ssbana001@student.acu.edu.au, bmsthesis@rediffmail.com
Subject: Q200708-30 Ethics Extension
Date: Thu, 25 Sep 2008 08:18:47 IST

Dear Nasir and Santosh,

Thank you for returning the Ethics Progress Report for your project Q200708-30. The Deputy Chair of the Human Research Ethics Committee has approved your request to extend the period of data collection. The new expiry date for data collection is the 31 December 2008.

We wish you well in this ongoing project.

Kind Regards,
Kylie
Kylie Pashley
Research Services
McAuley at Banyo Campus, PO Box 456, VIRGINIA  QLD  4014
AUSTRALIA
Tel (+61 07) 3623 7429  Fax (+61 07) 3623 7328
EMAIL: kylie.pashley@acu.edu.au
Australian Catholic University Ltd
ABN 15 050 192 660
CRICOS Registration codes:00004G, 00112C, 00873F, 00885B
Appendix C
Letter to PVCs / DVCs (Research)

Date: 01.09.2008

Professor [Name]
Pro-Vice-Chancellor (Research)

Sub: Research Project – Downsizing in Australian Universities

Dear Professor [Name],

Mr. B. M. Santosh is a full-time PhD Student working under my research supervision in the School of Business & Informatics, Australian Catholic University, Brisbane Campus. His area of research is “Organisational Downsizing”. The title of his study is “Do Leaders’ Characteristics and Organisational Culture matter while downsizing? A Study of Publicly-funded Australian Universities.” This research study is aimed at contributing to the scientific knowledge in the field of organisational downsizing by exploring the association of organisational leaders’ characteristics and organisational culture with the downsizing strategies. Details of the research project could be found in the attached research proposal.

For his research purpose Mr. B. M. Santosh needs to collect data from your Institution. The research participants are the heads of organisational units (as per the attached list) working at different management levels in Australian Universities. I would be grateful to you if Santosh is permitted to carry out his research through survey questionnaire at your Institution. In giving him your permission to conduct this research study, your support and kind co-operation would be very much appreciated.

There are no anticipated risks in participation in this research. As a participant in this research, an individual will be required to complete the survey questionnaire which will take him/her less than 15 minutes. Questionnaire will be posted directly to the participants and they will be requested to send the completed survey using reply paid envelope addressed to the researcher.
Pending your approval, the staff holding organizational leadership positions will be contacted. Responses to the questionnaire will remain confidential and neither the participants nor their institutions will be identifiable in any way. A copy of questionnaire is attached to this letter. The research findings are expected to identify new ways of thinking about leaders’ approaches to downsizing strategies that affect their professional future and their institutions.

This study has been approved by the University Human Research Ethics Committee at Australian Catholic University (as per the attached letter). In the event that you may have any complaint/concern about the way participants have been treated during the project, or a query that the investigator has not been able to satisfy, you may write to the Chair of the Human Research Ethics Committee, care of the nearest branch of the Research Services Unit.

Chair, University Human Research Ethics Committee  
C/o Research Services Office, Australian Catholic University  
Brisbane Campus, P.O Box 456 Virginia, QLD – 4014  
Tel: 07 3623 7294, Fax: 07 3623 7328.

Any complaints made will be treated in confidence, investigated fully and you will be informed of the outcome.

If you have any questions about the research, please do not hesitate to contact me, at the address given below.

Yours sincerely,

Associate Professor Dr. Nasir Butrous  
School of Business & Informatics  
Australian Catholic University, Brisbane Campus  
1100 Nudgee Road, Banyo, Brisbane  
PO Box 456, Virginia, QLD – 4014, Australia  
Tel: 07-36237208, Fax: 07-36237361

Email: n.butrous@mcauley.acu.edu.au

Encl: 1. List of Position Titles chosen for the Survey  
2. Research Proposal  
3. ACU Human Research Ethics Committee Approval letter  
4. Survey Questionnaire
Appendix D

Generic List of Position Titles

Following leadership positions (academic / research and administrative) are chosen for conducting the survey:

1. Executive Deans / Faculty Deans / Deputy Deans / Associate Deans / Assistant Deans (Such as Faculties, Academics, Research and Innovation, Students, Graduate Studies)

2. Heads of Schools (Such as Accounting, Law, Economics, Finance, Marketing, Art, Architecture, Design, Mechanical Engineering, Civil Engineering, Life Sciences, Social Science)

