STRATEGIC DEVELOPMENT PROCESS: INVESTIGATING THE RELATIONSHIP BETWEEN ORGANISATIONAL DIRECTION AND PERFORMANCE MEASUREMENT

by

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Ithaca

When you set out on your journey to Ithaca,
pray that the road is long,
full of adventure, full of knowledge.
The Lestrygonians and the Cyclops,
the angry Poseidon -- do not fear them:
You will never find such as these on your path,
if your thoughts remain lofty, if a fine
emotion touches your spirit and your body.
The Lestrygonians and the Cyclops,
the fierce Poseidon you will never encounter,
if you do not carry them within your soul,
if your soul does not set them up before you.

Pray that the road is long.
That the summer mornings are many, when,
with such pleasure, with such joy
you will enter ports seen for the first time;
stop at Phoenician markets,
and purchase fine merchandise,
mother-of-pearl and coral, amber and ebony,
and sensual perfumes of all kinds,
as many sensual perfumes as you can;
visit many Egyptian cities,
to learn and learn from scholars.

Always keep Ithaca in your mind.
To arrive there is your ultimate goal.
But do not hurry the voyage at all.
It is better to let it last for many years;
and to anchor at the island when you are old,
rich with all you have gained on the way,
not expecting that Ithaca will offer you riches.

Ithaca has given you the beautiful voyage.
Without her you would have never set out on the road.
She has nothing more to give you.

And if you find her poor, Ithaca has not deceived you.
Wise as you have become, with so much experience,
you must already have understood what Ithacas mean.
Constantine P. Cavafy (1911)

Ιθάκη

Σα βγεις στον πηγαιμό για την Ιθάκη,
να εύχεσαι νάναι μακρύς ο δρόμος,
γεμάτος περιπέτειες, γεμάτος γνώσεις.
Τους Λαιστρυγόνας και τους Κύκλωπας,
τον θυμωμένο Ποσειδώνα μη φοβάσαι,
τέτοια στον δρόμο σου ποτέ σου δεν θα βρεις,
αν μέν' η σκέψις σου υψηλή, αν εκλεκτή
συγκίνησις το πνεύμα και το σώμα σου αγγίζει.
Τους Λαιστρυγόνας και τους Κύκλωπας,
τον άγριο Ποσειδώνα δεν θα συναντήσεις,
αν δεν τους κουβανείς μες στην ψυχή σου,
αν η ψυχή σου δεν τους στήνει εμπρός σου.

Να εύχεσαι νάναι μακρύς ο δρόμος.
Πολλά τα καλοκαιρινά πρωϊά να είναι
που με τι ευχαρίστηση, με τι χαρά
θα μπαίνεις σε λιμένας πρωτοειδωμένους·
να σταματήσεις σ' εμπορεία Φοινικικά,
και τες καλές πραγμάτειες ν' αποκτήσεις,
σεντέφια και κοράλλια, κεχριμπάρια κ' έβενους,
και ηδονικά μυρωδικά κάθε λογής,
όσο μπορείς πιο άφθονα ηδονικά μυρωδικά·
σε πόλεις Αιγυπτιακές πολλές να πας,
να μάθεις και να μάθεις απ' τους σπουδασμένους.

Πάντα στον νου σου νάχεις την Ιθάκη.
Το φθάσιμον εκεί εἰν' ο προορισμός σου.
Αλλά μη βιάζεις το ταξίδι διόλου.
Καλλίτερα χρόνια πολλά να διαρκέσει·
και γέρος πια ν' αράξεις στο νησί,
πλούσιος με όσα κέρδισες στον δρόμο,
μη προσδοκώντας πλούτη να σε δώσει η Ιθάκη.

Η Ιθάκη σ' έδωσε το ωραίο ταξίδι.
Χωρίς αυτήν δεν θάβγαινες στον δρόμο.
Αλλο δεν έχει να σε δώσει πια.

Κι αν πτωχική την βρεις, η Ιθάκη δεν σε γέλασε.
Ετσι σοφός που έγινες, με τόση πείρα,
ήδη θα το κατάλαβες η Ιθάκες τι σημαίνουν.
Κωνσταντίνος Π. Καβάφης (1911)

Τώρα γυρίζω και κοιτώ
και τη ζωή μου αναμετρώ
πόσο μεγάλη ήταν η φόρα
και πόσο το πήδημα μικρό.
Κ. Ουράνης

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It is said – and it is true – that PhDs are lonely journeys; however, I have been lucky enough in this journey to have had the support of numerous people who I feel the need to acknowledge their help and thank them for helping me arrive to Ithaka. First and foremost, I would like to thank my parents who have always believed in me, supported me and helped me realise my dreams. They have managed to offer to me simultaneously my being (*ζειν*) and well being (*ευ ζειν*).

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I am also grateful to the interviewees from University of Warwick who helped with my case study, the responders of the survey and those participating in the follow up interviews. Their feedback was invaluable for the thesis.

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Dedication

To my family and Teti.

DECLARATIONS

- I am responsible for the work in this thesis
- This work has been written by me.
- All verbatim extracts have been distinguished and the sources specifically acknowledged.
- This thesis has not been submitted in any other university.
- During the preparation of this thesis a number of paper and presentations were prepared as listed below. The remaining parts of the thesis are unpublished.

1. *Tapinos E.*, Dyson R. G. and Meadows M., 2003, 'The impact of the performance measurement systems in setting the 'direction' in University of Warwick', 3rd International Workshop on Performance Measurement, Implementation and impact of performance measurement systems, Bergamo, Italy.
2. Meadows M., *Tapinos E.* and Dyson R.G., 2003, 'Strategic development: a survey of UK organisations', EURO/INFORMS, Istanbul, Turkey.
3. *Tapinos E.*, Dyson R. G. and Meadows M., 2003, 'Determining the linkages between direction setting', 45th Operational Research Society, Keele, UK.
4. *Tapinos E.*, Dyson R. G. and Meadows M., 2004, 'Assessing the elements of strategic/corporate planning: a global survey', 20th European Conference on Operational Research, OR and MANAGEMENT of ELECTRONIC SERVICES, Rhodes, Greece.
5. *Tapinos E.*, Dyson R. G. and Meadows M., 2004, 'The impact of performance measurement in strategic/corporate planning', 3rd Conference of the Performance Measurement Association, Edinburgh, UK.
6. *Tapinos E.*, Dyson R. G. and Meadows M., 2005, 'The impact of the performance measurement systems in setting the 'direction' in University of Warwick', Production and Planning Control, Vol. 16, No. 2, pp. 189-198.
7. *Tapinos E.*, Dyson R. G. and Meadows M., 2005, 'The impact of performance measurement in strategic/corporate planning', International Journal of Productivity and Performance Management, Vol. 54, No. 5/6, pp. 370-384.

ABSTRACT

Strategy development is an issue of great importance for the practitioners and at the centre of the academic research over the last century. This thesis concentrates on the investigation of strategy from the development and implementation process point of view. In particular, this thesis presents a study on the relationship between organisational direction and performance measurement. Organisational direction manifests the purpose of the existence for the organisation and its future desired state, while performance measurement is a monitoring and control mechanism for the assessment of the performance achievements. It is a common place that organisational success requires the alignment between organisational direction and performance measurement. On this topic, the existing published literature includes a significant number of recommendations on how to manage effectively the relationship between organisational direction and performance measurement; nevertheless, there is a distinct lack of empirical evidences on the current status and trends of this relationship. Therefore, this thesis examines the interrelationship and interdependencies between these two concepts.

The present research has been conducted through three different empirical investigations: an exploratory case study, a survey and follow up interviews. The exploratory case study examines the relationship between organisational direction and performance within an academic institution, the University of Warwick. The survey, was built on the observations made on the exploratory case study, and examined the role of organisational direction and performance measurement in the success of the strategic development process. Finally, the follow up interviews have been undertaken in order to enhance the findings of the survey and to provide insights and explanations for the variations observed in the survey.

Synthesising the results from the three empirical investigations, it is attempted to describe the trends, dynamics and practicalities of the relationship between organisational direction and performance measurement and to present the determinants of this relationship.

GLOSSARY

MD: Managing Director
CEO: Chief Executive Officer
COO: Chief Operations Officer
SME: Small and Medium sized Enterprise
BSC: Balanced ScoreCard
UK: United Kingdom
US: United States
EU: European Union
WBS: Warwick Business School
KPI: Key Performance Indicator

Chapter 1

Introduction

1.0 Summary

The first section of this introduction presents the main focus of the thesis, discussing the background of this research and particularly the theoretical motivation in order to undertake the research described in the following chapters. The second section presents the structure of this thesis.

1.1 The Introduction

This thesis investigates the relationship between setting the organisational direction and performance measurement within the strategic development process. This research objective suggests that organisational direction and performance measurement are elements of the process undertaken in order to develop strategy. It also suggests that there is a linkage between organisational direction and performance measurement. Finally, it is claimed that it is worth studying the setting of the organisational direction and performance measurement's relationship. An introduction to the thesis will be made in the following section by explaining why it is worth studying this relationship.

There are quite a few prominent academic authors (Roger, 1983, Porter, 1996, Mintzberg, 1998) who have questioned 'what is strategy?'. There are also some (Whittington, 2001) who have publicly addressed the question 'does it matter?'. Furthermore, there are those (Campbell and Alexander, 1997) who have raised the question 'what's wrong with strategy?'. Markides (1999) in his '*Search of strategy*' stated that '*despite the obvious importance of strategy and despite decades of*

academic research on the subject, there is surprisingly little agreement on what strategy is or how to develop a good one'.

There is no widely accepted definition of strategy as will be presented in the literature review, but it is widely accepted that strategy and the process for its development and implementation, are at the core of organisational survival and success. Roughly it could be claimed that strategy is the plan, method or approach to achieve one or more objectives.

It is easily understood that the continuously increasing competition, resulting from the evolution of technology and the globalisation of the economy dictates the need to develop strategies which will ensure the survival and success of an organisation. The study of strategy and strategic development processes has a relative short history, however significant developments have been achieved in the field. It is widely recognised that the starting point of any strategy is the organisational direction which defines the purpose of existence of an organisation, its business and the future desired state. In order to achieve the desired future state, organisations develop strategies whose implementation is monitored and controlled. Performance measurement is the main means for monitoring and controlling the success of the strategies and the organisation overall.

Organisational direction and performance measurement are both parts of the strategic development process, and their study has led to the conclusion (Kaplan and Norton, 1992, Dyson, 1998) that there should be an alignment between them. This alignment is valuable because it should ensure that performance measurement monitors the implementation of the strategy and the success of the organisation, instead of assessing irrelevant aspects. Performance measurement collects information and it is important that this information supports the organisational direction.

Chakravarthy and White (2002) discuss the research on strategy process and observe that '*despite the voluminous writings on strategy process (Chakravarthy*

and Doz, 1992, Pettigrew, 1992 and Lechner and Muller-Stewen, 1999) relatively little is still known about how processes actually affect strategy'. This statement is particularly interesting because it highlights that even if there is a vast amount of literature on the elements of strategy from a process point of view, there is not enough empirical work published on the interaction between the elements of strategic development processes.

Summing up, this thesis is going to present an investigation into the relationship between organisational direction and performance measurement, because their alignment is a vital need of modern organisations and because both are elements of the strategic development process and a key driver for the organisational success. This research started with a thorough review of the literature focusing on the strategic development processes and the theoretical background of organisational direction. Then performance measurement was also reviewed and the existing attempts to link these two concepts were studied. This led to the identification of a series of gaps in the literature, which framed the research questions. After that, social science research methodologies were reviewed in order to select the ones that best serve the objectives of this thesis. Three different empirical investigations have been undertaken. Each stage of the research has been built on the output of the previous stage always reflecting on the initial scope of the thesis. The follow section presents how this thesis is structured.

1.2 Brief discussion on the structure of this thesis

This thesis is structured in eight chapters. After the present introductory chapter, the second chapter presents the literature review, and is divided in four major sections. The first section is engaged with the theoretical background concerning the concept of the organisational direction. Then the performance measurement is presented. The third section of the second chapter discusses the existing attempts in the literature to link the two concepts. Finally, the last section of this second chapter

summarises the observations made in the literature review, and explains how these shape the research questions.

The third chapter presents the methodology of this thesis. Given that the empirical research was conducted in three stages, the first section of this chapter discusses the theoretical background of social science research methodologies emphasising the value and practicalities of multi-methodological approaches. Each stage of the research is presented in terms of the design phase, the data collection and the data analysis.

The fourth chapter contains the exploratory case study. The case study is introduced with some key information regarding the background of the organisation investigated. Then the data collected for each of the concepts examined are presented. The development of the organisational direction and performance measurement are discussed separately, followed by a summary and discussion on the observations regarding their relationship. The last section of the fourth chapter reflects the observations made in the case study upon the research questions in order to aid the design of the next research activity.

The fifth chapter presents the survey conducted to map the current practices in strategic development processes and to examine the impact of the organisational direction and the performance measurement upon the success of the strategic planning process. The analysis of the survey is presented in two sections. The first section contains the descriptive statistics and the second one included the multivariate statistical analysis. The results are discussed and in the last section of this chapter, conclusions drawn from the survey are presented, showing the linkage between the survey and the next research activity, the follow up interviews.

The sixth chapter presents the follow up interviews conducted to reinforce and enhance the results of the survey. The findings of the follow up interviews are firstly analysed and then discussed and compared with the outcome of the survey.

The seventh chapter contains the discussion of the thesis. In this chapter, all the findings from all three empirical investigations are synthesised in order to present the responses to the research questions.

The last chapter of the thesis contains the conclusions drawn in this thesis. This chapter is divided into four sections. The first section summarises the research conducted, the second presents the conclusions, the third discusses the limitations of this thesis and the fourth suggests the future research.

Chapter 2

Literature Review

2.0 Summary

The scope of this chapter is to present the main theoretical arguments of this thesis and, build on the research focus as presented in the previous chapter, to identify the gaps in the literature in order to frame the boundaries of this research and to develop the research questions. The chapter is structured in four sections. Firstly, the concept of strategic development processes is presented: the history and evolution of strategy formulation and development is analysed, the working definition is determined and the most popular frameworks and models are discussed. The second section investigates the theoretical background of performance measurement, discussing the evolution of the concept and issues related to their design, development and implementation; the most popular models and frameworks are also presented. The third section analyses the existing attempts in the literature to determine the linkages between strategy and performance measurement. The last section of this chapter emphasises the gaps identified in the literature and states the research questions of the thesis.

2.1 Introduction

Strategy and its implications for organisational activities are issues that have long been at the centre of attention for both academics and practitioners. Organisations always try to identify and develop strategies that will aid them to survive and outperform competition. Simultaneously, academic research investigates how the strategies are developed, how these influence the organisational performance achievements, and what makes some strategies more successful than others. Over

the last five decades, the discipline of strategy and strategy formulation is considered among the most powerful elements in the discourse and practice of management (Hill and Jones, 1998).

Strategy is not a static parameter in the organisational setting. Organisations identify suitable strategies which are implemented in order to lead the organisation to the desired results: '*strategy is the direction and scope of an organisation over the long term. It ideally matches its resources to its changing environment, and in particular its markets, customers or clients so as to meet stakeholders expectations*' (Johnson and Scholes, 1997). However, the performance of an organisation depends on the way the strategy is developed, implemented and executed. Each of those activities depends on the type of organisation, its environment and the competition. None of these parameters remain constant, which is why organisations tend to review, update or change their strategies. It is also quite common that they would change the approach employed for the development and implementation of their strategies.

The strategy related literature could roughly be divided into two categories, one referring to strategies that organisations adopt in order to deal with specific requirements or to address particular needs of the organisation (see for example Galbraith and Schendel, 1983) and the second which refers to the process of developing, articulating and implementing those strategies. This thesis is focused only on the second group. As explained in the previous chapter, the focus of this research is to explore the relationship between organisational direction and performance measurement within the greater frame of strategic development processes. Organisational direction is the starting point for strategy formation, while performance measurement is a separate activity which is viewed – by some researchers and academic authors – as an integral part of the strategic development processes. Therefore, in order to identify the research questions which will guide the design of the methodology and the analysis of the findings, the boundaries of this research should be defined.

The first section of the literature review explores the theoretical background of strategy formulation, presenting the existing academic debates, and positioning itself against those debates so as to frame the limits of the research. Furthermore, to identify a suitable framework for this research, the history and evolution of strategy formulation are reviewed and by analysing the challenges and considerations that should be made in strategy research, the most appropriate model for this research is determined and presented. Then, setting the organisational direction is investigated as a distinct concept and in particular the relevant approaches are described. In the second section, performance measurement is reviewed by presenting the evolution of the concept which provides the chance to discuss its importance for the strategic development processes. The main characteristics of performance measurement are analysed, in order to focus the research on the most important debates of the relevant academic literature. The third section discuses the existing attempts to link strategy and performance measurement which is the field where this thesis is contributing the most. The last section of this chapter summarises the findings of the literature review and highlights the gaps in the literature so as to determine the research questions which are stated in conclusion.

2.2 Strategy formulation

There is a continuously growing number of publications examining the formulation of strategy. Most of the published studies refer to suggestions on how to shape the process of developing and implementing the organisational strategy (de Wit and Meyer, 1998).There is also a number of papers on empirical investigations of the strategy formulation process (Huff and Reger, 1987, Chakravarthy and Doz, 1992, Chakravarthy and White, 2001). This section of the thesis presents the main theoretical classifications of strategy formulation which constitute the theoretical background of the thesis.

The development of typologies and classifications for the different types of strategy formulation approaches is a significant contribution in the field, since it has aided the comparisons and evaluations of each type. McKiernan (1997) has identified four different schools of thought in strategy formulation:

i) prescriptive (also called deliberate or planned),

ii) emergent (or learning),

iii) competitive positioning,

iv) core competence, resource or knowledge-based.

The prescriptive approach is based on the idea that long-term planning is utilised to achieve a fit between the strategies of the organisation and its environment. The actual strategy making has been viewed (Stonehouse and Pempberton, 2002) as a highly systematised and deterministic process. The emergent approach is based on Mintzberg and Waters' (1985) work for organisations operating in volatile environments. The competitive positioning school of thought is based on the work of Porter (1980) who suggested that strategy should be the effort to position the organisation within its competitive environment. The core competence approach is based on the idea that superior performance is achieved through developing the organisational core competences (Heene and Sanchez, 1999).

The most widely acknowledged classification of strategy formulation is the ten schools of thought by Mintzberg et al. (1998). The development of this classification was entirely theoretical and has been based on dividing the trends in strategy related fields rather than clustering the responses from empirical data. The ten schools of thought are divided in two different categories: prescriptive and descriptive. The prescriptive are: design, planning and positioning schools; the descriptive are: entrepreneurial, cognitive, learning, power, cultural, environmental and configuration schools.

The design school promotes the '*concept of conception*'; it is based on the work of Selznick (1957) and Andrews (1971) and sees the formulation of strategy as achieving the essential fit between the internal strengths and weakness of the organisation and the external threats and opportunities. The planning school which promotes the '*formal process*', has been based on the writings of Ansoff (1965); this school of thought proposes the formalisation and standardisation of strategy making with pre-defined stages and delineated checklists. The positioning school promoting '*an analytical process*' has been based on the works of Porter (1980). The stance of this school of strategy, is to determine a generic position and this is achieved through formalised analysis of the environment and particularly the dynamics of the sector.

Regarding the descriptive schools of strategy, the entrepreneurial which promotes '*a visionary process*', is the school of strategy which suggests that visions or broad perspectives should be the driving forces for the development of organisational strategy. Mintzberg (1999) notes that the entrepreneurial school was rather applicable to particular contexts like start-ups, niche, private owned or 'turnarounds' by forceful leaders. The cognitive school promotes '*a mental process*' which is based on the idea that the messages of the cognitive metaphor become the basis of the strategy. The learning school promotes '*an emergent process*'; this approach suggests that strategies are emergent, rather than planned, and their emergence is based on the ability of the organisation to learn or adapt to the changes of environment. The power school promotes '*a process of negotiation*', this approach suggests that strategy is a result of either internal negotiations or negotiations of the organisation with its environment. The culture school promotes '*a social process*', this school of strategy examines strategy as result of common interest and integration. The environmental school promotes '*a reactive process*'; in this approach Mintzberg et al (1998) have included the 'contingency theory' as well as the 'population economy' theories, suggesting that the formulation of strategy is based on reacting to changes in the environment. Last but not least, the configuration school promotes '*a process of transformation*'; this approach suggests

that the organisation is going through a series of different stages and at each stage, different types of strategy formation schools, influence the decision making.

The study of Mintzberg et al's (1998) reviews the most dominant trends in the strategy literature. They do not imply that organisations can be clustered directly in each school of thought. It is expected that organisations utilise hybrid approaches which combine features from more than one school of strategy. Mintzberg and Lampel (1999), reflecting on the strategy process, suggest that all ten schools should be combined for a holistic strategy formation; each school highlights a different aspect or parameter of the organisational setting.