3. Heads of Departments / Disciplines (associated with Schools)

4. Executive Directors / Directors / Deputy Directors / Associate Directors / Assistant Directors of Admin Units (Such as Policy and Planning, Financial Services, ICT, HR, International, Alumni & Development, Internal Audit & Risk Management, Facilities Services, Property Services, Legal Services, University Marketing)

5. Executive Directors / Directors / Deputy Directors / Associate Directors / Assistant Directors of Institutes and Research Centres specific to each university

6. Academic Registrar / Students Director

7. University Librarian, Heads of Campus Libraries and Discipline Libraries

8. Heads of University Campuses

9. Managers of Admin Units (Such as Policy and Planning, Financial Services, ICT, HR, International, Alumni & Development, Internal Audit & Risk Management, Facilities Services, Property Services, Legal Services, University Marketing)

10. Faculty Managers

11. Managers of Research Units

12. Other Management / Academic Positions at the level of Director or Manager specific to each university
Appendix E
Letter to Survey Participant

Date: 17.10.2008

Title of Research Project: Downsizing in Australian Universities
Name of the Principal Research Supervisor: Dr. Nasir Butrous
Name of the Co-supervisor: Dr. Ann Bramwell
Name of the Student Researcher: B.M.Santosh
Program in which enrolled: PhD

Dear Participant,

You are invited to participate in the above research project which seeks to gain an insight into role of leaders’ characteristics and organisational culture in choosing downsizing strategies. This research study is aimed at contributing to the scientific knowledge in the field of organisational downsizing by exploring the association of organisational leaders’ characteristics and organisational culture with the downsizing strategies.

Your institution has been contacted and we have been permitted to contact all participants directly. There are no anticipated risks in your participation. As a participant in this research, we appreciate if you complete the survey questionnaire which will take less than 15 minutes of your time. A copy of questionnaire is attached to this letter. Completed questionnaire needs to be placed in the attached reply-paid envelop and posted directly to the researcher.

Responses to the questionnaire will remain confidential and neither you nor your institution will be identifiable in any way. You are free to refuse consent altogether without
having to justify that decision, or to withdraw consent and discontinue participation in the study at any time without giving a reason.

The research findings are expected to identify new ways of thinking about leaders’ approaches to downsizing strategies that affect their professional future and their institutions. Any questions regarding this project can be directed to my Principal Research Supervisor at:

Associate Professor Dr. Nasir Butrous
School of Business & Informatics, Australian Catholic University
McAuley@Banyo Campus, 1100 Nudgee Road
Banyo, Brisbane, QLD 4014
Tel: 07 3623 7208, Fax: 07 3623 7361
Email: n.butrous@mcauley.acu.edu.au

This study has been approved by the University Human Research Ethics Committee at Australian Catholic University. In the event that you may have any complaint/concern about the way you have been treated during the project, or a query that the investigator has not been able to satisfy, you may write to the Chair of the Human Research Ethics Committee, care of the nearest branch of the Research Services Unit.

Chair, University Human Research Ethics Committee
C/o Research Services Office, Australian Catholic University
Brisbane Campus, P.O Box 456 Virginia, QLD – 4014
Tel: 07 3623 7294, Fax: 07 3623 7328.

Any complaints made will be treated in confidence, investigated fully and you will be informed of the outcome.

Your co-operation is greatly appreciated. Thank you in advance for your time and consideration of this survey research project.

Principal Research Supervisor

Student Researcher

Encl.: 1. Survey Questionnaire
2. Reply-paid envelope
Appendix F
Survey Questionnaire

Downsizing in Australian Universities

Survey Questionnaire

Thank you for participating in this survey which forms part of my PhD thesis in Business. This survey is anonymous and your identity will not be disclosed to the researcher. You may withdraw from this survey at any time up until submission of the survey. Once the surveys have been submitted, you will be unable to do withdraw individual surveys as they are anonymous, and are therefore non-identifiable. If you do decide to take part in this survey, please make sure that you complete ALL the relevant questions and place the completed questionnaire in the enclosed reply paid envelope.

[A] Downsizing Survey – Practical

As a head of organizational unit, to what extent have you used the following actions while downsizing in the last three years. Using the following scale please inscribe a circle around one of the five numbers where: 1 = Not at all, 2 = to a very little extent, 3 = to a little extent, 4 = to a large extent, 5 = to a very large extent.