2.3 Strategic Development Processes

Examining the history of strategic planning in the academic literature, some of the earliest developments were made by Harvard Business School in 1920 s (Brysson, 1988) where the Harvard Policy Model was published as one of the first methodologies for planning in organisations. The basic principles of the Harvard Policy Model was that its strategy defines the organisation and the spectrum of its businesses. A major shift in the practice of strategic planning took place in the 1950 s (Grant, 2003) when the focus of strategic planning initiatives moved from organisational tactics and structure to risk management, market share and industry growth. The next step of the evolution of the strategic planning concept took place in the 1960 s with the development of industrial economic models (Fletcher and Harris, 2002) where the decision making was based on the analysis of competitive power relationships as derived by the economic models used. The formalisation of strategic planning was established in the 1970 s building on the pioneering work of researchers like Ackoff (1970, 1974), Ansoff (1965) and Beer (1959).

The evolution of the strategic development process consists of a series of stages, however there is no consensus on the characteristics of each stage. For example

Taylor (1997) considers that the transition from the traditional corporate planning to strategic planning is an enhancement of the concept which addresses better the current needs of modern organisations. At the same time, those who criticise strategic planning (Minztberg, 1994) suggest that strategic planning and corporate planning are of the same essence, while they suggest that the real revolution on the field came with the development of strategic thinking.

2.3.1 The importance of strategic planning

A significant number of published research shows the beneficial roles of strategic planning (Ansoff et al, 1970, Fulmer and Rue, 1974, Ramanujam and Venkatraman, 1987, Capon et al, 1990, Kotha and Nair, 1995). There is also a number of studies (see for example Shapiro and Kallman, 1978, Kulda, 1980, Covin, 1991) which conclude that there is not any systematic correlation betweens strategic planning and performance achievements. However, McKeirnan (1993) explains that there are considerable methodological and theoretical difficulties in these studies which are to blame for the variation and inconsistency of their outcome. Additionally, the majority of the published research examines whether there is a linkage between undertaking strategic planning exercises and the effects of organisational performance as expressed mainly with financial ratios.

Strategic planning as a managerial activity has a series of advantages which subsequently have an impact upon the performance achievements. De Wit and Meyer (1998) compared strategic planning with *ad hoc* management and found that firstly strategic planning provides an organisational direction '*instead of letting it drift*'. The value of organisational direction as a means of giving strategic intention to organisations has been widely addressed in the literature (Hamel and Prahalad, 1989 and Collin and Porras, 2000) and will be further presented in section 2.4. The second advantage is that strategic planning provides the frame for programming. The value of programming is that it makes strategy more clearly communicated and

managed which facilitates its articulation and particularly implementation. According to the same authors, a further advantage of strategic planning is the fact that '*it helps to achieve optimisation*'. One of the ways that optimisation can take place is through having analytically defined the different options available and being able to compare the implementation's practicalities for each one, as well as the potential results. Another advantage of strategic planning is that it '*allows for the formalisation and differentiation of strategy tasks*'; the value of formality has been at the core of the academic debate and is further presented and analysed in section 2.3.3. Last, but not least, strategic planning encourages long-term thinking and at the same time puts in place the mechanisms that ensure the commitment to the envisioned future.

2.3.2 Definition

Strategic planning has been defined in numerous ways; some of the definitions are more general and inclusive while others emphasise particular aspects of the process. In this section, a few characteristic definitions are provided and, finally, the working definition of this thesis is presented. Mintzberg and Quinn (1991) provide a general view of strategic planning: '*human nature insists on a definition for every concept. But the word strategy has long been used implicitly in different ways even if it has traditionally been defined in one. To almost anyone you care to ask, strategy is a plan – some sort of action, a guideline (or set of guidelines) to deal with a situation*'.

Some authors (see for example Hewlett, 1999) consider strategic planning to be associated with increasing competition; for example Ohmae (1983) found that '*business strategy is about competitive advantage. The sole purpose of strategic planning is to enable a company to gain as efficiently as possible, a sustainable edge over its competitors*'. Other authors have defined strategic planning as a response to environmental uncertainty; Ackoff (1970) said that '*planning is*

required when the future state we desire involves a set of interdependent decisions, that is a system of decisions'. An important parameter of Ackoff's definition is his mention of the 'future state'. It is a common place for most writers that strategic planning as a management function aims to identify a desired future state for the organisation and then develop the strategies in order to achieve this envisioned future state. Along this line, is the definition by Goodstein et al (1993): '*strategic planning is a process by which the guiding members of an organisation envisioned its future and develop the necessary procedures and operations to achieve it*'. Similarly, Michaluk (2002) believes that strategic planning is '*the process of discovery of what is required to be done in order to achieve a specific goal*'.

Quinn's (1980) definition highlights the programming character of the strategic planning process which creates alignment in the organisational activities, therefore he found that strategic planning is defined as a process that coordinates the organisational goal development and patterns of activity in such a way as to result in a synergistic outcome.

Most of the strategy researchers recognise that there is not any generally accepted definition of strategy and that there is no consensus on the difference between strategic planning, strategic management and strategic development processes. In this thesis, the term 'strategic development processes' is sometimes used in conjunction with 'strategic planning'. Given that this research examines empirically the current trends in strategic development processes, any approach of strategy formulation independently of the levels of formality and standardisation is considered to be strategic planning.

2.3.3 Comparing strategic planning with strategic management and strategic thinking

Rowley et al (1997) compared corporate planning (or long range planning) with strategic planning, highlighting that corporate planning is oriented towards dealing with problems based on current understanding while strategic planning requires '*an understanding of the nature of the issue and then finding of an appropriate response*'. The same authors explain that corporate planning is '*a projection from the present or an extrapolation from the past*', in contrast with strategic planning which '*builds on anticipated future trends, data and competitive assumptions*'. Another remark made on the same study is that corporate planning is driven by numbers (based on forecasting methodologies) while strategic planning is more qualitative, is driven by ideas (usually expressed in terms of vision, mission statements).

There are two categories of studies regarding the criticism of strategic planning: one category is by those authors who critique the underpinning principles of the concept and the second group consists of those who criticise the way strategic planning initiatives are implemented. The second group's comments are mainly focused on the poor implementation caused by the top management teams, '*one of the most common reasons that strategic planning fails is because the process is not supported by key decision makers at the top*' (Gable, 1999). The criticisms of the first group are strongly influenced by Mintzberg's studies; Michaluk (2002) summarises Mintzberg's criticisms: i) strategic planning cannot predict discontinuities, ii) the process of strategy making cannot be formalised and iii) strategy cannot be detached from the operational practicalities of the organisation. Similarly, Perry et al (1993) wrote that '*strategic planning is supposed to be a future-oriented activity, but quite often plans do little more than project the recent past into the future*'. The same authors explain that one of the most important problems with strategic planning is that the managers involved put too much emphasis on quantitative goals and measures.

One of the most widely acknowledged definitions of strategic management is provided by Schendel and Hofer (1979) – which is quoted by Pettigrew (1992) in a special volume of the Strategic Management Journal – '*Strategic management is a process that deals with the entrepreneurial work of the organisation, with organisational renewal and growth, and more particularly, with developing and utilising the strategy which is to guide the organisation's operations*'. Similarly, Goodstein et al. (1993) define strategic management as '*the execution of strategic* planning'. This definition does not really make apparent the difference between strategic planning and strategic management. It can also be observed that the majority of academic authors use the terms strategic planning and strategic management interchangeably (see for example, Dess and Millfer, 1993, Hahn, 1999, Price et al. 2003). Munqith and Zaydie (2004) noticed that the new term to describe the concept which is proposed to be substituting strategic planning is 'strategic thinking'. Strategic thinking is another management term for which a great number of definitions have appeared in the literature emphasising some its characteristics; Lietdka (1998) summarised strategic thinking's five major attributes:

i) strategic thinking adopts a systems approach, highlighting the dynamics between the different parts of the organisation,

ii) strategic thinking focuses on strategic intent,

iii) the strategic thinkers (-managers) link the past, future and present,

iv) strategic thinking is hypothesis driven; generating and testing hypotheses is at the core of the strategic thinking processes,

v) strategic thinking's orientation is intelligently opportunistic, taking advantage of emerging opportunities.

It would also be interesting to bring forward one of the suggested processes for managers to approach strategic thinking; Zabriskie and Huellmantel (1991) have developed a six stages process for senior executives to think strategically, they: a)

visualise what they want their organisation to become, b) are able to reposition their resources to compete in tomorrow's markets, c) assess the risk, revenues, and costs of the strategy alternatives available to them, d) think about and identify the questions they want the strategic plan to answer and e) think logically and systematically about the planning steps and model they will use to activate their strategic thinking in the company's operations.

Stonehouse and Pemberton (2002) compare strategic planning with strategic management and strategic thinking saying that '*strategic planning centres on setting long-term organisational objectives, and the development and implementation of plans designed to achieve them. [ ] strategic management can be conceptualised as a set of theories and frameworks, supported by tools and techniques, designed to assist managers of organisations in thinking, planning and acting strategically. [ ] strategic thinking relates to a vision of the future developed by an organisation's leaders, requiring managers to think beyond day to day operations in order to develop a long term strategic intent for the business*'. This comparison considers strategic planning to be fragmented in the development of plans to be implemented in contrast with strategic thinking which is driven by visions. This view is not shared by other authors in the field who consider long term visions to be the starting point of the strategic planning process (see for example the Strategic Development Process model by Dyson, 2000).

Mintzberg (1994a) states that there are distinct differences between the manager who is engaged in strategic planning activities and the one who is practicing strategic thinking: '*planners should make their contribution around the strategy-making process rather than inside it. They should supply the formal analyses or hard data that strategic thinking requires, as long as they do it to broaden the consideration of issues rather than to discover the one right answer*'. The same author explains the difference in the practice of each concept: '*planning has always been about analysis – about breaking down a goal or set of intentions into steps, formalising those steps so that they can be implemented almost automatically and*

articulating the anticipated consequences or results of each step [ ] *strategic thinking, in contrast, is about synthesis. It involves intuition and creativity. The outcome of strategic thinking is an integrated perspective on the enterprise, a not-too-precisely articulated vision of the direction*'.

It is still a great academic debate whether strategic planning and strategic thinking are contradictory approaches in strategic decision making or complementary. Mintzberg's (1994b) widely acknowledged book '*The rise and fall of strategic planning*' claims that the practice of strategic planning constrains innovative and strategic thinking, since the bureaucracy of the standardised processes do not allow space for flexibility in decision making. Kaplan and Beinhocker (2003) explored the real value of strategic planning and draw the conclusion that '*only few truly strategic decisions are made in the context of a formal process*'. The authors claim this is in agreement with Mintzberg and Lampel's (1999) label the phrase 'strategic planning' an oxymoron, since they found that real strategy is made '*informally – in hallway conversations, in working groups, and in quiet moments of reflection on long plane flights – and rarely in the panelled conference rooms where formal planning meetings are held*'. However, Kaplan and Beinhocker (2003) note that their research indicates that '*when [strategic planning is] approached with the right goal in mind, formal planning need not be a waste of time and can, in fact, be a real source of competitive advantage*'. Also, there is a plethora of published studies (Mazary et al, 1995, Hill et al. 1997, Frost, 2003, Dyson, 2004) which shows that using specific management techniques such as SWOT analysis, brainstorming within workshop, which are more formalised and standardised, can aid the development of strategy.

The difference between strategic planning and strategic thinking, is that strategic thinking does not consider as adding value practices, the formalisation and standardisation of the processes involved in the formulation and implementation of strategy. In the previous paragraphs, some of the main criticisms on strategic planning's philosophy, have been described and the proposed 'evolutions' of the

concept, strategic management and strategic thinking, have been briefly presented. However, there is a growing stream of literature which suggests strategic planning's principles are not contradictory to the ones of strategic management and strategic thinking. Furthermore, there is a significant number of studies which show that strategic planning is not in decline as Mintzberg suggested. For example, Glaister and Falshaw (1999) set out to examine whether strategic planning is '*still going strong*', and found that a series of characteristic activities of strategic planning (such as written mission statements) are currently adopted by the majority of organisations.

Stonehouse and Pemberton (2002) suggest that the association of strategic planning with the '*highly prescriptive approach of strategic management*' is unfortunate, since these concepts are not necessarily opposite and can co-exist at different levels of strategy making. Similarly Heracleous (1998) found that strategic planning and strategic thinking are '*distinct but interrelated and complementary thought processes*'. In parallel, Lietdka (1998), in an attempt to link strategic planning and strategic thinking, found that they can co-exist if strategic planning offers a '*forum for dialogue [ ] by creating an opportunity to share information*' while the way managers take decisions is inspired and influenced by the principles of innovation created by strategic thinking.

2.3.4 Overview of strategic planning

Hahn (1999) reviewed a series of widely acknowledged text books on strategy to reveal that that there are five steps to the strategic planning process (Barnett and Wilsted, 1988, Montanari et al, 1990, Pearce and Robinson, 1994, Thompson and Strickland, 1995); the five steps are:

i) goal/objective setting,

ii) situation analysis,

iii) alternative consideration and selection,

iv) implementation and

v) evaluation.

The investigation into the elements that contribute to the success of the strategic development process, leads to the examination of the reasons why some strategic planning initiatives fail (Finney and Mittrof, 1985). O'Regan and Ghobadian's (2002) findings regarding the barriers for unsuccessful strategic deployment, agree with the results of previous similar studies (Wessel, 1993, Beer and Eisenstat, 2000); they found that the main barriers for successful implementation of strategic planning are:

i) communication was inadequate,

ii) implementation took longer than anticipated,

iii) a shortfall in employee capabilities,

iv) overall goals of strategy not well enough understood by staff,

v) co-ordination of implementation not effective enough,

vi) unanticipated external problems arose and

vii) external factors impacted on implementation.

This list shows that the implementation of the strategies selected depends on the clearly stated objectives and strategies which are well communicated and articulated through the various levels of hierarchy. In addition, it is reinforced that environmental turbulence has a strong impact upon the implementation of strategy.

2.3.5 Strategy as a process

Bailey (1995) notes that '*an area of growing importance has been the conceptual development of integrated frameworks to explain the strategy development process (e.g. Chafee, 1985, Eisenhart and Zbaracki, 1992, Hart and Bandury, 1994, Hickson et al, 1986, Schwenk, 1988)*'; nevertheless limited empirical research has been published on strategy as a process. Undoubtedly, there is a lot of empirical research examining the linkages of strategy with the performance of the organisation, however all those researches examine the impact of strategy on the overall performance achievements. Powell's (2003) extensive review of published strategy research revealed that 'continuous profit rates' are the most commonly used measures in strategy research. The same author found that a lot of researches used short-term profit rates such as ROI, ROS, ROA, ROE (see for example Lawless et al, 1989, Powell, 1995 and King and Zeithaml, 2001). Moreover, long term profit rates have also been used, for example Mueller (1986) studied the persistence of 23 year profit rates in US manufacturing, Goddard and Wilson (1996) examined the 19 year profit rates in UK manufacturing and services and McDonald (1999) examined the profit rates in Australian manufacturing for a 20-year period.

Powell (2003) observes that studies with short-term profit rates '*presage firm-specific effects*' with reference to the works of (Rumelt, 1991, Hansen and Wernerfelt, 1989, Powell, 1992, 1995), while the researches which use longer-term profit rates inevitably bring '*exogenous industry factors into account*' referring to the studies of Mueller, 1986, Jacobsen, 1988 and McGahan, 1999. This implies that it is not correct to view the financial performance achievements of an organisation as a direct result of its strategy only, since there are external and circumstantial parameters that might influence the accounting based ratios which assess the finance performance of the organisation.

One of the few studies examining strategy from a process point of view is by Ramanujam et al's (1986) whose work delved into the '*black box of strategic*

planning process', looking into the components of the process and their effectiveness. The result of their work was the development of a model which identifies seven elements of strategic planning process grouped into three dimensions, these are:

i) *contextual* dimensions which includes *resources* and *resistance*,

ii) *system design* dimension which includes *internal facets*, *external facets*, *functions* and *techniques*,

iii) *effectiveness* dimension which includes *system capability*, *objective fulfilment*, *competitive performance*.

Burgelman (1983 and 1991) undertook a series of in-depth case studies on a single organisation (Intel corporation). He built on previous research (Bower, 1970) developing an evolutionary framework which '*posits the existence of induced and autonomous processes in strategy making*'. According to Burgelman (1991) the strategy process should be classified within four dimensions: i) variation, ii) selection, iii) retention and iv) ties to adaptation. The induced process concerns '*initiatives that are within the scope of the organization's current strategy and build on existing organizational learning*', while the autonomous process concerns '*initiatives that emerge outside of it and provide the potential for new organizational learning*'. Regner (2003) praises the contribution of the evolutionary perspective within the strategy process field, however he notes that '*the specifics in terms of detailed characteristics of managerial activities and reasoning and their contextual embeddedness remain less well understood*'.

There is a general consensus on the stages involved in strategic planning from a process point of view. Most of the published models are based on the seminal works of Ackoff (1970) and Chandler (1962). Chandler was one of the first authors to list the basic steps of a strategic planning process:

i) development of plan,

ii) identification of organisational mandates,

iii) clarifying organisational mission and values,

iv) external and internal environmental assessment,

v) strategic issue identification,

vi) strategy formulation,

vii) strategy and plan review,

viii) development of a description of the organisation in the future – its vision of success,

ix) implementation,

x) strategy and planning process reassessment.

It is understood that the list of steps involved in strategic development processes developed by Chandler (1962) is rather inclusive; however, it does not show the interrelationships between the various stages. There are a great number of similar models in the form of flow charts which depict the development of the strategy (see Kottler 1996 for example). One of the most widely recognised models is by Johnson and Scholes (1997) who have included different activities for the operationalisation of the strategic development process with the identification of Key Performance Indicators, Competitive advantage and Critical Success Factors. Johnson and Scholes's (1997) model is depicted in figure 2.1.

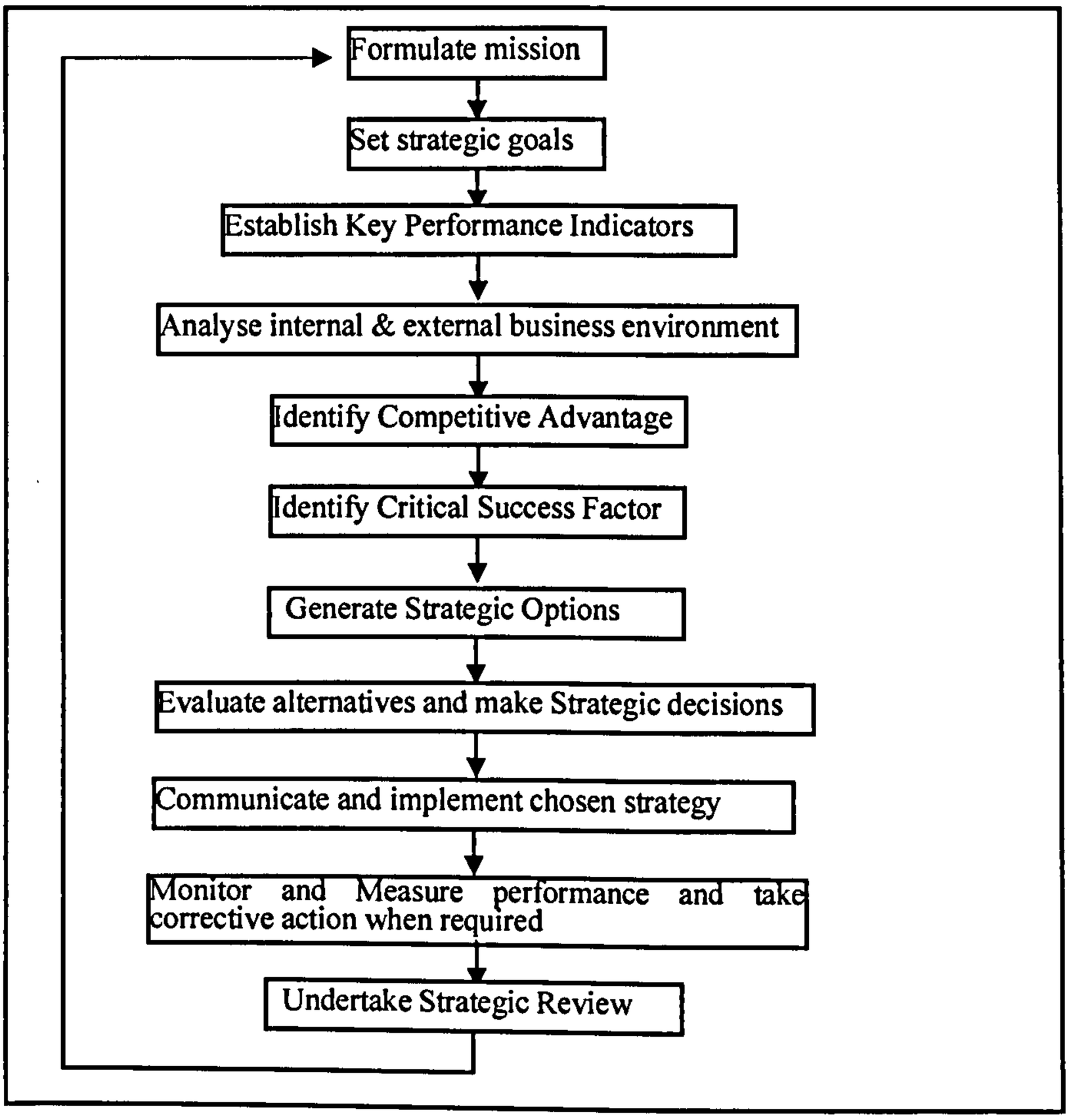

Figure 2.1: The strategy process (Johnson and Scholes, 1997)

Johnson and Scholes' (1997) model is more analytic than previous attempts to systematise strategic development practices. However, the model itself provides a series of recommendations on how to undertake strategic development processes and at the same time it implies that the stages suggested by the model are applicable to all types of organisations. Simultaneously, it does not explain what happens in organisations. Furthermore its linear representation of the strategic development process does not provide any insights into the interrelationships between the stages. This reinforces Hart and Banbury (1994) who noted that '*unfortunately most existing strategy-making process models do not fully capture the complexity and variety of the phenomena*'. Therefore it is essential to search for a model which considers the linkages and interrelationships between the various elements of the

process, thus the research should focus on the discipline of strategic operational research.

2.3.6 Strategic Operational Research

Strategic operational research is the field of operational research or management science which studies strategy related issues from the perspective of operational research. The benefit of this field is that models developed are based on the principles of systems thinking (Keys, 1991). In brief, systems thinking has emerged from the study of complexity and chaos (Gharajedaghi J., 1999 and Checkland, 1998), and it focuses on the interdependences of the elements that are contained in the system. Models and frameworks from the field of strategic operational research are not commonly used in strategy research. One of the areas from strategic operational research which has gained a lot of attention is that of 'operational research tools' (Mingers and Rosenhead, 2003); however, as Dyson (1998) noted '*the involvement of OR* [Operational Research] *in strategy should be inclusive of methods not just simply relying on well known OR tools*'. A growing number of authors (Labroukos et al, 1995, Byrd et al, 1995, Dyson, 1998, Bell, 1998, Bell and Anderson, 2002) have praised the contributions of the developments of strategic operational research and particularly the contribution of operational research frameworks and models in strategy research.

Dyson (2000) identified three '*steams of endeavour*' which can associated with strategic Operational Research. The first one refers to strategic Operational Research as competitive engineering process and is concerned with the content of the strategy (Bell, 1998). The second stream of endeavour has to do with policy analysis (see Rosenhead, 1992, for a comprehensive review of the concept). The third is of '*corporate strategy or strategic development support*'. The present thesis has focused on strategy development support.

A field of Operational Research which contributes to strategy support is 'Problem Structuring Methods' (PSM). PSM is a category of methodologies which are based on the principles of modelling to deal with problems characterised by increased complexity, conflict and uncertainty (Rosenhead and Mingers, 2001). Some characteristic examples of PSMs are: Soft Systems Methodology (Checkland, 1998), Cognitive Mapping (Eden and Ackerman, 1998), Strategic Options Development and Analysis (Eden and Ackerman, 1998) and Strategic Choice (Friend and Hickling, 1987). These approaches have been applied for a variety of problems. Recently, they have been used to deal with the complexity of strategy development. For example Eden and Ackerman (2002) have developed the JOURNEY (Jointly Understanding, Reflecting, and NEgotiating strategY) which is an approach based on the principles of PSMs, which is used to '*facilitate and structure understanding and accommodation for the development of strategic options*'. There is a growing literature of application of PSMs for strategy development for example Thurnhurst and Barker (1999) has used a number of cognitive mapping to facilitate the process of strategic planning in a health organisation.

2.3.7 Research Framework: Strategic Development Process model

The framework that this research has been based on, in order to express the relationship between the elements of strategic planning, is the Strategic Development Process model by Dyson (1998). This model examines the development and implementation of strategy from a process point of view and contains the main elements that are involved in the development and implementation of strategy. The framework is depicted in figure 2.2.

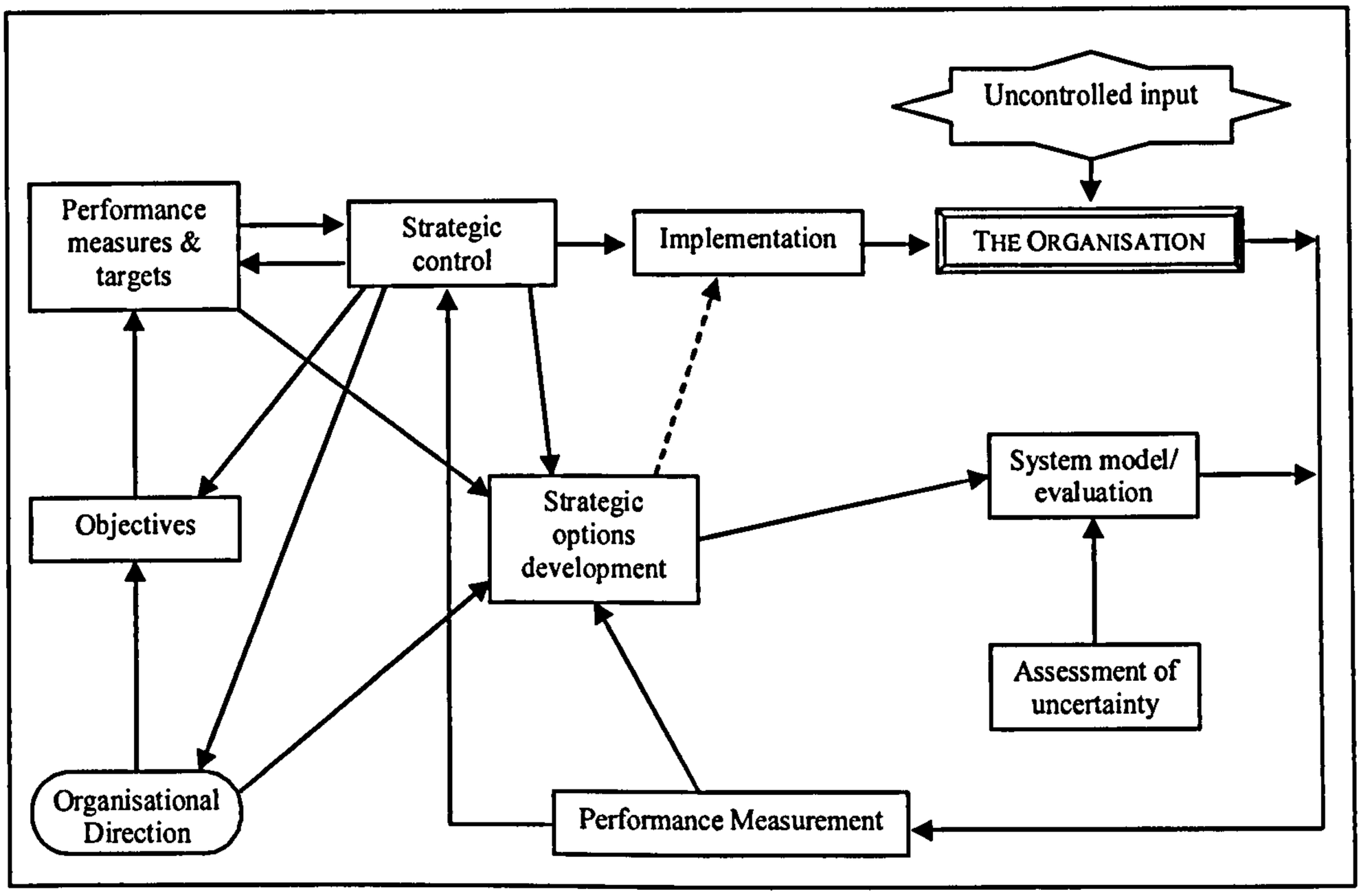

Figure 2.2: Strategic Development Process model (Dyson, 1998)

According to Dyson (2000) the basic elements of the strategic development process are:

i) organisational direction which is expressed in some organisations with the vision, mission or values statement,

ii) objectives, which express the strategic targets of organisation,

iii) performance measures and targets, these are the operational targets for the performance achievements and after being quantified they become the performance targets,

iv) strategic control which uses the information collected by the performance measurement and feeds to other elements of the process,

v) strategic initiative development, where a series of strategic options are formulated,

vi) system model evaluation, where the set of alternative strategies are analysed and the ones which fit best are selected to be implemented

vii) assessment of uncertainty, which involves the examination of the parameters and (environmental) factors whose future trends are not predictable nor can be forecasted,

viii) uncontrolled input,

ix) implementation, which is the stages when the selected strategies are communicated and are put in place,

x) the organisation with its own complex structures, diverse activities and different levels of decision-making, and

xi) performance measurement, which is the evaluation of the achievements either of individual process or for the overall organisation.

The elements of the Strategic Development Process model are not different from other process oriented strategy development frameworks (Ackoff, 1970, Varadarajan and Ramanujam, 1987, Bryson and Roeing, 1988, Johnson and Scholes, 1997, Wheelen and Hamper, 2000). However its advantage, from a research framework point of view, is that this model has been developed through empirical work (Dyson and Foster, 1980, 1982, 1983 and Dyson, 2000), which ensures that the model is realistic as far as the strategic planning processes are concerned. In addition, even if it is inclusive, it provides analytically the most important elements of strategy development.

Furthermore, since it is developed according to the principles of strategic operational research (Tomlinson and Dyson, 1983), it emphasises the interrelationships and interdependencies between its elements.

2.4 Setting the organisational direction

Direction setting refers to the establishment of organisational goals. For Garvin (1998) direction setting is the most widely recognized managerial activity taking place in the organisation: 'it involves charting an organisation's course and then mobilizing support and ensuring alignment with stated goals'. Similarly Kotter (1982) defines direction setting as the establishment of organisational direction and goals with the primary task of developing the agenda.

Gioia and Thomas (1996), reporting on a top management team that was setting the future direction of a particular organisation, identified that the main perceptions of the top management team were the 'present identity', 'the desired future image' and the 'present image'. For the same authors the process of direction setting has been seen as a process of sense-making and sense-giving by the top managers.

An extensive review of the literature indicated that there is no attempt to identify, report, list or summarise the practices that set the organisational 'direction'. However, some of the characteristics of the processes for setting the organisational 'direction' are provided in the existing literature. Simons (1994) views the result of the 'direction' setting processes as the development of a 'shared belief that defines the basic values, purpose and direction'.

Garvin (1998) reports that: 'managers initially develop an agenda, collecting information from a wide range of sources, and then assimilating it and forming general goals, which are communicated through diverse media and opportunities, to ensure that the members of the organisation develop a shared understanding of the objectives'. The same author describes the direction setting processes as multi-prismatic, having several components: learning about the organisation and its problems through a broad range of interactions and assessments. It is also added that they frame 'an agenda to be pursued during the manager's tenure through conscious reflections and intuitive experience; and aligning individuals through communication, motivation, rewards and punishments, often using established

organisational processes'. Most of the academic articles analyzing direction setting, mention mission and vision statements (Nanus 1992, Gioia and Thomas 1996, Simons 1999, Kotter 1999, Paglis and Green 2002) as the practices for its realization.

The review of the literature on mission and vision brings the researchers in front of the debates on what each of these concepts are, if they are the same or completely different things and how they apply in the organisations. For this research, vision has been considered to be: a future desired state of the organisation, which is in agreement with Kouzes and Posner (1987), Wilson (1992), Nanus (1992), Holladay and Cobbs (1993), Raynor (1998) and Lipton (2000), while mission has been considered to be a statement of the organisation's purpose of existence (raison d'etre) which is in agreement with Campell and Yeung (1991), Wilson (1992), Raynor (1998), Bart and Baetz (1998) and Levin (2000). It should be stated that these are definitions of the terms as suggested in the literature and are not always followed in the organisations. Therefore, this research has considered as 'direction' any statement that manifests the organisational 'direction'.

The development of these statements is a topic which has attracted the focus of academics as well as practitioners in their effort to identify and develop 'best practice' approaches (see, for example, Westley and Mintzberg 1989, Wilson 1992, Steward 1993, Raynor 1998). A very inclusive summary of the most important stages involved has been suggested by O'Brien and Meadows (2001): (1) analysis of the organisation's current situation, (2) assessment of the external environment, (3) identification of desired future state, (4) connection of the future to the present state and (5) testing the vision.

2.5 Performance Measurement

Performance measurement is a topic with increasing interest for both academics and practitioners. Neely (1999) calculated that between 1994 and 1996, some 3,615 articles on performance measurement were published, while Frigo and Krumwiede's (1999) research identified that from 1995 to 1999, '*between 40 and 60 percent of the companies significantly changed their measurement systems*'. This section presents the main characteristics of performance measurement, their evolution, how they are defined and what is the working definition that frames this research.

Performance measurement can be seen as an essential part of the monitoring and control activities within the organisation (Simons, 1991, Veen-Dirks and Wijn, 2002). Management control systems are described as '*the processes by which managers ensure that resources are obtained and used effectively and efficiently in the accomplishment of the organisation's objectives*' (Anthony, 1965). Dearden (1989) commenting on the relationship between management control and performance measurement wrote that '*the goals are set in advance, outcomes are compared with pre-set objectives and the variances are reported to the managers for remedial action and follow up*'.

According to researchers like Langfield-Smith (1997) and Flamholtz et al (1985) management control systems are employed to influence the human endeavour within the organisations. Simons (1995) argues that performance measurement can have either a diagnostic role or an interactive one; the same author explains that the purpose of diagnostic control systems operate as error-based reports which provide feedback on performance results, while interactive control systems are used by managers to '*involve themselves regularly and personally in the decision activities of subordinates*' (Simons, 1995).

Research published on performance measurement mainly concerns recommendations on how to design and develop performance measurement systems

that will capture more efficiently and effectively the status of the performance achievements (Neely et al. 1995). The integration of performance measurement systems, moving from the so-called 'traditional' ones to the more inclusive 'modern' ones, is a phenomenon appearing at the beginning of the 1990s according to Eccles' (1991) highly influential 'Performance Measurement Manifesto'.

The investigation of performance measurement's value and contribution, can potentially explain the reasons why this concept has gained such great attention. Neely (1999) developed a very comprehensive list of reasons justifying the increasing need to explore in depth the area of performance measurement:

i) the changing nature of work,

ii) increasing competition,

iii) specific improvement initiatives,

iv) national and international awards,

v) changing organisational roles,

vi) changing external demands and

vii) the power of information technology.

Discussing this list of reasons which explain the increase in popularity of performance measurement, it is observed that the seven items mentioned by Neely could be divided into large categories: organisational characteristics and environmental turbulence. This means that the drivers for the establishment and integration of performance measurements are both internal and external and the style and relationship of performance measurement with strategy could also be dependent on organisational characteristic and environmental turbulence.

The reasons for designing and implementing performance measurement systems are highly significant for this research. One of the most commonly mentioned reasons justifying the importance of the performance measurement systems is '*what gets*

measured gets done' (Berman 2002). This explains why the rapid expansion of performance measurement as a managerial activity came alongside the implementation of management initiatives such as total quality management (Holloway 2001), and Business Excellence (McAdams and Bailie 2002). Neely (1999) explained that the basic function of performance measurement is to help managers to track whether their organisation is moving in the desired direction or not. Furthermore, Letza (1996) claimed that the main function of performance measurement is to provide the means of control to achieve the strategic objectives which will lead to the achievement of the organisational mission/strategy statement.

Performance measurement has been examined beyond the limits of the control function, as a strategic management tool that facilitates strategic decision making. Ittner et al (2003) found that many organisations in response to increased antagonism and environmental turbulence '*are adopting strategic performance measurement (SPM) systems that (1) provide information that allows the firm to identify the strategies offering the highest potential for achieving the firm's objectives, and (2) align management processes, such as target setting, decision-making, and performance evaluation, with the achievement of the chosen strategic objectives (Gates, 1999, Otley, 1999).*'

Another area of the literature which is particularly relevant to this thesis is the process of selecting performance measurements. Neely et al. (2002) provide a comprehensive review of the basic stages for the design and development of performance measurement. The first stage is focused on designing the initiative by selecting the success factors and performance measures. The second stage is devoted to planning and building, this stage consists of developing systems and practices for collecting data, analysing them and presenting the results. The third stage is the implementation of the measurement system. At this stage, the selected performance measurements are put into practice to manage performance. The last stage is for reviewing the process and making any changes which are necessary. This stage leads to the first stage again, since the changes reflect either new

approaches to evaluating performance or new targets, and therefore needs to be re-designed and properly implemented.

Neely et al (2000) summarise the works of Globertson (1985), Keegan et al (1989) and Maskell (1989) in order to develop a list of rules and guidelines for the development of the performance measurement:

i) performance criteria must be chosen from the company's objectives,

ii) performance criteria must make possible the comparison of organisations that are in the same business,

iii) the purpose of each performance criterion must be clear,

iv) data collection and methods of calculating the performance criterion must be clearly defined,

v) ratio based performance criteria are preferred to absolute numbers,

vi) performance criteria should be under the control of the evaluated organisational unit

vii) performance criteria should be selected through discussions with the people involved (customers, employees, managers) and

viii) objective performance criteria are preferable to subjective ones

Performance measurements are not static and are subject to continuous review and update. Wisner and Fawcett (1991) were among the first authors to recognise the need for reviewing and changing a performance measurement system in order to maintain its ability to facilitate decision making. The same authors emphasise that one of the most important characteristics of performance measurement systems is the appropriateness of the measurements and indicators used. Smith (1993) suggests that the use of inappropriate measures may have '*distorting and potentially dysfunctional effects*' for the organisation. The latter justifies why Dixon et al (1990) recommend that organisations need to ensure that their measurements are

regularly reviewed so as to match the organisational circumstances both internally and externally. Meyer and Gupta's (1994) study concluded that performance measurements might lose their relevance, and consequently beneficial role, over time. Bourne et al (2000) explain that part of the revision of the performance measurement system should be the review of targets; since the change of either organisational features (e.g. size, diversification etc) or environmental change should be reflected in the measurement of the organisational performance. Bourne et al's (2000) suggestion actually implies that organisational features and the dynamism of the environment determine the development of performance measurement within an organisation and its relationships with the other elements of the strategic development process.

Evans (2004) highlights that there is not any 'magic number' of appropriate measurements of organisational performance, however the design and development of performance measurement should be aligned with the requirement of the organisational strategy in order to support the decision making. He also explains that too many performance measurements are not manageable and therefore useless, while if they are not enough, they would not provide an accurate picture of the organisation which could be misleading for the decision to be made.

McCunn (1998) found that 70 per cent of performance measurement initiatives fail. It is therefore very important to explore the reasons which determine the success or failure of performance measurement initiatives. Bourne et al (2002) summarise them using Pettigrew et al's (1989) model of: context, content and process:

a) *contextual issues*: i) the need for a highly developed information system was highlighted by Bierbusse and Siesfeld (1997), ii) time and expense required are also important factors (Bierbusse and Siesfeld 1997, McCunn, 1998) and iii) the lack of leadership and resistance to change (Hacker and Brotherton, 1998, Meekings, 1995) are equally significant factors with a key role in the success or failure of performance measurement initiatives.

b) *processual issues*: i) Kaplan and Norton (1996) emphasise the significance of having 'actionable' organisational direction, as authors like Bierbusse and Siesfeld (1997) and Schneiderman, (1999) have found that without 'actionable' vision and strategy, '*there are difficulties in evaluating the relative importance of measures and the problems of identifying true drivers*', ii) strategy was not linked to resource allocation (Kaplan and Norton, 1996; Meekings, 1995), iii) goal setting was driven by stakeholder requirements instead of being negotiated (Schneiderman, 1999) and iv) striving for perfection undermined success (McCunn, 1998; Schneiderman, 1999).

c) c*ontent issues*: i) a common mistake made was not to link strategy to departmental, team and individual goals (Kaplan and Norton 1996; Bierbusse and Siesfeld, 1997; Schneiderman, 1999), ii) the large number of measures adopted, created a dilution of the overall impact (Bierbusse and Siesfeld, 1997), iii) poor definition of the metrics utilised (Schneiderman, 1999) and iv) Bierbusse and Siesfeld (1997) mention the difficulty of quantifying results in areas which are more qualitative in their nature.

Another investigation into the '*factors that play a role in managing through measures*' by Franco and Bourne (2003) found that there are nine distinct factors which have a greater impact on the way that the organisations manage using performance measurements; these are: i) organisational culture, ii) management leadership and commitment, iii) compensation links to the performance measurement system, iv) education and understanding, v) communication and reporting, vi) review and update of the performance measurement system, vii) data process and IT support, viii) business and industry and ix) performance measurement framework adopted.

Bourne et al's (2002) exploration into the success and failure factors reveals that most of the factors are related to integration and alignment of the performance measurements with the other systems of the organisations and particularly the

strategic development processes. The links between performance measurement and strategy are further investigated in section 2.6.