<table>
<thead>
<tr>
<th>Action</th>
<th>Not at all</th>
<th>To a very little extent</th>
<th>To a little extent</th>
<th>To a large extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Voluntary Redundancy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Voluntary Early Retirement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Targeted Redundancy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Proportionate staff cut</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Forced Layoff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Closure of sub-units</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Merging of sub-units</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Delayering</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Elimination of Academic Programs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Reduction in EFTSU intake</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix F (Continued…)

[B] Big Five Inventory - 10 Items (BFI-10)

Think about how well the following statements describe your personality. Using the following scale please inscribe a circle around one of the five point scale where: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly Agree.

<table>
<thead>
<tr>
<th>I see myself as someone who;</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. is reserved</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. is generally trusting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. tends to be lazy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. is relaxed, handles stress well</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. has few artistic interests</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. is outgoing, sociable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. tends to find fault with others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. does a thorough job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. gets nervous easily</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. has an active imagination</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Appendix F (Continued…)**

[C] Leader Behaviour Description Questionnaire XII - “Self”

Think how frequently, you as a leader engage in the behaviour described by the following statements. Using the following scale please inscribe a circle around one of the five point scale where: 1= Never, 2 = Seldom, 3 = Occasionally, 4 = Often, 5 = Always.

<table>
<thead>
<tr>
<th>As a Leader, I;</th>
<th>Never</th>
<th>Seldom</th>
<th>Occasionally</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. make my attitudes clear to the team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. assign team members to particular task</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. schedule the work to be done</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. maintain definite standards of performance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. encourage the use of uniform procedures</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. ask the team members to follow standard rules and regulations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. let the team members know what is expected of them</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. decide what shall be done and how it shall be done</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. make sure that my part in the team is understood by the team members</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. try out my ideas with the team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. do little things to make it pleasant to be a member of the team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. keep to myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. refuse to explain my actions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. act without consulting the team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. treat all team members as my equals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. am willing to make changes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. am friendly and approachable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. put suggestions made by team into operation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19. give advance notice of changes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20. look out for the personal welfare of team members</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Appendix F (Continued…)**

[D] Short Schwartz’s Value Survey Questionnaire (SSVS Questionnaire)

Think about how important each of the following value has acted as a guiding principle in your organisational decisions. Using the following scale please inscribe a circle around one of the five point scale where: 1 = Against my principles, 2 = Not at all important, 3 = Important, 4 = Very Important, 5 = Supreme importance

<table>
<thead>
<tr>
<th>Personal Values</th>
<th>Against my principles</th>
<th>Not at all imp.</th>
<th>Imp.</th>
<th>Very imp.</th>
<th>Supreme imp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Power</strong> (i.e. Social status and prestige, control or dominance over people and resources)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. <strong>Achievement</strong> (i.e. Personal success through demonstrating competence according to social standards)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. <strong>Hedonism</strong> (i.e. Pleasure and sensuous gratification for oneself)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. <strong>Stimulation</strong> (i.e. Excitement, novelty, and challenge in life)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. <strong>Self-Direction</strong> (i.e. Independent thought and action choosing, creating, exploring)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. <strong>Universalism</strong> (i.e. Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. <strong>Benevolence</strong> (i.e. Preservation and enhancement of the welfare of people with whom one is in frequent personal contact)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. <strong>Tradition</strong> (i.e. Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide the self)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. <strong>Conformity</strong> (i.e. Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. <strong>Security</strong> (i.e. Safety, harmony, and stability of society, of relationships, and of self)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix F (Continued…)

[E] Downsizing Survey - Ideal

As a Head of Organisation Unit, please think about to what extent you would ideally prefer to use the following actions while downsizing. Using the following scale please inscribe a circle around one of the five point scale where: 1= Not at all, 2 = to a very little extent, 3 = to a little extent, 4 = to a large extent, 5 = to a very large extent.

<table>
<thead>
<tr>
<th>As a head of organizational unit, I would ideally prefer to use:</th>
<th>Not at all</th>
<th>To a very little extent</th>
<th>To a little extent</th>
<th>To a large extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Voluntary Redundancy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Voluntary Early Retirement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Targeted Redundancy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Proportionate staff cut</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Forced Layoff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Closure of sub-units</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Merging of sub-units</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Delayering</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Elimination of Academic Programs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Reduction in EFTSU intake</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
[F] Organisational Culture Index

Please inscribe a circle around one of the five point scale below which most closely corresponds with how you describe your organization. 1= Not at all, 2 = to a very little extent, 3 = to a little extent, 4 = to a large extent, 5 = to a very large extent.