2.5.1 Definitions of the performance measurement concept

Performance measurement is a popular topic, however, as Neely et al (1995) claim, '*performance measurement is a topic often discussed but rarely defined*'. Similarly Marr and Schiuma (2003) agree that the field of performance measurement lacks a consistent body of knowledge or a generally accepted theoretical background. This is explained by the fact that a very diverse mixture of researchers are contributing in this field (Franco-Santos and Bourne, 2005). In order to define performance measurement, Neely et al (1995) highlight the distinction between 'performance measurement', 'a performance measure' and 'performance measurement system': "performance measurement can be defined as the process of quantifying the efficiency and effectiveness of action", "a performance measure can be defined as a metric used to quantify the efficiency and/or effectiveness of action" and "a performance measurement system can be defined as the set of metrics used to quantify both the efficiency and effectiveness of actions". McAdam and Bailie (2002) criticise these definitions since (quoting Neely et al (1994)) they '*fail to develop performance measurement as a complex and dynamic phenomenon that can be used to interact with strategy*'.

The evolution of measuring the organisational performance has been followed by an evolution in the research practices of this area. Recently Franco-Santos et al (2004) suggest that the most accurate terminology is 'performance measurement'. Gates (1999) suggests that the evolution of performance measurement is the 'strategic performance measurement' which are defined as ''[the set of processes which] *translates business strategies into deliverable results. SPM systems combine financial, strategic, and operating business measures to gauge how well a company meets its targets*'' (Gates, 1999)

Given that this thesis investigates empirically the concept of performance measurement, a more generic definition of it, is accepted. One very inclusive definition is provided by Marshall et al. (1999), which considers performance measurement in a wider frame and described as: '*performance measurement is the development of indicators and collection of data to describe, report on, and analyse performance*'. Therefore in this research it is accepted that performance measurement is any type of attempt to evaluate the outcome of individual processes and activities, or the organisational performance achievements. This research also accepts that performance measurement can be multidimensional (financial and non-financial), both quantitative and qualitative and are implemented at all levels of the organisational hierarchy.

2.5.2 Evolution of performance measurement

The concept of performance measurement is an area of business management related literature, which recently gained a lot of attention. Therefore it is common to present the history of the concept in order to highlight its evolution both from the practitioners' and academics' perspective. One of most comprehensive reviews of the concept is provided by Wilcox and Bourne (2003) who suggest that performance measurement development can be divided in three different periods: i) 1850-1925: the development of cost and management accounting, ii) 1974-1992: the development of the multi-dimensional performance measurement frameworks and iii) 1992-2000: the development of strategy maps and cause and effect diagrams.

Neely et al (2003) concentrate their description of performance measurement's evolution, by referring to the efforts made after the 1980 s, distinguishing three generations of systems developed for measuring the organisational performance. The first generation focused on the development of the "balanced measurement systems" following the criticism of traditional (accounting based) performance

measurement systems by Kaplan and Norton (1987). The Balanced Scorecard (Kaplan and Norton, 1991, 1996 and 2001) is the most characteristic framework developed. The second generation integrated the previous models by '*mapping the flows and transformations*' (Neely et al. 2003). Pike and Roos, (2001) suggest that in this generation of performance measurements the emphasis is placed on the transformations rather than the individual stocks measures. The most characteristic example of this generation of performance measurements is the strategy maps (Kaplan and Norton, 2000). Another noticeable suggested methodology is the 'success and risk maps' (Neely et al, 2000). The third generation of performance measurement focuses on organisations' efforts to seek greater clarity by linking financial to non-financial indicators, emphasising the linkages between '*intangible dimensions of organisational performance and the cash flow consequences of these*' (Neely et al, 2003).

The greatest change in the evolution of performance measurement took place with the integration of non-financial measurements into the existing systems which were accounting based. The integration of the performance measurement concept has been attributed to the shortcomings of the traditional accounting-based measures as summarised by Yeniyurt (2003):

i) they are inadequate for strategic decisions (Kaplan and Norton, 1992),

ii) they are historical and backward-looking (Ittner and Larcker, 1998)

iii) they lack predictive ability to explain future performance (Ittner and Larcker, 1998)

iv) they provide too little information on root causes (Ittner and Larcker, 1998)

v) they do not link the nonfinancial metrics to financial metrics (Kaplan and Norton, 1992)

vi) they report functional not cross-functional processes (Ittner and Larcker, 1998)

vii) they do not consider intangible assets (Bukowitz and Petrash, 1997)

viii) they do not measure the value created (Lehn and Makhija, 1996)

ix) there are too many measures; new ones are needed that have broader content, being able to describe more with less numbers (Frigo and Krumwiede, 2000) and

x) traditional metrics do not aggregate from an operational level to a strategic level (Frigo and Krumwiede, 2000).

The identification of the shortcomings created by the 'traditional accounting based' performance measurement has been addressed with the development of new integrated frameworks and models which seek to cover the need for diverse and holistic measurement of the organisational activities and achievements.

Operational Research has contributed significantly in the field of performance measurement. Its contribution has been based on suggesting methodologies and approaches to enhance both the development and use of performance measurement. For example, Systems Thinking approaches provide the means to develop conceptual frameworks that are used by managers to understand the causes and effects of the relationships between different organisational factors (Mingers and Rosenhead, 2003). Similarly, Multiple Criteria Decision Analysis are used to '*take explicitly account of multiple and usually conflicting objectives in supporting decision making processes*' (Santos et al, 2004). Finally, Data Envelopment Analysis is a technique for using multiple measures of performance to identify 'best practice' while a map of 'under-performance' is developed which aids in the process of setting achievable stretch targets (for example see Sarrico and Dyson, 2000).

2.5.3 Popular frameworks and models

There is a growing number of frameworks and models developed in order to address the current trends and needs for managing the performance of the organisation through measurement (Bititci et al, 2000). Some of them are:

-Strategic measurement analysis and reporting technique (SMART) (Cross and Lynch, 1988)

-performance measurement for world class manufacturing (Maskell, 1989)

-performance measurement questionnaire (Dixon et al, 1990)

-balanced scorecard (Kaplan and Norton, 1992)

-Cambridge performance design process (Neely et al, 1995)

-performance criteria system (Globertson, 1996)

-Skandia's navigator (Edvinsson and Marlone, 1997)

-integrated performance measurement systems reference model (Bititci and Carrie, 1998)

-performance prism (Neely et al, 2002)

In addition, there is a vast amount of literature suggesting that 'self-assessment' models and frameworks are used for the development of the organisational performance measurement. The two most characteristic examples are the Malcolm Baldridge National Quality Award (MBNQA, 2005) and the Business Excellence Model (EFQM, 2005).

The most popular and widely used model is the Balanced Scorecard by Kaplan and Norton. Given that it is mentioned in the empirical investigation, particularly in Chapter 5 and Chapter 6, the Balanced Scorecard is briefly presented in the following section.

2.5.4 Balanced Scorecard

The Balanced Scorecard was one of the first models of performance measurement developed to address the shortcoming of traditional accounting based systems. The basic principle of this model is putting equal (balanced) emphasis on financial and non-financial measures (Kaplan and Norton, 1992). The first edition of the balanced scorecard suggested that there are four main perspectives that measurements should be based on: financial, internal, customer and learning and growth. According to the creators of the balanced scorecard (Kaplan and Norton, 1992), these four perspectives should be directly linked to the 'vision and strategy' of the organisation. The financial perspective should examine '*if we succeed, how will we look at our shareholders?*', the internal perspective should consider '*to satisfy customers and shareholders, at which processes must we excel?*', the learning and growth perspective should address '*how can our organisation continue to learn and improve?*' and the customer perspective should investigate '*how do we create value for our customers?*'. The graph representation of the balanced scorecard is attached in figure 2.3.

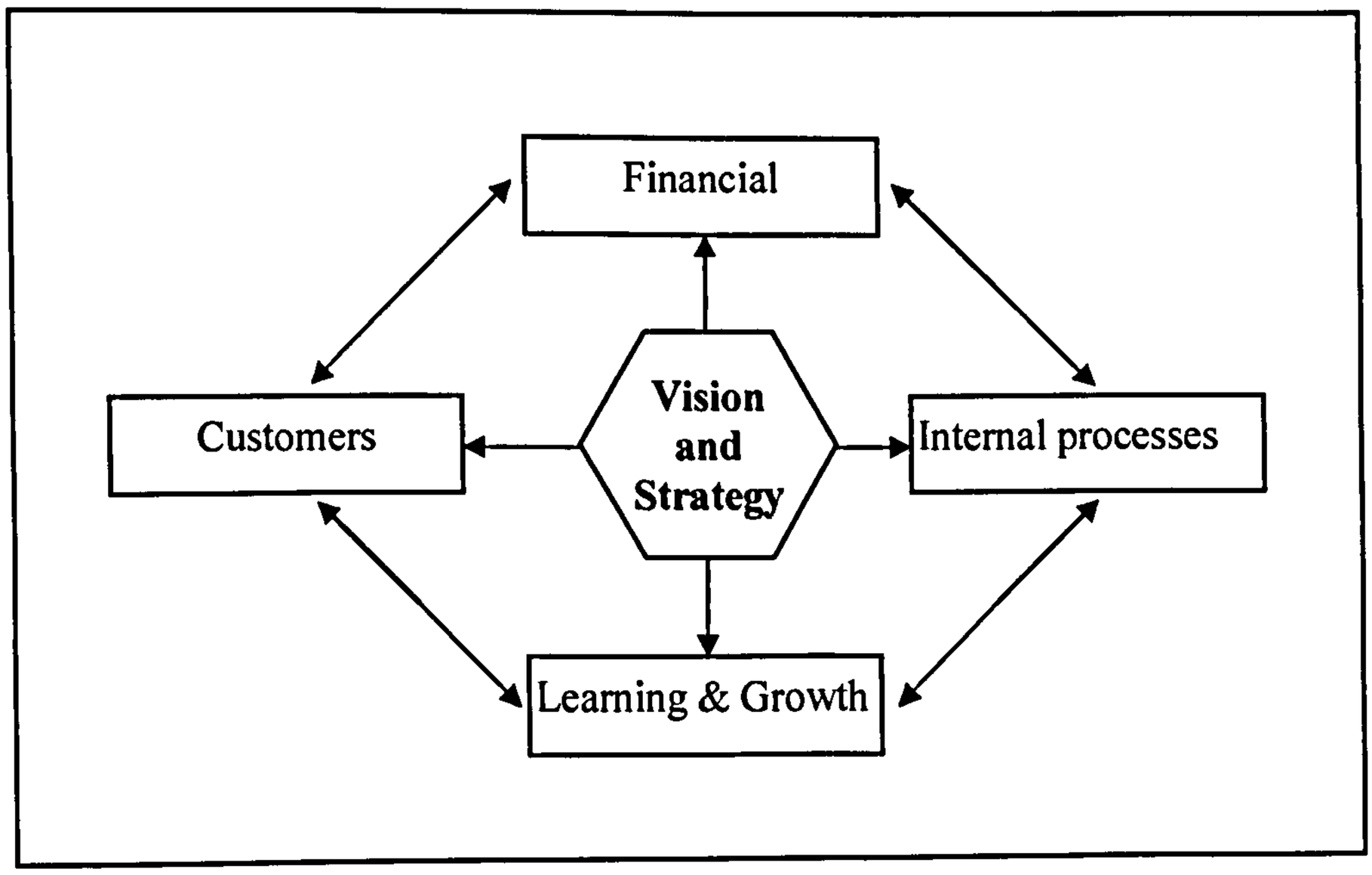

Figure 2.3: The Balanced Scorecard (Kaplan and Norton, 1992)

The concept of the balanced scorecard is continuously being updated. Lawrie and Colbodd (2004) distinguish three generations of scorecards. The first generation is based on the early work of Kaplan and Norton (1992), when the organisations start introducing non-financial performance measurements. This generation of balanced scorecards was about '*putting vision and strategy at the centre of the performance measurement*' (Kaplan and Norton, 1992). The criticisms and the challenges of the balanced scorecard's design and its implementation in particular (Butler et al., 1997, Ahn, 2001, Irwin, 2002, Radnor and Lovell, 2003) led to the development of the second generation of balanced scorecards. Lawrie and Colbodd (2004) found that the innovations of the second generations of balanced scorecard were, to suggest that the relationship between each of the four perspectives – the strategic objectives of the organisation and the performance measurements – should be mapped; furthermore the mapping of this relationship was enhanced by identifying causality between the elements of the model produced. This development in the balanced scorecard led the original inventors of the concept to suggest that it became '*from an improved measurement system, a management system* [ ] *with strategic orientation*'. The third generation of balanced scorecards have incorporated 'destination statements'. The benefits of these statements are that they '*helped to identify inconsistencies in the profile of the objectives chosen and the final document was found to be useful in validating the targets chosen for some measures*' (Lawrie and Colbodd, 2004, Kennerly and Neely, 2000 and Brignall, 2002).

The review of the evolution of the balanced scorecard does not imply that all the organisations implementing this management technique are all developing balanced scorecards of the third generation. The balanced scorecard is implemented differently in each organisation (Bourne et al, 2003). Recommendations are recorded in the literature on how to use it more effectively in order to transform the performance measurement system to a performance management system (Kaplan and Norton, 2001).

2.6 Strategy and Performance Measurement

The links between strategy and performance measurement have been explored in the literature of management control (Simons, 1991, Veen-Dirks and Wijn, 2002). This can be detected in some early attempts to identify the underpinning principles of this relationship; Kootz and Bradspies (1972) found that '*although planning and control are closely related, most managers see planning as the establishment of objectives or goals and the selection of rational means of reaching them, and regard control as the measurement of activities accompanied by action to correct deviations from planned events. It may thus be perceived that the function of managerial control is to make sure that plans succeed*'. Similarly Hrebiniak and Joyce (1985) state that "*control in organisations follows logically from the planning process. Its underlying rationale or purpose is to ensure that the organisation is achieving what it intends to accomplish. Planning involves the setting of objectives or determination of some future desired state of affairs; the control process tracks performance against desired ends and provides the feedback necessary to gauge or evaluate results and take corrective action, as needed*'.

Ittner et al (2003) suggest that there are two general approaches for the development of performance measurement systems linked with the organisational strategy*. The first approach suggests that a broad set of measures, financial and non financial, can aid organisations achieve higher performance (Lingle and Schiemann, 1996). The second approach is based on contingency theory; this approach suggests the performance achievements are improved when the '*measurement gap*' between the organisational direction or strategic objectives and the measurement practices is minimized.

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* Ittner et al (2003) call the strategic performance measurements systems, the performance measurements linking strategy and measurement of the organisational performance.

All the published studies which attempt to link strategy and performance measurement are mainly recommendations on how to manage this relationship and particularly how to design and develop the performance measurements so as to support the implementation of the organisational strategies (see for example the Balanced Scorecard section 2.5.4). In addition, the literature review in the previous sections of this chapter, shows that performance measurement is an organisational activity which is vitally linked to strategic development processes. This is for example evident in the two process models of strategy presented in section 2.3.5 and 2.3.7. Similarly the literature from the field of performance measurement emphasises the linkages between strategy and performance measurement; Melnyk et al (2004) state very clearly that '*strategy without metrics is useless, metrics without strategy is meaningless*'. The Balanced Scorecard for example shows that the driving force for the development of the performance measurement systems is the vision of the organisation (-organisational direction).

In particular, the research framework of this thesis, the Strategic Development Process model, shows that performance measurement is directly linked with the strategic control function and the strategic initiatives/options development activities. This means that, within a greater frame of strategic development processes, it is recognised that performance measurement's role is not only limited in monitoring and control through the strategic control function, but it also provides useful information and feedback for the development of new strategic initiatives. Rejc (2004), attempting to develop a contingency theory of performance measurement, claims that '*there is no universally appropriate performance measurement system which is applicable to all organisations in all circumstances*'; which leads to the conclusion that the development of performance measurement within each organisation is dependent on its characteristic features. Therefore, it is understood that empirical research is required to examine whether the organisational characteristics are determinants of the relationship between organisational direction and performance measurement.

2.7 Conclusions – Research Questions

In the previous chapter (Chapter 1: Introduction), it was explained that the research focus of this thesis is to examine the relationship between setting the organisational direction and performance measurement and to identify the determinants of this relationship. Based on the literature review it is hypothesised that strategy is developed in organisations through a series of processes which may or may not be formalised and standardised. In addition, it is assumed that every organisation measures its performance achievements either in an organised manner or in a more *ad hoc* approach. Furthermore, it is an assumption of this thesis that the measurement of organisational direction has an impact upon the performance achievements. It is understood that there is no consensus in the literature whether performance measurement is linked with enhanced financial performance. Nevertheless, it is accepted that the benefits of performance measurement are applied to all levels of the organisational setting.

The literature review presented in this chapter has led to the identification of a series of gaps in the literature which framed the research questions. Summing up the findings from the literature review, it is understood that even if there are various recommendations on how to manage more effectively and successfully the relationship between organisational direction and performance measurement, there is not adequate empirical information on the practicalities of their relationship. Therefore this thesis is going to investigate how organisational direction is set up and how this influences the design and development of the performance measurement system. The examination of the linkage between strategy and performance measurement revealed that the latter can potentially influence the development of the strategy; therefore this thesis will also explore the impact of performance measurement on setting the organisational direction.

Organisational direction and performance measurement are not two isolated practices, both co-exist within a broader framework of strategic planning, and the

Strategic Development Process model shows that they are linked with each other and simultaneously they are linked and interdependent with the other elements of the model. Therefore, this research will attempt to investigate the role of each of them within the strategic development processes which will facilitate the investigation of their interrelationship.

Regarding the determinants of the relationship between organisational direction and performance measurement, it is understood from the literature that the organisational characteristics influence their relationship. The literature review has also revealed that previous research has found that organisational characteristics are a significant parameter for design and development of performance measurement. However, there has not been any empirical work which examines whether these have an impact on the relationship between setting the organisational direction and performance measurement. Therefore, this thesis will explore how organisational size and environmental turbulence determine the relationship between organisational direction and performance measurement.

In addition, the literature review revealed that most published studies have examined strategy, performance measurement as well as the two of them combined with regard to the overall organisational achievements. However, as has been discussed in the literature review, little research has been published on strategy from a process point of view. Therefore, this thesis is going to examine the relationship between organisational direction and performance measurement with regard to their impact upon strategy as an effective process and not to the overall organisational performance achievements.

Chapter 3

Methodology

3.0 Summary

This chapter presents the methodology of the thesis. Its main scope is to present all characteristics of the methodologies employed in this research and justify their use. It starts with an introduction to the research design where the three different stages of this research are described. In addition, the introduction explains how these stages are linked and which methodological considerations were made in their selection. Then each stage of the research is presented separately, analysing the design and development of the data collection instruments, the data collection approach and the methodologies employed for the analysis of the collected data. The last section of this chapter offers a summary of the methodology employed in this thesis.

3.1 Introduction

It is quite common in social science research, to define in advance the epistemological stances of the research in order to drive the selection of the methodological approach. This assumes that the choice of research methodology and the activities undertaken are entirely driven by the epistemological stances, for example a researcher coming from the positivist paradigm would be engaged only with quantitative methodologies. However, the present research has adopted a mixed approach combining both quantitative and qualitative approaches. The selection of the research methodology has been determined by the research questions and the aims at each stage, which practically follows Miles and Huberman's (1994) proposition '*knowing what you want to find out leads*

inexorably to the question of how you will get that information'. It should also be stated that within the frame of PhD research, the selection of methodology is influenced to a large extent by the ease in the accessibility to data.

Sarantakos (1999) divides the main paradigms in the social sciences into three categories: positivistic, interpretive and critical. Briefly, positivism '*sees social science as an organised method for combining deductive logic with precise empirical observations of individual behaviour in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity*', the interpretive perspective '*is the systematic analysis of socially meaningful action* [ ] *in order to arrive at understandings and interpretations of how people create and maintain their social worlds*' and the critical perspective defines social science '*as a critical process of inquiry that goes beyond surface illusions to uncover the real structures in the material world in order to help people change conditions and build a better world for themselves*' (Newman, 2000).

There is a consensus in the literature concerning the method used and the paradigm of the researcher. Sarantakos (1999) explains that researchers with the positivistic stances would adopt a quantitative approach, while those from the other paradigms are more likely to engage in qualitative research. As has been stated already, my epistemological stances have not determined the type of methodology; however the whole research lays closer to the principles of interpretive perspective, even if it is using a mixture of quantitative and qualitative techniques. This is justified by the efforts made to examine the relationships between various concepts in order to '*learn what is meaningful or relevant*' (Neuman, 2000) so as to develop a better understanding of what determines the relationship of those concepts.

In an attempt to classify this research, it is worth discussing its multimethodological approach. The use of mixed methods in social science research has been praised in the literature for providing more holistic coverage of the concepts investigated (Brannen, 1992, Miles and Huberman, 1994, Punch, 2000). Furthermore the mixing

of methodologies is gaining a lot of attention in business management studies, too; Hitt et al. (1998) recommend to researchers engaged with strategic development issues to integrate both quantitative and qualitative research. Mingers' studies (Mingers and 1997, Mingers 2001) on multimethodology, highlight that the use of multi methodologies for the same research can focus on different aspects of the concept(s) under investigation and provide 'full richness' in the data provided, since, as Mingers explains the real world problems are highly complex and multidimensional.

The research methodologies available to social scientist researchers recorded in the literature are divided mainly into two categories: qualitative and quantitative. Quantitative research involves the collection and analysis of quantitative data; quantitative data are 'measurements in which numbers are used directly to represent the properties of something' (Hair et al., 2003). Subsequently qualitative research uses qualitative data and these are 'descriptions of things that are made without assigning numbers directly' (Hair et al., 2003). These definitions make clear that the main difference between the various types of methodologies is the type of data used or whether the data collected are expressed by numbers. The type of methodologies has a number of other implications considering the nature of the research; Sarantakos (1999) compares the two types through a series of five features. The results of this comparison are tabulated in Table 3.1.

Each type of research methodology includes a range of research approaches available, based on which way the data are collected and analysed. The selection of the research approach is driven by the scope of the research. Yin (1994) explains that research approaches coming from quantitative methodologies such as the surveys, tend to be used when the research questions are focused on questions like "'who", "what", "where", "how many" and "how much"', while research approaches like case studies coming from the qualitative methodologies tend to answer the research questions whose focus is "'how" and/or "why"'.

Feature	Quantitative Research	Qualitative Research
Logic of theory	Deductive	Inductive
Direction of theory building	Begins from theory	Begins from reality
Verification	Takes place after theory building	Data generation, analysis and theory verification take place concurrently
Concepts	Firmly defined before research begins	Begins with orienting, sensitising or flexible concepts
Generalisations	Inductive generalisations	Analytic or exemplar generalisations

Table 3.1: Differences between quantitative and qualitative research (Sarantakos, 1999)

The present thesis consists of a combination of quantitative and qualitative approaches used in its three different phases of empirical data collection. Overall, the research conducted in this thesis started with the literature review which led to the identification of the gaps in the literature which framed the research questions. The first stage of the empirical data collection was conducted within an exploratory case study. For the case study three distinct stages took place: i) preparation, when the research instrument was developed and some documented material were collected and analysed, ii) data collection and iii) analysis, when the outcomes of the exploratory case study were summarised and related to the initial research question. The results of the exploratory case study were exposed to review by peers via participating in two academic conferences (Tapinos et al, 2003a and Tapinos et al, 2003b). The analysis of the outcomes of the exploratory case study provided the frame for the design and development of the survey. This second stage of research consisted of three phases: i) preparation, when the research instrument (-questionnaire) was developed and tested with a pilot exercise, ii) administration of the questionnaire and iii) analysis of the survey's outcome. Similarly to the previous stage, upon completion of the analysis of the survey, its results were presented in two conferences (Tapinos et al, 2004a, Tapinos et al 2004b). Using the conclusions drawn from the survey's analysis, the next stage of the research – the follow up

interviews – was designed. The follow-up interviews consisted of three phases similar to the previous stages: i) preparation and development of research instrument, ii) onsite visits for the interviews and iii) analysis of the results. All stages of the research are depicted in Table 3.2, in the form of a timetable.

The case study was developed in order to investigate the relationship between organisational direction and performance measurement within a specific organisation. This stage was used to develop an understanding concerning the two concepts under examination so as to prepare more effectively the next stages of the research. The survey was designed to map the current practices of strategic development processes. This would help to draw conclusions concerning the interrelationship and interdependencies between organisational direction and performance measurement with the other elements of the strategic development process. This stage was expected to enhance our understanding concerning the role of each concept within the strategic planning process and their impact upon the success of the strategy development process. Another research questions addressed in the survey, was to investigate the influence of the determinants (-organisational size and rate of change in the environment) in the relationship between organisational direction and performance measurement. The follow up interviews were designed to enhance the findings of the survey and particularly to explain some of the variations identified.

Research Activities		Duration
Case Study	Preparation	June 2002 – July 2002
	Data Collection	July 2002 – September 2002
	Data Analysis	September 2002 – March 2003
Survey	Preparation	April 2003 – June 2003
	Data Collection	June 2003 – August 2003
	Data Analysis	August 2003 – January 2004
Follow up Interview	Preparation	February 2004 – June 2004
	Data Collection	June 2004 – September 2004
	Data Analysis	September 2004 – January 2005

Table 3.2: Timetable of research activities

Scandura and Williams (2000) compared the research strategies used in highly rated journals in the 1980s and 1990s, and observed that there has been a significant rise in the use of field studies during that period. Field studies have become the most commonly used research strategy in management studies.

Hitt et al (2004) made an extensive review of strategic management research and found that '*it largely evolved form work primarily based on case studies that were atheoretical to a field that is now largely populated by theory-driven empirical research*'. The same authors concluded that strategy related research requires the development of '*better theory* [ ] *and the use of more sophisticated and appropriate methodology,* [ ] *we still need more use of multiple methods within single research projects along with dynamic models and data*'.

3.2 Stage 1: Exploratory case study

Case study research is one of the most popular methodologies in qualitative research. Schramm (1971) explains the reasons for selecting this methodology by offering its definition: '*the essence of a case study, the central tendency among all types of case study, is that it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented and with what results*'. The classification of case studies has led to a great number of different types (see Sarantakos 1999 for a comprehensive review of all types). One of the categories is the 'exploratory case' study which is the type of case study adopted in the present research. Exploratory research is undertaken, as Sarantakos (1999) explains, 'in order to provide a basis for further research'. The same author also explains that qualitative research and particularly the case study approach is one of the most commonly used methodologies for exploratory research. Furthermore, Sarantakos (1999) quotes Blumer (1973) suggesting that exploratory research can actually offer

assistance in modifying and testing the hypothesis and theories that underpin the research focus.

3.2.1 Research Design

The first stage of this research was exploratory and at the same time it was trying to identify the links and relationships between the two concepts. Therefore the method selected within this frame was an interpretative case study, because that is the most appropriate way to 'identify the relations between concepts', as has been emphasised by Gioia and Pitre (1990).

To justify the selection of case study for this exploratory research activity, it is worth referring to Tesch (1990) who emphasises that qualitative analysis engages the researcher into the process of making sense of data which are not expressed in numbers and therefore is especially useful in the exploratory stages of the research. Case study is a relatively new methodological approach, effectively accepted and used in the social science research over the last few decades. However, as Silverman (2000) notes, its use in social sciences and particularly in the business-management field is continuously increasing.

The selection of the case study should also be discussed; the University of Warwick was selected to be the exploratory case study, for the ease of gaining access for interviews at all levels of the organisation and the accessibility to documented material. In addition, it was possible to arrange and undertake a total of 25 interviews within a limited period. Furthermore, the University of Warwick was selected because as an organisation it belongs to a particular category – the

academic institutions in the UK – which is of increasing interest in the academic literature* (Tapinos et al, 2005a).

The first activities of the case study aimed to familiarise myself with the context of the University and particularly to analyse documented data, which helped in identifying a set of areas that needed to be investigated in depth. Initially, one set of questions was developed, which was then split into two different areas: i) for the people involved with the formulation of the University's 'direction' and ii) for the people at the 'lower' levels of the organisational hierarchy.

Part of the design phase was the selection of the interviewees. The interviewees were chosen according to the principles of 'theoretical sampling' (Newman, 2000) and people's availability. It must be highlighted that during the time –mid August until beginning of September– that the case study was conducted, a great percentage of the academics and the principal officers were not available. Nevertheless, the intention was to interview people from a variety of posts, backgrounds and particularly with great experience in working for the University of Warwick.

In addition, in order to capture opinions from a greater variety of 'angles', the interviews were conducted at two levels: i) corporate and ii) departmental. At the corporate level a series of interviews were undertaken with senior academic officers who are responsible for the development of the University's 'direction'. At the departmental level, it was also attempted to ensure holistic coverage, thus three different types of departments were investigated: i) Warwick Business School, from the Faculty of Social Science, ii) Department of Physics, from the Faculty of Science and iii) Hospitality Services, from the non academic departments. The selection of the interviewees in each department covered almost all hierarchical

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* academic institutions in the literature are discussed in detail in the case study's background (section 4.1.1) in Chapter 4: Exploratory case study

levels: Head or Dean, Associate Dean, Head of a subject/research group*, Senior Lecturer and Lecturer. For the non academic department a similar arrangement was achieved by interviewing the Head of Hospitality services, Finance Officer, Head of a division, and employees from that division.

3.2.2 Data Collection

The interviews were semi-structured in order to make sure that all the important issues would be covered and it would be possible to extend the conversation in order to obtain a 'holistic' view (Mitchell, 1998). In the semi-structured interviews (May, 1997), questions were normally specified in advance, but the interviewer had the chance to probe beyond the answers, seeking clarification and elaboration on the answers given. As Flick (1998) explains, this type of interview is widely used in case studies, since it allows the research to investigate in-depth the interrelations of the concepts under investigation. In practice, in the present study, the set of questions was developed in advance, and used to guide the interviews, to make sure that no aspect of the concepts investigated was missed and to ensure that all the interviewees were asked about similar issues. The interviews were conducted at the office of each participant and they lasted between 60 and 90 minutes. All interviews were recorded after receiving permission from the interviewees.

The interviews contained three sections: i) responders profile, ii) University's organisational direction and performance measurement and iii) departmental direction and performance measurement. In the first section, the scope of this research was introduced and the interviewees were asked to describe their role, involvement and experience with the strategic planning process of the University. The second section investigated the interviewees' perception regarding the

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* Heads of research/teaching groups are Professors

organisational direction, the process for developing, articulating and implementing it. This section also covered the performance measurement system of the University, where the interviewees were asked to explain which aspects of the organisational activities and performance are measured, what happens with the information collected from the measurement of the performance and how this influences their jobs. Similar questions were made regarding the departmental direction and performance measurement. At this section, the linkages between the organisational direction and the departmental direction were explored and the role of the departmental performance measurement in the University's performance measurement was also investigated. As explained the interviews were semi-structured and some of the questions were generated by interviewees' comments. Some of those comments were also used for the other interviews. For example, one of the interviewees from WBS suggested that the promotions scheme in the department was linked to performance measurement. This was further explored in the other interviews in the same department and was also addressed in the interviews in the other departments.

Documented material provided by the interviewees or publicly available, were also used. Patton (1990) emphasises that the use of a combination of observations, interviewing, and document analysis, gives the researcher the ability to use different data sources to validate and cross-check findings.

3.2.3 Data Analysis

To analyse the data of the case study, the methodological approach suggested by one of the most acknowledged authors in the field, Yin (1994), has been adopted. Yin suggests four different approaches for the analysis of the data collected within case studies: i) pattern-matching, ii) explanation-building, iii) time-series analysis and iv) program logic models. Given that the present case study attempted to reveal the relationship and interactions between two concepts, 'explanation-building' was

selected as the most appropriate approach, since its 'goal is to analyse the case study data by building an explanation about the case' (Yin, 1994). The same author explains that even if 'explanation-building' could be considered to have a similar orientation to the 'Grounded-Theory' approach (Glazer and Strauss, 1999), these are different because the 'explanation-building' approach's goal 'is not to conclude a study but to develop ideas for further study' (Yin, 1994). This also justifies the selection of this mode of analysis for the exploratory case study in the present research.

At the core of this type of analysis is its 'iterative nature', which according to Yin (1994) requires the researcher to continuously review the initial assumptions which constitute the research questions. In the present case study, this was facilitated by the choice of different departments within the University. In addition, the research at each department was conducted separately, then the results were summarised in reports and were further discussed with senior academic officers whose experience benefited the iteration process.

As mentioned, documented data were used for the present case study. In particular, the business plans of the University for the last 7 years were made available and were analysed; their analysis was tabulated to allow direct comparisons among the years. The assumption was that if significant changes were observed in the statements within the business plans, these could potentially enhance the interviews by providing the basis for discussion, particularly with regard to changes in the organisational direction. Pettigrew et al. (2001) suggest that management changes are a reliable basis for research in the strategy of the organisation.

Yin (1994) proposes a series of activities for the research design stage, the data collection and composition of the results, to ensure the validity of the process and its reliability. For the present case study, at the stage of research design, special care was taken in order to conform with Yin's suggestions. The use of multiple sources of evidence and the fact that the results of this survey have been evaluated and

critically discussed with senior academic officers with long experience within the University, ensure the 'construct validity' of the research. The adoption of 'explanation-building' as the mode of analysis for the collected data is an indicator of 'internal validity'. The issue of 'external validity' is not directly relevant to this research, given that it was compared with other similar case studies; however the use of a range of different departments whose practices are directly compared, is an additional indication of 'external validity' if each department is considered a different mini case study. Finally, concerning the 'reliability', the principles of the 'case study protocol' (Yin 1994) have been followed at the data collection stage.

Upon the completion of the analysis of the case study, an extensive report with the observations, results and conclusions was written. This report was used as the basis for the design and development of the next stage of this research.

3.3 Stage 2: Survey

The survey was the second stage of the present research. The survey was conducted in order to map current trends in the strategic development processes and to develop a better understanding of the determinants for the relationship between organisational direction and performance measurement.

3.3.1 Research Design

The design of the questionnaire is primarily based on the Strategic Development Process model which is extensively described in the literature review (section 2.3.6). The questionnaire consists of 5 sections:

i) profile of the participant,

ii) profiles of the participant's organisation,

iii) the strategic development processes,

iv) evaluation of strategic planning as a process and

v) management techniques related to strategic development processes.

All the questions were close-ended and were developed within a brainstorming session with a panel of experts; for the first two sections, the questions provided a range of possible answers and the responder had to select one. In the third and forth sections, the questions were on a 7-point Likert scale, with 1 for 'strongly disagree' and 7 for 'strongly agree'. The fifth section invited the responders to tick which management techniques they use in their strategic planning process. The questionnaire is attached in Appendix I.

The first section of the questionnaire is composed of questions concerning the responders' profile, and examined their level of experience and involvement with the strategic planning process and their job title. The second section focuses on the profile of the organisation that the responders were working for; it also examined the location (country) of the organisation, the turnover, the number of employees and their sector. This section had two additional questions referring to the rate of change in the environment and the drivers for change. Since the work of March and Simon (1958) the relationship between strategy and environment is of great significance in the literature (see for example Eisenhardt, 1989, Hart and Banbury, 1994, Harrington et al, 2004). Most of previous published work is based on Dess and Beard's (1984) work which examines the dynamism of the environment, which refers to the unexpected change or change which is hard to predict. There are some studies which have used quantitative measures to assess dynamism (Keats and Hitt, 1988, Boyd, 1995), while other have used questions related to the relative stability or instability of the environment (Brews and Hunt, 1999 and Harrington et al, 2004). However, following Parnell et al (1996) this thesis adopts a perceptual assessment of environmental turbulence which is based on the assessment of the responders which is considered to more accurately predict their perception for the rate of change in the environment.

The third section of the questionnaire was divided into 6 subsections following the elements of the Strategic Development Process model (Tomlinson and Dyson, 1982 and Dyson 2003). However, in order to formulate the questions in each subsection, the characteristics of each element as described in Dyson and O'Brien (1998) were used combined with the model for Effective Planning (Dyson and Foster, 1980, 1981 and 1982):

i) Development of the organisational direction,

ii) Strategic options development,

iii) Strategy selection,

iv) Implementation,

v) Feedback and Strategic control,

vi) Performance Measurement and

vii) Assessment of uncertainty

The fourth section, 'Evaluating strategic planning', contains a series of questions which assess general characteristics of the strategic planning process. The last five questions are the 'measures' of the questionnaire which are used as dependent variables in the multivariate statistical analysis. There are two aspects of the 'measures' that need to be discussed given that they are extensively used in the analysis of the survey data in chapter 5. Firstly their development and selection needs to be addressed and secondly a further discussion into the fact that these are perceptual or subjective 'measures' should also be clarified.

The evaluation of the strategic planning process is a vital need for strategists, and therefore a research field attracting the interest of academics (see for example Moroney, 1999). The variables used as 'measures' (dependent variables) examine whether the strategic planning process:

i) supports the achievement of the organisation's goals,

ii) is efficient,

iii) is effective,

iv) leads to the adoption of successful strategies and

v) is considered a successful process.

It is important to make the distinction between evaluating strategy and the process of developing it. For this reason, this survey has not included commonly used measures such as the ones summarised by Hastings (1996). It is quite common in the field of strategy research to evaluate the impact of a process, concept or any managerial issue against the performance achievements of the organisation as explained in detail in the literature review section 2.3.5 (see for example Judge and Douglas, 1998). It should also be noted that the majority of these researches are limited to the evaluation of financial indicators/ratios only. This is justified by their effort to be objective. However this implies a linear relationship between the concepts under examination and the organisational achievements which is supported by the researchers coming from positivistic epistemological stances. The five assessments used are generic and refer to the process itself. They are developed following the 'Effectiveness of strategic planning' model (Dyson and Foster, 1982); this model supports the notion of an effective process rather than relying on the outcome assessment of organisational performance achievements.

The measures of this survey are perceptual, and it is well known that there exists some scepticism on whether subjective or perceptual measures can be used as dependent variables (Ketokivi and Scroedoer, 2004, Tapinos et al, 2005a). McLarney (2001) explains that, even if there is a great amount of empirical research recorded in the literature investigating the relationship between strategy development and organisational performance, there is a distinct lack of research, examining some measure of effectiveness beyond financial measures which are considered objective assessments of organisational success. Collier et al (2004) provide an analysis on the necessity of using perceptual data in large scale surveys examining the development of strategy, highlighting that 'although perceptions may not always equate with reality, they are important because they are likely to be the basis of behaviour'. To ensure reliability, careful consideration was given to

Cronbach's alpha (see section 5.4), which has shown that the reliability of the data collected was 'excellent'. Cronbach's alpha is a test of for survey's internal consistency, it is also called a 'scale reliability coefficient'. This approach of examining Cronbach's alpha when using perceptual data has been adopted by many authors (see for example Hambrick (1982), Benbunan-Fich and Hiltz (1999), Thrikell and Dau (1998) and Mikkelsen et al (2000), Asrilhant et al (2005)).

The fifth section of the questionnaire examines the management techniques which are used within the strategic development processes. To develop this list, Rigley (2003) and Asrilhant (2001) were taken into consideration. It has to be highlighted that the list from Rigley (2003) was not adopted directly since his use of the term "management technique" is rather vague and in some cases "management concepts" have been named as "management techniques"; for example Rigley suggests that 'strategic planning' is a management technique, however the author of this thesis considers that strategic planning may include a number of different management techniques but it is management concept rather than just a technique.

One of the comments that have to be made is that in the questionnaire, the terms 'strategic development processes' and 'strategic planning' have been substituted with 'strategic/corporate planning'. This was made in order for the questionnaire to become more inclusive to all types of strategic development processes in each organisation. There is no specific recommendation in the literature as to how to express these concepts more effectively. However, making use of past experience (O'Brien and Meadows, 2000) of research where the terms used in the questionnaire did not match the terminology used in some organisations, it was decided that 'strategic/corporate planning' was the most inclusive term.

The responders of this survey come from the database of WBS alumni. According to its website (WBS, 2004), it has 18000 members coming from 115 different

countries. A total of 4000 alumni members* were contacted for this survey. The use of alumni is quite common in research that do not concentrate on a particular sector but attempt to provide a cross-industry exploration of the topic (see for example Bailey et al 2000).

3.3.2 Data collection

A pilot exercise was used to test the validity of the questionnaire. In the pilot exercise, the survey's questionnaire was sent with 4 additional questions which invited the responder to comment on the contents of the questionnaire in terms of the clarity of the questions and the jargon used, as well as the ease of response. One hundred alumni were randomly selected from the database and were sent the questionnaire attached in an email. Fifteen responses were returned. The comments received were rather encouraging, since a great interest in the scope of the research was expressed and a limited number of adjustments were made upon the completion of the pilot. The changes made concerned the outline for the section of management techniques which was not considered very user friendly.

This survey was conducted online, instead of mailing the questionnaires or doing telephone interviews which are other options for this type of research. There is an increasing literature which examines the advantages and disadvantages of online surveys, which has led to the development of some suggestions for better results. It has to be emphasised that the outcome of this stream of literature is sensitive to the developments in the technology and people's perception regarding the use of technology. Boyer et al. (2002) review all the relevant surveys until 2002, highlighting that most of the studies were conducted on college campuses or using students as responders. These surveys have actually investigated the responders'

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* the number of email addresses provided was specified by the Alumni office.

perceptions concerning the use of online technology to respond in surveys. However, even if the 'experiment' type of research is perfectly acceptable in social science, there is still a limited number of published studies using responders from the business field.

Discussing the advantages of online surveys there is a general consensus in the literature that they reduce the expenses of the studies and allow the use of larger samples (Bachmann et al., 1996, Weible and Wallace, 1998). Surveys conducted online can also provide reduced response times; Fowler (1993) states that mail surveys suffer from slow response times. Another obvious advantage is the economy in time and effort in processing the data collected in order to format them for analysis by software (Boyer et al., 2002). In the present survey, the output (provided by Information Systems Support Unit of WBS) did not need any formatting in order for the data to be supplied to SPSS. In addition, studies like Schmidt (1997) and Teo et al. (1997) found that an electronic survey compared with a mail survey can provide more complete responses of higher quality.

One of the main disadvantages for online surveys is low response rates (Tse, 1998 Dommeyer and Moriarty, 2000 and Cobanoglu et al., 2001). However, Mehta and Sivadas (1995) showed that repeated contacts and reminders can potentially improve response rates. Unfortunately, this was not possible in the present survey since it was decided not to disturb twice the members of the WBS alumni. Boyer et al. (2002) drew the conclusion that, as accessibility to internet facilities becomes easier, people's familiarity with the internet increases and this potentially can lead to comparable response rates; although, it is emphasised that people's concerns regarding internet security, anonymity and confidentiality increase as well.