<table>
<thead>
<tr>
<th>Organisational Culture Items</th>
<th>Not at all</th>
<th>To a very little extent</th>
<th>To a little extent</th>
<th>To a large extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Risk-taking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Relationship-oriented</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Results-oriented</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Creative</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Structured</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Ordered</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Stimulating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Regulated</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Personal freedom</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Sociable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Safe</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Challenging</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. Established</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. Trusting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. Power-oriented</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix F (Continued…)

[G] Demographics

The following questions concern your personal and professional information. No individual data will be reported and full confidentiality will be assured. Please choose the most appropriate option by putting a cross mark inside the given block.

1. What is the title of your current position in the organisation?
   - Executive Dean
   - Dean / Deputy Dean / Associate Dean
   - Head of School / Department
   - Director of Research Centre
   - Director of Institute / College
   - Head of University Campus
   - Other …………………………………

2. How long you have been working in the current position in the organisation?
   - 1 year or less
   - 2 - 5 years
   - 6 - 9 years
   - 10 years and above

3. How long have you been working in the Higher Education sector?
   - 5 years or less
   - 6 - 10 years
   - 11 - 15 years
   - 16 - 20 years
   - 21 years and above

4. Have you worked outside higher education sector?    Yes ☐    No ☐

5. Which one among the following would describe the broad field of your organisation unit:
   - Natural and Physical Sciences
   - Information Technology
   - Engineering and related Technologies
   - Architecture and Building
   - Agriculture, Environ, and related studies
   - Food, Hospitality and Personal Services
   - Education
   - Management and Commerce
   - Society and Culture
   - Creative Arts
   - Health
   - Mixed field

6. What is your age group?
   - 35 years or less
   - 36 - 50 years
   - 51 - 65 years
   - 66 years and above

7. What is your gender?    Female ☐    Male ☐
Appendix G
First follow up e-mail to Survey Participant

5th Nov 2008

Title of Research Project: Downsizing in Australian Universities
Name of the Principal Research Supervisor: Dr. Nasir Butrous
Name of the Co-supervisor: Dr. Ann Bramwell
Name of the Student Researcher: B. M. Santosh
Program in which enrolled: PhD

Dear Participant,

Our sincere thanks to you if you have participated in the above research project which seeks to gain an insight into role of leaders’ characteristics and organisational culture in choosing downsizing strategies.

If you have not responded yet but intend to do so please use the package that was sent to you recently. If you have misplaced the package and would like to take part in the research, please let us know, by responding to this e-mail, and a new package containing survey questionnaire and a reply paid envelop will be posted to you immediately.

As you have been assured before, responses will remain confidential and neither the participants nor their university will be identifiable in any way.

Many thanks for your time and responses.

Assoc. Prof. Dr. Nasir Butrous
Principal Research Supervisor
Tel: 07 3623 7208
Email: n.butrous@mcauley.acu.edu.au

B. M. Santosh
Student Researcher
Appendix H
Second follow up e-mail to Survey Participant

1st Dec 2008

Title of Research Project: Downsizing in Australian Universities
Name of the Principal Research Supervisor: Dr. Nasir Butrous
Name of the Co-supervisor: Dr. Ann Bramwell
Name of the Student Researcher: B. M. Santosh
Program in which enrolled: PhD

Dear Participant,

Our sincere thanks to you if you have participated in the above research project which seeks to gain an insight into role of leaders’ characteristics and organisational culture in choosing downsizing strategies.

If you have not responded yet but intend to do so please respond before the closing business of 8th Dec 2008. If you have misplaced the package that was sent to you recently and would like to take part in the research, please let us know, by responding to this e-mail, and a new package containing survey questionnaire and a reply paid envelop will be posted to you immediately.

As you have been assured before, responses will remain confidential and neither the participants nor their university will be identifiable in any way.

Many thanks for your time and responses.