A very interesting insight is provided by Crawford et al. (2001) who found a correlation between lower response rates in web-based surveys and the design of the survey regarding the ease in filling in the questionnaire and maintaining the interest of the responder. To address this concern, the survey was set up on the WBS site,

and special consideration was made to make it look professional. Furthermore, it was decided to keep it as simple as possible in order to be less time-consuming to access and easier in its use.

The administration of the questionnaire was done primarily by the WBS alumni office. A covering letter was written and was attached in the email sent (see Appendix I). The email explained the purposes of the survey, the structure of the questionnaire and the time required to respond. The recipients were invited either to access the online version of the email or to fill in the attached questionnaire which was in MS-Word format and to return it via email.

One of the most important issues that need to be addressed is the reliability of the questionnaire. Carmines and Zeller (1991) define reliability as the 'ability of a measure to produce consistent results'. An extended review of published surveys on business-management literature and particularly on strategy related studies determined that the most popular approach to assess the reliability of the questionnaire was Cronbach's alpha, which according to Hair et al (1997) should exceed 0.70. In chapter 5, the value of Cronbach's alpha has been calculated for the questionnaire overall and for each section separately; as shown the questionnaire overall and its sections individually are of 'very good' and 'excellent' reliability. In addition, having a pilot exercise increases the reliability of the questionnaire (Kerlinger, 1986); for this reason the pilot conducted was carefully taken into consideration and its results were thoroughly reviewed.

Another assessment is the validity of the questionnaire; Hair et al (1998) define validity as the 'extent to which a measure or a set of measures correctly represents the concept of the study'. Validity has three distinct assessments: i) content validity, ii) criterion-related validity and iii) construct validity. The content-validity examines whether 'an empirical measurement reflects a specific domain of content' (Carmines and Zeller, 1991). The content-validity of the questionnaire was ensured by developing it based on a model of strategic development (Dyson, 1998) which is

consistent with other strategy frameworks and whose applicability was examined within the follow up interviews. Furthermore, the design and development of the questionnaire, as well as the results of the pilot exercise were assessed and critically discussed with experts in this academic field with long experience of similar research.

Criterion-related validity 'examines whether a scale/construct performs as expected relative to the other meaningful variables' (Hair et al, 2004). This was ensured by undertaking a thorough literature review in order to address all the issues which were relevant to this research. Furthermore, the pilot exercise is an additional assurance of the criterion-related validity. The exposure of the research instrument and the pilot's results to peer review via a conference publication (Meadows et al, 2003), is another means of testing the validity of the questionnaire.

Construct validity examines the extent to which the constructs are systematically linked in theoretical terms and are adequately represented by their measures (Carmines and Zeller, 1991). Part of the analysis for the survey data was factor analysis (section 5.6). The assessment of the validity of each factor* showed that the factors produced were of high validity; thus, it can be deduced that the content of the questionnaire with regards to the concepts under examination, is of high construct-validity.

3.3.2 Data analysis

The analysis of the survey started with checking the responses. There were a number of responses which were not fully completed and had to be excluded from the analysis. The first stage of the analysis concentrated on descriptive statistics; these provided an overview of the data and were also used to check for normality, to

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* The factors produced are linear combinations of the original concept/variables (Hair et al, 2004)

ensure that multivariate statistical analysis can be conducted with this data set. Upon the completion of the descriptive statistics, multivariate analysis was conducted. Initially factor analysis was used in order to group the independent variables into meaningful factors. After careful consideration, a four factors solution was found to be most meaningful and relevant to the research focus. Using the factors produced six hypotheses were then tested. The development of the hypotheses was based on the observations made at the exploratory case study. Regression models were also built using the independent variables (-'measures') of the survey. Regression analysis compared the impact of the four factors on the five assessments of strategic planning as process. Given the diversity of the responses in terms of the variety in different types of organisations, regression models were built separately comparing the trends in organisations of different size and in organisations operating in environments with different rates of change. Other types of multivariate statistics were used, such as cluster analysis. Although in some cases the results of the cluster analysis were similar to the ones from the regression analysis, in most of the analysis the results were not meaningful.

3.4 Stage 3: Follow up interviews

Upon the completion of the analysis of the survey's results, there were a number of very interesting observations and findings, whose understanding would be enhanced if better insights into the practices involved were gained. As has been explained in the introduction to this chapter (section 3.1), quantitative research and particularly surveys tend to answer the question of 'what is happening', while qualitative research can potentially reveal 'how something happens' and explain 'why it is happening'. Therefore the aim of this research stage was to validate the results of the survey and to explore the variations exhibited by some of the survey's outcomes. The latter required examination of the practices involved for the concepts

under investigation in order to be able to explain the reasons why different types of organisations exhibit different trends in their strategic development processes.

3.4.1 Research design

Upon completion of the analysis of the survey, a webpage was set up* in order to disseminate the results as promised in the invitation to participate in the survey. From the 348 participants, 190 had agreed to be contacted for follow up interviews; however, only the ones from the UK (100 responders) were invited for the follow up interviews. Taking advance of the dissemination of the results, the participants from the UK, received an invitation for the follow up interviews (attached in Appendix II). A total of 30 responses were received, expressing an initial interest in the follow up interviews. For a variety of reasons such as lack of available time, recent job change or sensitivity of information, five of them did not agree to participate. Therefore, the total number of contacts for this stage of the research was 25.

This stage of the research was originally planned to have a series of mini case studies. Such a plan required access to a large number of people at different positions in each organisation. However, it was not possible to gain access to anyone else other than the survey's responders; to overcome this difficulty this stage was redesigned with follow up interviews instead of case studies. The benefit of follow up interviews, compared to comparative mini case studies, is that a broader range of opinions and ideas can be captured which may provide better insights into the concepts examined. In addition, the observations made at this stage of the research, reflect the opinions for a cross industries sample and not for some particular industrial sectors. It is well acknowledged in the analysis as presented in

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* a printout of the webpage is attached in Appendix II

Chapter 7, that the follow up interviews conducted for this research stage cannot provide generalisable conclusions but can only reinforce some of the conclusions made at previous stages and provide insights, in an attempt to explain the variations identified in the survey.

There is no specific literature addressing the methodological theory of follow up interviews. Follow up interviews have a distinct difference from the method of interviews conducted as primary data collection activity. During the follow up interviews the researcher acquires a certain 'picture' of the concepts examined as exhibited in the interviewee's survey-questionnaire. In addition, the research analysed the results of the survey, so the interview can be focused more effectively.

In the present study, the interviews were semi-structured, for the same reasons as explained in the exploratory case study. Each interview's questionnaire was developed based on the responses of the survey-questionnaire. The interview contained six thematic sections: 1) a few introductory questions concerning the involvement and the level of experience of the interviewee with the strategic development processes, 2) some questions on the rate of change in the environment of the organisation and the main drivers for change, 3) a series of questions on the elements of the strategic development process, 4) a range of questions exploring the impact of organisational size and rate of change in the environment on strategic development process and on performance measurement, 5) a limited number of questions asking the interviewees to compare the strategic planning process in their organisation with the framework used in this research (the Strategic Development Process model by Dyson, 2004) and 6) in the last section of the interviews the interviewees were asked to discuss the impact of the strategic planning process' elements, on the levels of success of the process itself.

The responses received by each interviewee's survey-questionnaire, were used mainly for section 3 and 6. In section 3, in order to explore effectively the processes involved in strategic development, the questions in the interviews were focused on

those areas where the interviewee had given either very high or distinctively low scores. This would 'spark' the discussion on which processes or activities undertaken are or are not perceived as adequate, appropriate, desired or even 'best practice'/'bad practices'.

3.4.2 Data collection

The follow up interviews were conducted face to face, and in most cases onsite visits were made. In a limited number of cases the interviewees requested the interview questions in advance. This helped some of them to bring documented material with them which demonstrated and justified their responses. In most cases the interviewees brought with them either the annual or the 3 years business plans. However, due to the sensitivity of the data included, internal documents were not provided for further examination. The interviews were recorded, after receiving permission from the interviewees, and in a limited number of cases, the interviewees requested a copy of the transcript. In a single case, the copy was returned with minor corrections on specialised jargon of that industry.

3.4.3 Data analysis

The analysis of the interviews was qualitative. A few decades ago, one of the most influential authors in qualitative research analysis observed that: 'by the best current standards, qualitative data is a mysterious, half-formulated art' (Miles, 1979). Since then, a lot of methodological suggestions have been published in order to establish and enhance the outcome of qualitative data analysis. There is still an ambiguity whether the existing approaches of analysing qualitative data are adequate. Particularly in the field of business management research, it is still debatable whether there exists an exact approach which is trustworthy (Ketchen and Berge,

2004). There is a plethora of methodologies for analysing data collected via interviews (Silverman, 2000). The choice depends upon the scope of the research which is determined by the research focus/questions. In the present stage of this research, the primary goal was to reinforce the validity of the findings at the previous stages of the research and to develop a better understanding of the practices involved in strategic development processes so as to attempt to explain the variation exhibited in the outcomes of the survey. Taking into consideration the fact that the collected data came from semi-structured interviews, the analysis compared and synthesised the responses received. The comparison was facilitated by the fact that the interviewees had direct visibility of the processes discussed. The synthesis of the responses was based on the fact that questions examined interviewees' perception of the concepts and processes involved, therefore some of the responses were combined in order to depict more accurately the 'whole picture' as each interviewee offered some of the elements involved.

Methodologically the analysis of the transcribed interviews was based on the principles of content analysis. Content analysis has been broadly defined as (Holsti, 1969) 'any technique for making inferences by objectively and systematically identifying specified characteristics of messages'. Content analysis is regularly used in the field of business management research (see for example Lal et al, 2002, Yeo, 2003 and Lai, 2004). Following the example of Druskat and Weller (2004) the transcribed interviews were content analysed by creating a list of responses for each concept under examination. To drive and frame this process, the structure of the questionnaire was used and the content analysis was applied to each section of the questionnaire.

According to Carley (1992) content analysis consists of two types of analysis: conceptual and relational analysis. In 'conceptual analysis' the researchers count specific concepts as part of content analysis (Weber, 1990); however, this is a process required when the technique is used in order to deal with a large amount of documented (qualitative) data. In the present study, even if comparisons are drawn

between the content of the interviews by the various interviewees, comparing the number of appearance of 'key words' was not found to produce meaningful results. The analysis of the follow up interviews is closer to the principles of 'relational analysis' which upon identification or definition of the key concepts, examines the relationship between those concepts. Analytically, the responses at each section were further categorised into two groups: one group included the practices of those who had given high scores in those questions and a second group with those who had given low scores. This process created summaries for each section of the questionnaire which could be directly compared and synthesised in order to reveal the practices involved; it also assisted in developing an understanding as to which practices are perceived to be beneficial and which ones are not.

The analysis of the follow up interviews led to the identification of a concept which was not originally thought to have an impact upon the strategic development processes. The identification of this concept, which is a determinant of the relationships between the issues under examination, is presented analytically in section 6.10 and its significance is fully discussed in 7.3.3. However, it has to be noted that when it was understood that its presence/existence was implied by the interviewees, then the development of the argument was not based on 'content analysis' as described in the previous paragraphs but on the principles of 'phenomenological analysis'. Phenomenological analysis is used in business management research (see for example Atherton and Hannon, 2000, McAdam, 2002).

Phenomenological analysis is rooted in the philosophy of phenomenology (Golstein, 1963). This type of analysis requires the research design to be adopted for this type of research, which was not within the scope of this present research. However, its basic principles were used to organise its analysis more effectively, in order to examine it and analyse its basic features more effectively, too. Summarising the basic suggestions for phenomenological analysis, as mentioned by one of the most widely acknowledged authors (Hycner, 1985 and 1999), in

phenomenological analysis the researcher has: i) to familiarise him/herself with the content of the interviews, ii) to define the 'units of meaning', iii) to cluster the 'units of meaning' into themes, iv) to summarise the elements of the phenomenon in each interview and v) to compose the parameters of the phenomenon from all the summaries. It has to be noted that phenomenological analysis is accepted to have a lot of judgement calls by the researcher (Moustakas, 1994). This methodology of analysis was adopted in the present research by re-reading all the interviews and highlighting the phrases or responses which seemed to include or imply the existence of the phenomenon under examination. Then, comparing the summaries from each interview, several different parameters were identified to be mentioned in the interviews, which led to the development of the argument. To validate the identification of the phenomenon the results were compared to the existing literature as presented in section 7.3.3.

3.5 Conclusion

The development of the research methodology has been driven by the research focus and research questions defined in previous chapters. The focus of this research is to explore the relationship between setting the organisational direction and performance measurement. The exploration of this relationship requires to investigate a number of research questions which examine both the linkage between these two concepts and at the same time it is necessary to examine their role within strategic development processes and in particular the determinants of this relationship.

The review of the literature which provides recommendations on the methodologies that should be used for the type of research as determined by the research focus and questions led to the selection of a multimethodoligical approach. The relationship between setting the organisational direction and performance measurement is explored within an interpretive qualitative case study, and the interdependencies of

the two concepts under investigation within strategic planning process, as well as the determinants of their relationship are explored by a large scale survey and some follow up interviews. These are presented separately in the following three chapters.

Chapter 4

Organisational direction and performance measurement of the University of Warwick

4.0 Summary

This chapter presents the first stage of the empirical research of this thesis, the exploratory case study. The introduction of this chapter presents the main scope of this research as well as how this case study was conducted. The same section presents the information about the University of Warwick and the three departments which participated in the interviews conducted. The outcome of the interviews in each department is presented separately.

The main findings of this research are discussed against the relevant literature and then are reflected against the original research aims of this thesis. This provides the chance to highlight how this exploratory case study helped design the next stages of this research.

4.1 Introduction

The exploratory case study was set up in order to investigate the relationship between direction setting and performance measurement. The first research question determined by the review of the relevant literature was to develop an understanding of the practices involved for setting the organisational direction and of the role of performance measurement in this process. This investigation is going to provide useful insights into the relationship between direction setting and

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* A version of this has been published in Tapinos et al. 2005a

performance measurement which would aid the design and development of the following stages as this case study is exploratory as explained in Chapter 3.

The case study consisted of a preparation stage, the data collection and data analysis. At the preparation stage, documented material was collected and analysed in order to familiarise the researcher with the context of the organisation. At this stage the research instruments were developed as well. The first set of interviews conducted at WBS were used as a pilot. They were transcribed and analysed before carrying on with the other interviews in order to identify whether there were any topics, issues or questions which should be addressed. As explained in Chapter 3 in an attempt to have representative coverage interviews were conducted on two levels: i) corporate and ii) departmental; three different departments participated from the Faculty of Social Studies, the Faculty of Science and a non academic department.

4.1.1 Management practices in Academic Institutions

The selection of the University of Warwick to be used for the exploratory case study has been discussed in Chapter 3. However, it has to be mentioned that apart from the ease in getting access and managing to undertake 25 interviews in a limited period, the choice of using an academic institution is of significant importance, too.

Higher education in the UK and particularly the academic institutes have been the focus of research for the last 20 years. The changes in the funding system in the mid eighties (Reform Act 1988) combined with the internationalisation of the competition between the universities, has made their study very significant in the academic world. Universities as institutions were functioning in a stable environment in the UK, with a very clear purpose of existence and well defined activities. The inclusion of the polytechnics as universities, in parallel with the

decrease in government funding per student, have created an increasing competition between them (Johnes and Cave 1994). Etzokwitz (1998) suggests that the universities today are undergoing a 'second revolution'; the first one was when research was added to teaching, as an academic function (Jencks and Riesman, 1968). This second revolution concerns the incorporation of 'economic and social development in their mission'. The implementation of new practices of management and governance (Clark 1998) has made them interesting case studies from a management and business point of view (Galloway 1992, Pettigrew et al. 1992, Ferlie et al. 1996). The changes in the environment have created the need for more effective planning in the universities. For example, Grigg (1994) suggests that in order to survive in the 1990s, the universities were forced to review their mission and the overall frame of strategies for their implementation.

The study of management related concepts in the literature of higher education is continuously expanding. There have been reports from case studies of universities attempting to implement business models that are used by organisations in the private sector. For example, Davies et al (2001) report the implementation of the EFQM model, in the University of Salford, to facilitate the process of improving the leadership within the institution targeting in order to improve their management practices and in particular to prepare for the bidding system of funding. A similar case study is published by Dew (2001) outlining the role of developing a mission and vision as the first step in an effective planning exercise.

4.1.2 The context of the case study

In this section the background, for the University control administration and the three departments which participated in the case study, is presented. This information is provided in order to set the scene for the findings of the case study. The differences underlined between each department are significant for the

observations made later on in the chapter, concerning the concepts under investigation.

Background of the University of Warwick

The University of Warwick is a relatively young University established in 1965. It has rapidly expanded both in terms of student numbers and activities and fields it is involved in. At the moment, according to its current website, it has approximately 18,000 students at undergraduate and postgraduate level. The University is very internationalised with approximately 20% of its students coming from 114 countries. Moreover, it has 30 different academic departments covering a great range of academic interests. It should be highlighted that the University of Warwick is well known in the UK for its non-HEFCE income-generation activities; the decrease in the governmental funding in the early 80s was a significant driver for change and University of Warwick was the first UK university to respond by seeking additional sources of income; in 2002 when the case study was conducted, these produced 65% of its £200 million budget.

As far as the figures are concerned, the University is constantly ranked among the Top Ten universities in the UK (Times 2002). It has been ranked as 5th in research among 100; over 90% of academic staff members were submitted in the 2000 RAE and all but one were ranked 5 and 5* (HEFCE 2001) (5*being the highest grade). Regarding teaching, 22 out of 24 departments assessed by the Quality Assurance Agency for Higher Education and were rated as 'excellent' (Warwick 2003). One of the most important facts in the University's recent history regarding its governance, is the changes in its top management team. In August 2001, a new Vice-Chancellor was appointed who initiated reorganisation of the top management teams and some of the processes and practices of the University's operations.

The governance of the University is conducted through a series of committees that are involved in every aspect of the University's activities. Table 4.1 summarises the most important of them at the time when the case study was conducted*. At the top of the government, the Vice-Chancellor is followed by the Deputy Vice-Chancellor, the Registrar and three Pro Vice-Chancellors.

Senate Strategy Committee (JCSSC)	Official remit: To consider the inter-related questions of academic, financial and physical planning in order to advise the Senate and the Council on strategic issues for decision made by the University. In practice: Is an executive hidden as an advisory committee because whatever it tends to recommend, or advise, gets carried out by the executive committees at the end of the day. Tasks: Develops the financial plan, makes strategic decisions relating to growth, development and resource allocation, considers action plans, and monitors implementation of strategies in all the main areas of University strategic action.
Income Group (EIG)	Manages and monitors all non-HEFCE grant sources of income, known as earned income activities comprising some 65% of gross income. EIG monitors the four categories of activity: academic-driven; spin-off; stand-alone; and self-financing, quarterly and conducts an annual 'Challenge' review.
Estimates and Grants (E&G)	A centralised system of resource allocation interacting directly with academic departments using a 'zero-based' model whereby departments must apply for the filling of vacant posts with resources transferable according to central priorities. Traditionally, where posts are granted, the position reverts to a junior post, acting as a savings device and, indirectly, a source of embedding cultural values. Shapes the University by implementing growth, retrenchment and efficiency gains.

Table 4.1: Major Strategic committees (Jarzabkowski and Wilson, 2002)

The interviews conducted at the corporate level of the University were aimed at understanding the processes involved for setting the organisational direction and how performance measurement works at this level. In particular, the interviews started with a first set of questions concerning the direction of the University of Warwick and the interviewees' perceptions regarding the content of the direction. Then the officers were asked to describe the process of setting the direction of the University, the main drivers for the decision making, followed by a series of questions regarding the influence of performance measurement. The interviews at

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* the structure of the committees governing the University has changed since the time that the case study was conducted

this level were conducted upon the completion of the interviews at WBS, which provided a basis of further discussion concerning the perceptions of the interviewees at the departmental level. The senior academic officers who were interviewed for the corporate level were: the Deputy Vice Chancellor, the Pro-Vice Chancellor and the Administrative Secretary*.

Warwick Business School (WBS)

Warwick Business School (WBS) is one of the largest and most recognised departments of the University. At the time that the case study was conducted, WBS had over 300 staff and 3,700 students and participants; offering a range of undergraduate, postgraduate, and executive courses, as well as a doctorate programme. It has received a distinguished recognition in the last Research Assessment Exercise (RAE) in 2001 when it was rated among the top three Business Schools in UK. Furthermore it was rated as 'excellent' in teaching by the Higher Education Funding Council for England (HEFCE). It is worth mentioning that when the interviews took place, WBS had a relatively newly appointed Dean, Prof. H. Thomas. The Business School is structured around five teaching groups and six research centres. WBS is managed by the Dean, and a series of Associate Deans covering the most important fields of the department's activities.