Assoc. Prof. Dr. Nasir Butrous
Principal Research Supervisor

B. M. Santosh
Student Researcher

Tel: 07 3623 7208
Email: n.butrous@mcauley.acu.edu.au
## Appendix I

List of publicly-funded Australian Universities*

<table>
<thead>
<tr>
<th>No.</th>
<th>Group-wise affiliation of public-funded Australian Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>New-generation Metro Universities (NGMU)</strong></td>
</tr>
<tr>
<td>1</td>
<td>Australian Catholic University</td>
</tr>
<tr>
<td>2</td>
<td>Edith Cowan University</td>
</tr>
<tr>
<td>3</td>
<td>Swinburne University of Technology</td>
</tr>
<tr>
<td>4</td>
<td>Victoria University</td>
</tr>
<tr>
<td>5</td>
<td>University of Western Sydney</td>
</tr>
<tr>
<td></td>
<td><strong>New-generation Regional Universities (NGRU)</strong></td>
</tr>
<tr>
<td>6</td>
<td>University of Canberra</td>
</tr>
<tr>
<td>7</td>
<td>University of Ballarat</td>
</tr>
<tr>
<td>8</td>
<td>Central Queensland University</td>
</tr>
<tr>
<td>9</td>
<td>Southern Cross University</td>
</tr>
<tr>
<td>10</td>
<td>University of Southern Queensland</td>
</tr>
<tr>
<td>11</td>
<td>University of Sunshine Coast</td>
</tr>
<tr>
<td></td>
<td><strong>Innovative Research Universities (IRU)</strong></td>
</tr>
<tr>
<td>12</td>
<td>Flinders University</td>
</tr>
<tr>
<td>13</td>
<td>Griffith University</td>
</tr>
<tr>
<td>14</td>
<td>La Trobe Univ.</td>
</tr>
<tr>
<td>15</td>
<td>James Cook University</td>
</tr>
<tr>
<td>16</td>
<td>Murdoch University</td>
</tr>
<tr>
<td>17</td>
<td>University of New Castle</td>
</tr>
<tr>
<td>18</td>
<td>Macquarie University**</td>
</tr>
</tbody>
</table>

* As published by Department of Education, Employment and Workplace Relations (2008)

** Macquarie University pulled out from IRUA in the year 2007 yet maintaining the innovative status whereas JCU joined the same consortium.
<table>
<thead>
<tr>
<th>No.</th>
<th>Group-wise affiliation of public-funded Australian Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Australian Technology Network (ATN)</td>
</tr>
<tr>
<td>19</td>
<td>Curtin University of Technology</td>
</tr>
<tr>
<td>20</td>
<td>University of Technology Sydney</td>
</tr>
<tr>
<td>21</td>
<td>Royal Melbourne Institute of Technology</td>
</tr>
<tr>
<td>22</td>
<td>Queensland University of Technology</td>
</tr>
<tr>
<td>23</td>
<td>University of South Australia</td>
</tr>
<tr>
<td></td>
<td><strong>Regional Universities</strong></td>
</tr>
<tr>
<td>24</td>
<td>Deakin University</td>
</tr>
<tr>
<td>25</td>
<td>Charles Strut University</td>
</tr>
<tr>
<td>26</td>
<td>University of Wollongong</td>
</tr>
<tr>
<td>27</td>
<td>University of New England</td>
</tr>
<tr>
<td>28</td>
<td>University of Tasmania</td>
</tr>
<tr>
<td>29</td>
<td>Charles Darwin University ***</td>
</tr>
<tr>
<td></td>
<td><strong>Group of Eight (Go8)</strong></td>
</tr>
<tr>
<td>30</td>
<td>University of Sydney</td>
</tr>
<tr>
<td>31</td>
<td>University of Melbourne</td>
</tr>
<tr>
<td>32</td>
<td>University of Adelaide</td>
</tr>
<tr>
<td>33</td>
<td>University of Queensland</td>
</tr>
<tr>
<td>34</td>
<td>University of Western Australia</td>
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<tr>
<td>35</td>
<td>Australian National University</td>
</tr>
<tr>
<td>36</td>
<td>University of New South Whales</td>
</tr>
<tr>
<td>37</td>
<td>Monash University</td>
</tr>
</tbody>
</table>

* As published by Department of Education, Employment and Workplace Relations (2008)

*** Northern Territory University was renamed as Charles Darwin University
Appendix J

Conference Presentation

BIBLIOGRAPHY


Gluyas, R. (2008, October 23). More job losses to come at ANZ. *The Australian*


Hawks, J. (1999). Organizational culture and faculty use of empowering teaching behaviours in selected schools or nursing. *Nursing Outlook, 47*, 67-73.