The interviews at WBS examined people's perceptions concerning the setting of the University's direction, the extent to which the University's direction influences the setting of the departmental direction, the measurement of the departmental performance and the influence of the University's direction in the development of the departmental performance measurement system. The interviewees were the Dean of the department, one of the three Associate Deans (-International Relations),

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* the Administrative secretary is not an academic

a Head of an academic group (Operational Research and Systems*), a Senior Lecturer and a Lecturer, both from the same group.

Department of Physics

The Department of Physics was one of the first launched departments in the University. It is not as big as the Business School, with approximately 40 permanent staff and a large number of short-contract researchers. In the last RAE, it was rated as 5. The Department of Physics has five core research groups and each of those has a series of research centres. This department offers a limited number of undergraduate courses and postgraduate degrees only by research. It is managed by a range of committees headed by its recently (at the time of the interviews) appointed Head of the department, Prof. M. J. Cooper.

The interviews in the Department of Physics had the same structure and aims as the ones in the Business School. The interviewees were: the Head of the Department, the Head of the Research Committee, the Finance Manager, the Head of a research group (Elementary particle physics) and a Lecturer from the same group.

Hospitality Services

Hospitality Services is managed as a business within the University. It provides the on-campus accommodation, catering and conference services. It employees 550 people on various jobs with an annual turnover of approximately £16M which makes it the largest hospitality services of any UK University and the third largest income generation activity in the University, after research funding and overseas

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* this group is now called Operational Research and Information Systems

students. The Hospitality services at University of Warwick have won numerous awards for its services, especially the conference services. It is governed by a board chaired by an appointed Executive Director, Mr A. Paine.

The interviews in Hospitality Services had the same structure and aims as the ones in the other two departments, nevertheless the questionnaires were adapted to the main activities of the department and had taken into consideration its income generation activities. The interviewees were: the Executive Director, the Finance Manager, the Customer Relations Manager, the Catering and Accommodations Manager, the Manager of one division from Catering and Accommodations (Warwick Arts Centre) and one employee from the same division.

4.2 Research Findings

Analysis of annual corporate plans

One of the first activities undertaken in the case study in order to familiarise with the context and facilitate the design and development of the research instrument, was the analysis of the documented material. The annual corporate plans of the University from 1997 to 2004 were provided and analysed in order to identify any significant changes in the direction of the University. The material provided has been organised into a table which is very helpful for direct comparison over the years. The comparison has been conducted for four different categories: 1) Elements of the Mission, 2) General Statement of Aims, 3) Strategic and Planning Objectives and 4) Corporate Plan. The table is attached in Appendix III. The main findings of this analysis are that the University of Warwick is research-led, however since 2000 the emphasis on 'Teaching excellence' has been reemphasised. The mission of the University does not have any other changes; most of the changes are recorded for the 'Strategic and planning objectives', where a series of strategies

were initiated each year aiming at the internationalisation of the University, the enhancement of its infrastructures and widening participation.

Another interesting observation regarding the annual corporate plans of the University is that there are frequent references to performance measures. These are both internal measures, such as 'planned growth of postgraduates', and external ones, such as 'HEFCE research assessment exercise'. Simultaneously, the performance measures are both financial, such as 'projected net contribution from earned income' and non financial, such as 'number of courses available'.

4.2.1 Corporate level

The development of the University's direction was one of the first issues examined in the interviews at the corporate level. According to the interviewees there is a standard procedure for the development of the University's direction. The deputy Vice-Chancellor described the process: '*it is the role of the University's Strategy Committee; and the Strategy Committee is a joint committee of some members of Senate and some members of Council. The Strategy Committee meets two or three times each term and on some occasions we have open agendas and we look at long term strategy and at other times we have focused agendas. That is where the University's strategy is formed and discussions often take place in Council Meetings. The University's Council has an evening set aside once each year, where we discuss the long term strategy and it is a relaxed atmosphere in an evening meeting*'. This process is also documented and the relevant documentation provided by the Administrative secretary is in complete agreement. A very interesting observation concerning the aforementioned statement regarding the development of the University's direction is that there is no distinction as to which elements of the direction are mainly reviewed in this process. Therefore, the interviews investigated the interviewees' perceptions concerning the content of the University's direction.

Examining the perceptions of senior officers regarding the direction of the University, the responses received indicate that the direction remains constant. There was a consensus between the interviewees at the corporate level who emphasised that even if the University is research-led, the University's orientation remains balanced between research and teaching excellence; the Pro-Vice Chancellor said '*I think that the direction is to maintain and improve the profile based on research and teaching*'. Simultaneously, its direction expresses and responds to Government's recommendations such as widening participation. There was also an agreement in the opinions expressed concerning any changes in the direction of the University. The interviewees indicated that they did not think that any change has taken place with regard to the University's vision or mission but there are quite a few changes regarding the strategic practices employed to achieve them.

One of the most interesting observations made from the interviews with senior officers, concerns the purpose of the formal statements of the 'direction'. Apart from being compulsory for the research funding council (HEFCE) as the Administrative Secretary highlighted, their actual use is more internal in the University's central administration. They are used as an exercise to identify, prioritise and guide the officers involved with the development of the strategic processes, as the Deputy Vice-Chancellor said very characteristically: '*I think the purpose of having them is, in some ways is, the exercise of discussing them, the exercise of identifying the key items that need to go in it, the exercise of writing it and reviewing it and finally publishing it, that exercise is one that brings together the senior managers of the University and allows all to point in the same direction*'.

The senior academic officers expressed the opinion that the organisational direction is communicated through general meetings that take place twice per year when all the staff of the University are invited to listen to the Vice-Chancellor presenting the direction. And it is also believed that the Heads of the departments who participate in the various committees and meetings articulate the organisational direction to

their departments. The Heads of the departments are also responsible for ensuring the alignment between the direction at the corporate level, the departmental direction and the activities of each department. The centre of the University does not evaluate continuously the academic activities in each department, but for example it does review each departments research in the aftermath to the RAE. It is upon the Heads of the departments and their committees to ensure that the operation of the departmental activities are aligned with the University's direction.

Another point that should be highlighted is that the performance measurement at the corporate level is developed to support the main activities of the University. Taking into consideration the 'Academic Database', a booklet containing an extensive number of measures of academic related figures such as student numbers, student drop-out rates, first class degrees awarded per department etc, it could be said that the performance measures used at the corporate level are relatively balanced. However, the interviewees revealed that there is greater focus on the measures related to the income generation activities; '*the University's strategy is built around the financial agenda* [ ] *at the 5 years planning process, setting the financial targets for the next 5 years. And in setting the financial targets, we obviously consider that strategies of the University, the long term strategies of the University*' said the Deputy Vice-Chancellor.

4.2.2 Departmental level

Warwick Business School

In the interviews that took place in WBS most of the staff made it clear that the mission statement, the strategic objectives and the corporate plans are not communicated formally. All interviewees from WBS expressed an understanding of the University's direction, highlighting its research-led character. However, some of them, especially the ones coming from lower levels of the hierarchy, said that they

did not think that the University places equal emphasis on teaching excellence. Furthermore, some of them actually linked the funding benefits related to the research achievements to the orientation of the University, as the Lecturer said: '*because most of the funding is sourced on the basis of quality of the research, one of Warwick's directions is to excel in the research. If teaching and administrative was the source of funding, then its direction would have been to become the best administrative University'*. The variation exhibited, in the perceptions of the University's direction, was related to the status of each interviewee. The views expressed by the Lecturer are not shared by all the interviewees and in particular those from the higher levels of the hierarchy. It is apparent that each one's role corresponds to different activities, in terms of decision-making (authority and responsibilities) and of participation in committees that are useful sources of getting in contact with the University's direction. However, it should be noted that the perceptions expressed by the interviews reflect their interpretation of the reality and these have been constructed by the messages they get from the communication of the University's direction, strategy and priorities. The difference in the opinions expressed at different organisational levels highlight the disadvantages of informal and ineffective communication practises.

Concerning the staff members' perceptions in WBS, a very interesting observation was made regarding the University's direction in that they mentioned those elements of the direction which were closely related with their everyday functions that they have noticed to be monitored and controlled. It is a fact that the interviewees stressed the research character of the University in conjunction with the funding received as a result of the Research Assessment Exercises (RAE).

Another important issue examined was the direction of the Business School itself. WBS is one of the departments in the University with greater levels of autonomy in its decision making and budgeting processes. This is reflected in the fact that it has a specific direction for the future which is regularly reviewed within the committees of the department. According to the two interviewees directly related to the

development of the departmental direction, the Dean and the Associate Dean, the departmental direction is aligned with the University's direction and largely expresses and manifests the University's expectations from the department. The departmental direction is communicated through the annual meetings to all staff by the Dean and through a specific support and evaluation scheme for the staff, by the Designated Senior Member (DSM). Each staff member (apart from the Professors) has a DSM who evaluates the performance achievements and ensures the alignment of the activities with the overall targets of the department.

The performance measurement in WBS concentrates on the assessment of the academic achievements, the financial performance and the department's corporate image. The performance measurement system is an integrated part of the department's operations since it is predefined, based on specific documented procedures. The corporate image of WBS is measured by its appearance in the media and its position in the league tables, whose criteria are carefully taken into consideration. Its financial performance is evaluated by the surplus in its income–expenses equation. Therefore, its income-generation activities are measured. On the academic front, the student numbers are carefully monitored in terms of applications, number of accepted students and the entry level. The performance in teaching is monitored with quantitative measures, such as the students' feedback, and with qualitative measures by the external examiners scheme. Regarding research, performance measurement is associated with the appraisal system. Each staff member goes through an annual review of the number of books written, conferences attended and published articles in refereed journals. The academic performance is also evaluated with the external exercises by the HEFCE. These are the Teaching Quality Assessment (TQA) and the Research Assessment Exercise (RAE). The fact the RAE influences the governmental funding of the University is one of the reasons for setting very specific targets with respect to research achievements; each staff member knows exactly how many publications he or she should produce within a given time frame.

Department of Physics

All the interviewees within the Physics Department expressed very similar opinions about the University's direction; this is to be seen as a highly regarded University which is research led. The majority of the participants in these interviews stated very clearly that there is an emphasis and priority given to research activities by the University, compared to teaching: '*it is very much a research intensive University*' (Lecturer), '[the University] *is trying to develop a world class, research led institute*' (Head of the Research Committee).

The direction of the University is articulated informally via the Head of the department, the Head of a research group described this process as the '*drop down effect*'. However, the interviews with staff members who do not have direct contact with committees of the department nor the Head of the department, suggested that they are mainly communicated the direction for the Physics Department which they used to interpret the direction of the University. A very interesting comment regarding the communication of the direction was made by the Head of the department, who explained that he is informed of the University's direction through his personal contacts with senior academic officers who he has known for a long time. However, he admitted that if he were new to his job, he would not know how to be informed of the University's direction.

Regarding specifically the direction of the Department of Physics, there is not any formal statement and significant variation was observed in the answers provided (considering the small number of interviews). For the Head of the Department, Physics has a clear mission of '*developing and teaching good science*'. As for the longer term direction, he believes that it should be to '*become a 5* in the RAE*'. He also expressed his doubts whether this is a realistic goal, due to the limited capabilities of the department in terms of its size and facilities. The rest of the interviewees expressed more sceptical views on the departmental direction as they

claimed that the main focus is growth in order to be able to compete with the other Physics departments in the UK which achieved the grade 5* in the last RAE: '*to strengthen in the areas that we are already involved in and to expand into new areas of academic interest*' (Finance Manager), '*to grow to become a mid to large Physics Department*' (Head of the Research Committee).

The Department of Physics has limited autonomy in its budgeting, and its decision making is dependant on the committees of the University. This is reflected in the fact that the strategic planning within the department is focused on developing initiatives and short-term strategies. These are developed within the Steering Committee; the main driver for their development is the finance available: '*the main issue taken into consideration is the funding available by the University*' said the Head of the Department. The most important performance measurements used are the student numbers, which are strongly linked with the income generated, and the performance achievements of each group. It must be highlighted, that the departmental direction concerns mainly the research direction of the department: '[the departmental direction] consists of the direction in the research activities' (Head of the department) and particularly the strengthening of research groups, the expansion into new fields of research interest and the elimination of those that are not performing adequately. The chairman of the Research Committee described very clearly the criteria for the development of the strategies that will drive the Department in the desired direction: '*an area of research which is clearly attracting a very large flow of research income, that is an area that would be more close to the top of the priority list*'.

The performance measurement system in the Physics Department is based on a limited number of assessments. The main focus is the measurement of the income-generation activities and the academic achievements. The income-generation activities are measured by the number of applications made for grants and the number of successful ones. Concerning the academic achievements, the student numbers and entry levels are constantly measured and taken into consideration.

Teaching is evaluated by the measurement of the students' complaints and the qualitative comments of the external examiners. Research is assessed by the publications produced and the conferences attended. In the Physics Department, the only target set in terms of the expected performance is the number of applications for grants made. It should also be highlighted that the performance is measured through informal practices which take place irregularly. The appraisal system is not part of the performance measurement system.

The Department of Physics is monitored and controlled through some basic functions such as its budgeting and recruitment. All the income available for the Department is allocated by the committees of the University. The same applies to recruitment, which is subject to the approval of the Estimates and Grants Committee, in order to ensure the alignment of the departmental direction with University's direction.

Hospitality Services

The operation of Hospitality Services is different to the previous two academic departments. This department has its own direction which is formally expressed within its mission and vision statements. These are developed by the board of the department, which consists of the Executive Director, the Operations Director, the Head of Finance & Purchasing, the Head of Sales & Marketing and the Head of Human Resources. The direction of the Hospitality Services is recorded in the 5 year plan which is reviewed once a year. The development of the departmental direction follows a 'textbook' approach, since a great variety of management tools were used, as the Head of Finance highlighted: '*we use Porter's five forces and we also use SWOT analysis to identify strengths, weaknesses, opportunities and threats [ ] we also buy a report for 'environmental scanning' regarding all our regional competitors*'.

The alignment of the departmental direction with the University's organisational direction is achieved through '*a process of osmosis*' as the Executive Director described it. The process of osmosis described by the Executive Director refers to the embedding of the organisational direction in the organisational culture. As he explained, his understanding of the University's direction comes from his participation in meetings with senior officers and his interpretation of the 'culture of excellence' which according to Executive Director defines the practices at the University of Warwick. Similar opinions were expressed by the Catering and Accommodation Manager who suggested that even if the direction of the University is not formally communicated, there is a general understanding of the 'Warwick way', as he called it which is associated with 'excellence'.

This department has a number of communication strategies for the direction of the department, which explains why all the interviewees provided very similar responses and were all aware of the departmental direction. Obviously, they were all influenced by the orientation of their department which is focused on income generation activities.

At the moment that the interviews took place, Hospitality Services were in the process of implementing a Balanced Scorecard across the whole department; four 'Key Results Areas' have been defined, for each area the 'Actions/Tasks' necessary to be undertaken have to be determined and for each action/task a list of appropriate 'Measures of Performance' have been set. Furthermore, their Balanced Scorecard identifies the 'Competencies, Development/Training' required, providing the deadlines for their achievement and the person responsible for the monitoring of their realization. It is worth mentioning the four 'Key Results Areas', which are: (1) Finance, (2) Customer Satisfaction, (3) Staff (Human Resources) and (4) Continuous Improvement. At the time that the interviews were conducted, the Balanced Scorecard was used only at the corporate level and they were trying to cascade it down so that each division of Hospitality Services has its own Balanced Scorecard for its own operations. The departmental scorecard is used to define the

'Goals/Targets/Objectives' for each employee, with the 'Actions Required' and the corresponding 'Measures of Success'.

4.3 Discussion

The examination of the strategic development processes in the University of Warwick showed that the majority of the practices are characterised by their informality. Informality is a conscious choice by the senior academic officers who believe that the current structure and development of the University as well as its culture, are better served with informal processes. The informality of the processes made it significantly more difficult to investigate the relationship between setting the organisational direction and performance measurement, however a series of important observations need to be discussed further.

Overall, the performance measurement system of the University is engaged with both financial and non-financial assessments. Its financial measures are recorded extensively in its annual review (Warwick 2002). Nevertheless, the interviews with the members of the top management teams revealed that the University's success is not measured with these figures. It is primarily the academic excellence that constitutes the University's feeling of being successful. In the non-financial measurements, the measurement of the academic achievements can be seen as an assessment of the institution's quality.

One of the criticisms of the existing system, as determined by the interviews conducted, is that the assessment of quality of academic excellence is driven by the financial implications and benefits related to it; a number of academics expressed their doubts whether the academic quality should be measured with the indicators set by the RAE. This is reinforced by the staff's perception (not shared by the top management team members) that the appraisal–reward system is linked to indicators coming from the RAE. The problem of assessing the quality of research

is not new to the academic world. Oliver (1993) discusses the difficulties of developing an 'appropriate' measurement, explaining that the volume of research output does not mean quality, whereas the use of more sophisticated approaches, such as citation indices, have limitations with regard to time-constraints.

Analysis of the employees' perceptions and interpretations of the University's direction, led to the understanding that the performance measurement system has been the means for communicating the University's 'direction'. The staff members have clearly stated that their interpretation of the University's main 'direction' comes from the measurement of their performance. The emphasis placed on setting specific targets for the research outcomes, either in terms of publications or grants applied/approved, has been appreciated as an indication that the University is 'research-led', as far as the academic departments are concerned. Similarly in the non-academic department, the fact that there is an emphasis on monitoring the financial surpluses has been interpreted that the University has a very clear direction with regard to the non-academic activities. This element of performance measurement has been emphasised by Kaplan and Norton (1996) who suggest that the Balanced Scorecard should be communicating the organisational vision. Wang (2002) found that the performance measurement's impact is mainly on the external communication. This case research has in practice identified that performance measurements are a means of internal communication, without necessarily being developed according to the balanced scorecard principles, supporting McAdams and Bailie's (2002) proposition that performance measurements have the ability '*to communicate the organisation's strategy and direction across a wider base using appropriate performance measures*'.

One of the most important observations made is that there exists significant variation in the perceptions and interpretation of the University's direction. The fact that the employees' perceptions of the University's 'direction' are not always accurate or are in agreement with perceptions of the senior academic officers is an additional support for the importance of the design and development stages for the

performance measurement systems. On this issue, Smith (1993) has identified a list of '*distorting and potentially dysfunctional effects*', which can be avoided by the alignment of the organisational direction and the development of the performance measurement systems (see for example Neely et al. 1994).

One crucial issue that needs to be discussed is whether this research has reinforced the suggestions of the existing literature with regard to the nature of the performance measurement systems in the academic institutions. As has been already discussed, higher education academic institutions are considered to be public sector organisations and therefore their primary goal and consequently the focus of their performance measurement, should be the social benefit (Smith 1995). The University of Warwick has a specific statement regarding its interaction with the local community; however, no indication was found to show that the performance measurement systems of the University are driven by the evaluation of the social impact and benefit. Without doubt, one can claim that there is a link between the current practices of the University and social benefit. Nevertheless, it did not appear as a clear objective. Moreover, it could be said that the majority of the performance measurements are influenced by the income-generation activities; this is a result of the funding policy of the government in the UK which has made the education sector a quasi-market (Clark 1998). This can also explain the link between the external assessments of the University such as the Research Assessment Exercise and the appraisal systems.

The research conducted revealed that the performance measurement systems monitor the end result of the University's activities. They have a rather corrective and reactive role, since characteristics of a proactive philosophy have not been detected. This means that in their current state, the performance measurement system has been developed so as to be able to monitor and control whether the performance achievements match the expected results and targets, indicating corrective actions if necessary, but it is not the intention of the performance measurement system to identify potential problems before their occurrence.

Reinforcing this argument, it has to be added that the effectiveness of the communication practices of the University's direction is not usually monitored (Hospitality Services is an exception). The same applies to the assessment of the strategy implementation which is not measured either. The strategy and its implementation are evaluated based on the results produced.

Investigating the impact of performance measurement upon direction-setting in the University of Warwick, no observation could be made with regard to its vision and mission. This is due to the fact that no significant change in the University's mission and vision has taken place in the last 15 years. The University of Warwick has constantly seen itself as a leading institution which has to deliver high quality teaching and research, gaining global recognition for its achievements and contribution to knowledge and society.

The changes in higher education and in the environment that influence the University's operations provoke a continuous change in the strategic objectives and the strategies selected for their achievement. Performance measures have a critical role in the identification of the strategic objectives and depict the current status of the organisation. The development of the strategic objectives both at corporate as well as at departmental level has been described as 'gap analysis': a comparison between the desired future achievements and status and the current situation. The University's strengths and weaknesses are determined by the information supplied by the performance measurement. In the University of Warwick the 'Academic Database' has been characterised as a very useful tool helping the members of the top management teams to understand where the emphasis should be placed.

Similarly, performance measures have been found to be extensively used for the development of the University's strategies. Their usefulness is explained by the fact that the collected information indicates the source of competitive advantage for the University and the areas that need to be improved. Using the performance measures, the senior officers of the University can detect which areas need to be

supported. The impact of performance measurement in the development of the strategies reinforces the validity of the model suggested by Dyson (2000) and Dyson and O'Brien (1998) who have identified the link between performance measurement and the strategic control function, but they have also determined that there is an interaction between performance measurement and the development of strategies, in terms of 'strategic initiative development'. The case study of the University of Warwick showed that information collected by the measurement of the organisational performance is used for the development of strategic initiatives and in particular it aids the identification of weaknesses and areas that need to be improved.

Attempting to provide further insights into the impact of performance measurement upon direction-setting, it has to be added that the way that performance measurement influences the development of the direction and the associated strategies is by contributing to the organisational learning. The latter does not refer to the attempts to link performance measurement with organisational learning, in terms of measuring the output, efficiency and effectiveness of the learning activities but it suggests that performance measurement can play a part in the learning in the organisation. Learning is another term that has been defined and explained in various ways in the literature. A rather generic definition of organisational learning is given by Argyris and Schon (1978) '*the detection and correction of errors*'. Huber (1991) considers learning to be a construct of four variables: '*knowledge acquisition, information distribution, information interpretation and organisational memory*'. This suggests that performance measurements' impact in setting the organisational 'direction' is also through the learning activities. The impact of performance measurement in organisational learning has been also suggested by Feurer and Chaharbaghi (1995) who have pointed out that the links between the measurement of performance and direction-setting are traced on the feedback loop process which '*comprises both cognitive and behavioural learning. Cognitive learning, by and large, relates to the process of strategy formulation and focuses on*

generating knowledge about the organisation's competitive characteristics and value system'.

4.4 Conclusions: forward to the next chapter

This case study was set up to examine the relationship between direction setting and performance measurement. The investigation into the practices of developing the direction of the University showed that even if the mission and vision for the University of Warwick have not changed over the last decades, a number of changes have occurred in the strategic objectives, initiatives and strategies selected. This could be explained by the inclusive nature of the University's mission and vision which do not need to be updated; all the changes identified are located in the approaches employed to fulfil the requirements of the mission and move towards achieving the vision.

This case study revealed that the investigation of the relationship between direction setting and performance measurement will be better served if the term "direction setting" is expanded into its core elements, so as to enhance the understanding of the processes involved. Kotter (1992) states clearly that direction setting is a rather inclusive process which contains apart from the development of the direction, its communication and implementation. This suggests that it is necessary to examine relationship between organisational direction and performance measurement within the broader frame of strategic planning in order to examine more analytically the interrelationship and interdependencies with the other elements of strategic development processes.

One of the dangers of 'breaking' down one concept into its main elements, in order to facilitate its examination is the adoption of reductionism (Capra, 1997) which is opposed in the main principles of this thesis which is aligned with the concept of holism. Holism is rooted in the *Gelstat* theory which recognises that 'the total is

more than the sum of the parts' (Beer, 1995). To overcome this problem, the framework of research that will be used should conform with the principles of holism. For this reason, the framework selected the Strategic Development Process model by Dyson (1998) (presented in Chapter 2, section 2.5.7) has been used to develop the next stages; this model comes from the systems thinking background which is the theory which can address the holistic investigation into management concepts.

This exploratory case study responded to the initial research questions which required the development of an understanding concerning the relationship between organisational direction and performance measurement. Also, the fact that it was an in-depth case study provided the chance to examine, another research question, concerning the practices involved in setting the organisational direction and how this influences the design and development of the performance measurement system. Furthermore, through this case study the impact of performance measurement on setting the organisational direction has been addressed.

Summing up, this case study reinforced the arguments of the literature regarding the relationship between direction setting and performance measurement and at the same time brought forward some propositions about the potentiality of other elements of this relationship. However, the fact that the changes in the University of Warwick's direction are limited did not allow expanding the investigation into the determinants of this relationship. It could be hypothesised that some of the reasons that the direction of the University remains largely unchanged have to do with the stability in the sector of academic institutions (-low environmental turbulence) and the organisational characteristics of the University such as its size. These are better investigated in an empirical research of larger scale where comparisons can be drawn between organisations of different characteristics. This led to the decision to conduct a survey which is presented in the following chapter.

Chapter 5

On the relationship between organisational direction and performance measurement

5.0 Summary

This chapter presents the results of the large multinational survey. Initially, an introduction into the reasons why this survey was conducted is provided, to link it with the exploratory case study of the previous chapter. Regarding the results, firstly the profile of the survey is presented concerning the response rate and the basic characteristics of the responders. A statistical analysis has been conducted and is presented. Initially the descriptive statistics are provided structured according to the research framework (Strategic Development Process model). The descriptive statistics also include the correlation matrix, which serves the purposes of an exploratory analysis of the data. Then the multivariate analysis is presented starting with factor analysis, then hypothesis testing and regression analysis, followed by a discussion on the most important findings of this survey. The overall outcome of the survey is discussed and compared with the literature. The last section of this chapter analyses which aspects of the research questions have been answered by this survey and introduces the next step of this research towards providing a comprehensive and coherent answer to the initial research questions.

5.1 Introduction

This survey was conducted to address the issues raised by the exploratory case study. The latter identified that the relationship between organisational direction and performance measurement is a dynamic one which potentially can be a two-way relationship; organisational direction influences the design, development and implementation of performance measurement and at the same time, performance measurement influences the development (or review) of the organisational direction

and can have a critical role in its articulation and implementation. However, as discussed in the last section of the previous chapter, it is better to examine those two concepts within a broader and more holistic frame, since their relationship is influenced by other parameters and elements of the strategic development processes.

This stage of the research is engaged with the research questions which require the investigation of the organisational direction's and performance measurement's role within the strategic development process in order to examine their interrelationships within a greater frame. This stage also addresses the research questions which examine the determinants of the relationship between organisational direction and performance measurement.

This survey was conducted to map the current practices of the strategic development process and to investigate the role and impact of organisational direction and performance measurement within a broader frame of strategic planning as expressed by the Strategic Development Model (Dyson and Foster, 1980, Tomlinson and Dyson, 1983, Dyson, 2004) model. The decision to frame this stage of the research with a rather inclusive model of strategy has been made to ensure that responders will engage in this research's scope and participate. As has been already discussed in Chapter 3 (Methodology), the model's elements: vision, mission and strategic objectives, which are considered to be manifestations of the organisational direction, have all been grouped under the title 'organisational direction development' to ensure that the responders will not have difficulties identifying the organisational practices within their organisations, as addressed by the questionnaire.

In addition, in the previous chapter with the exploratory case study, some of the differences, between the practices within the organisation examined and the existing literature, were explained by the organisational characteristics. Particularly it was discussed that its size and the dynamics of its sector, influence its strategic development processes. Therefore this survey seeks to examine whether the organisational characteristics are determinants of the relationship between

organisational direction and performance measurement within strategic development processes.

This survey addresses a gap in the literature, as explained in detail in the first two chapters, concerning the examination of strategy from a process point of view. At the same time it contributes to the limited number of published surveys evaluating the strategic planning on the effectiveness of the process itself, rather the organisational achievements, as explained in the literature review (Chapter 2) and the methodology (Chapter 3).

The profile of the survey shows the responders come from a wide mix of organisations from different backgrounds and the majority of them are directly linked to the strategic planning process within their organisation. Therefore it is apparent that the division of data into specific categories will provide more insights on the concepts examined.

Another issue that should be emphasised is the step approach of this research. The descriptive statistics are setting the scene, and show that there are meaningful relationships among the variables of this survey. The multivariate analysis presented in this chapter consists of: factor analysis, hypothesis testing and regression analysis. Factor analysis was conducted to reduce the number of variables by grouping them into meaningful factors. Hypothesis testing is built on the observations made on the exploratory case study (Chapter 4), and regression analysis aims to enhance the conclusions made by the hypothesis testing. Cluster analysis was also conducted and although in some cases the results were similar to the ones of regression analysis, in most of the analysis the results were not meaningful.

5.2 Response Rate

WBS alumni database was used for this survey; 4000 emails were sent (see Chapter 3 for more details). The total number of responses was 428. Taking into

consideration the number of emails returned undelivered and the responders who felt they were not able to participate, the response rate is 11.4%. Some of the potential responders wrote back and explained the reasons for not being able to participate; some of those reasons were: being between jobs, company policy did not allow them or had retired. Also a number of people may not have participated due to their lack of experience or involvement with the strategic planning processes in their organisation. In addition, 90 responses were ignored due to incomplete answers. These responses had to be ignored because the responders had stopped filling in the questionnaire after the first couple of stages. An examination into those questionnaires determined that the majority of those participants had either only 'awareness' or were not involved at all with the strategic planning process. The set up of the online page allowed the participants to 'save' their responses and continue the completion at some other time. It is assumed that this was the main reason that the responders who had not a direct relationship with strategic planning in their organisation did not fill in the whole questionnaire.

The response rates of surveys on strategy vary according to the sample, its size and the research approach. An extensive review of questionnaire based surveys over the last 12 years, in two leading academic journals, the Strategic Management Journal and Long Range Planning, has been conducted, to ensure that the results of this survey are comparable with other published surveys. As expected the greatest response rates are recorded for surveys with a small number of responders, for example Reger et al (1992) achieved 98% response rate, but with only 50 participants. There are only 10 surveys with more than 1000 questionnaires sent, and two of them have more than 2000 questionnaires sent. For the latter category the response rates are similar to this one, in the article by Hart and Bandury (1994) 3625 questionnaires were posted and 20% response rate was achieved, while in McDouglas et al (1994) 2552 questionnaires were sent and they had a 11% response rate. Unfortunately the response rates tend to decline recently as noted by (Baruch, 1999), due to the large number of surveys conducted, organisational policies and sensitivity of information enclosed. Other surveys that used alumni databases such as the Maltz et al (2003) produced similar response rates (11%).

Concerning the approach of administering the questionnaires it is established (Boyer et al, 2002) that online surveys have undoubtedly a series of advantages, compared to mail surveys: easier to administrate, minimum costs even of large size samples, speed of delivery of the responses, easy to edit and use in relevant software. However, it has been found (Tse, 1998 and Crawford et al, 2001) that generally they produce lower response rates because i) there is a growing number of online surveys and people cannot afford to spend to much time on them, ii) there is the fear of security particularly with the recent problems of unsolicited emails (spam), iii) regular changes in the email address makes it difficult to have very accurate and updated databases.

The responses were checked for non response bias based on the widely acknowledged approach suggested by Armstrong and Overton (1977), which compares the early and late responders; early responders are presumed to have a greater interest in the topic of the research. No significant difference was found between early and late responders for: number of employees (t=-0.935, p=0.351)*, turnover (t=-0.405, p=0.685), country of origin (t=-1.285, p=0.201), level of experience (t=-0.383, p=0.702) or level of involvement (t=-0.766, p=0.445).

5.3 Research Profile

This section presents some of the main characteristics of this survey's responders. It is based on the first set of questions on the questionnaire which recorded the relevance of the responder to the topic and the main features of their organisations.

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* the difference is significant for $p<0.05$ (Hair et al, 2003)

5.3.1 Responders' profile

Job Title

The job titles provided by the responders are not really comparable, thus they have been grouped into 11 categories, as can be seen in figure 5.1. It is important that the responses cover a great variety of roles within the organisation, which ensures a different range of viewing strategic development processes. The importance of having variety in the responses is essential for this research because it aims at recording the current practices without limiting itself to the perceptions of a certain type of practitioner; this will allow greater generalisation of conclusions.

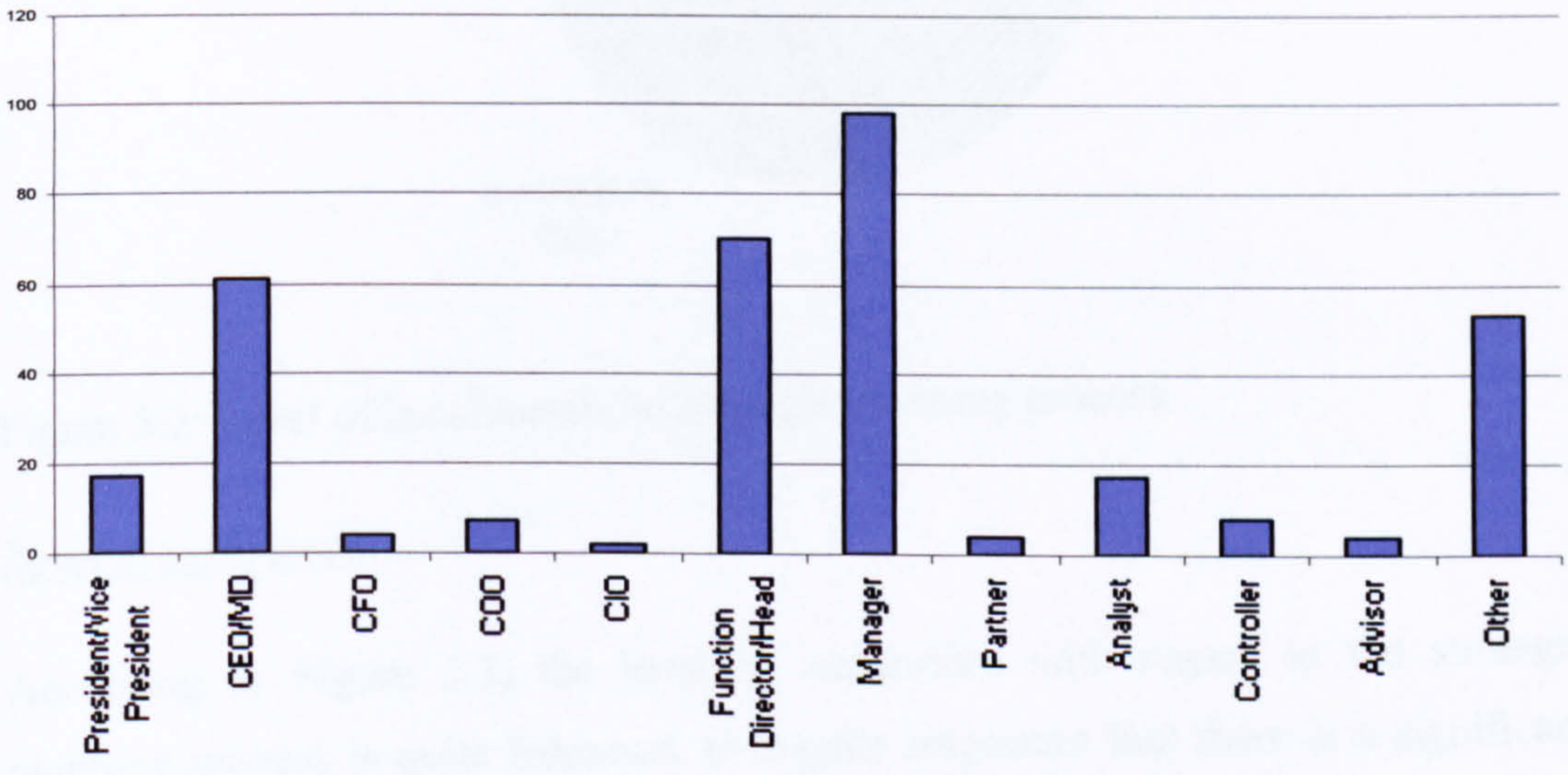


Figure 5.1: job titles of participants

Level of involvement

Most of the responses received concern the strategic planning process at the corporate level of the organisation, although there is a fair representation from departmental and subsidiary level, as can be observed in figure 5.2.

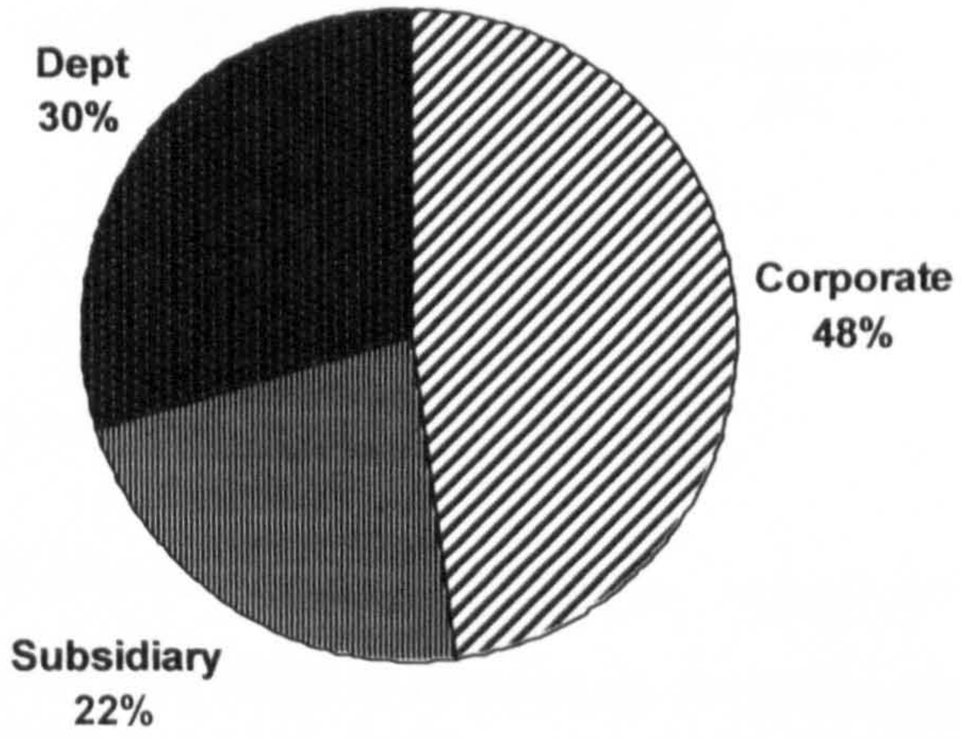


Figure 5.2: Level of involvement in strategic planning process

Level of experience

According to Figure 5.3, the level of experience with regard to the strategic planning process is quite balanced. It is quite important that there is a significant number of responses from each level to ensure holistic coverage. The value of having balanced representation from all different levels of organisational experience ensures that the results are limited and fragmented by the perceptions of only a certain group of practitioners.

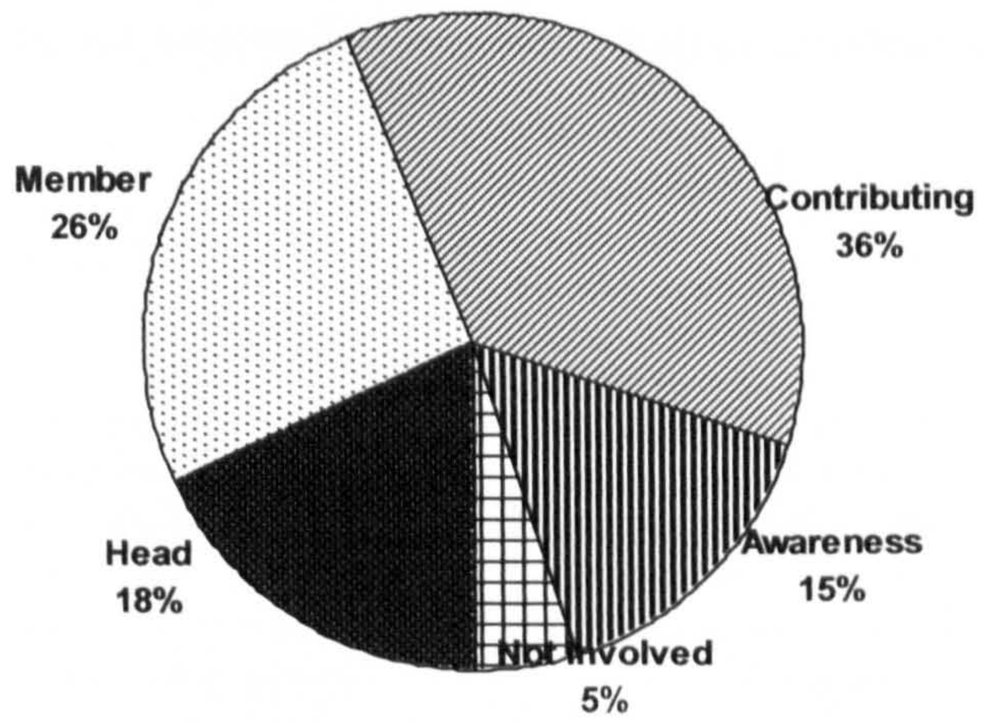


Figure 5.3: Level of experience in strategic planning process.

'Head' stand for Head of the strategic planning team, 'Member' for someone working for team or business unit which is responsible for either the development or the implementation of the strategy, 'Contributing' for someone whose job was related to a function with supports the activities of strategic planning, 'Awareness' for someone whose job was not directly related to the strategic planning but had some visibility on the process.

5.3.2 Organisations' profile

Country of responders' organisation

The responses received come from 42 countries. As it can be seen on Figure 5.4, the UK has almost half of the responses which is perfectly reasonable given that almost half of the WBS alumni are from the UK. The only other countries whose participation was above 5% were Singapore, China, U.S.A. and Greece. It should also be added that in almost all cases the responses from each country correspond to 10% of the corresponding number of entries. The WBS alumni has 18,000 members from 115 countries. However, the list of the database provided for this survey had 4100 entries, 46% of them were UK students. Calculating the percentages of each country with participation above 5%, it was found that in all cases apart from

Greece, the responses corresponded to the 10% of each country's number of members. For Greece, the response rate was slightly higher reaching 15%.

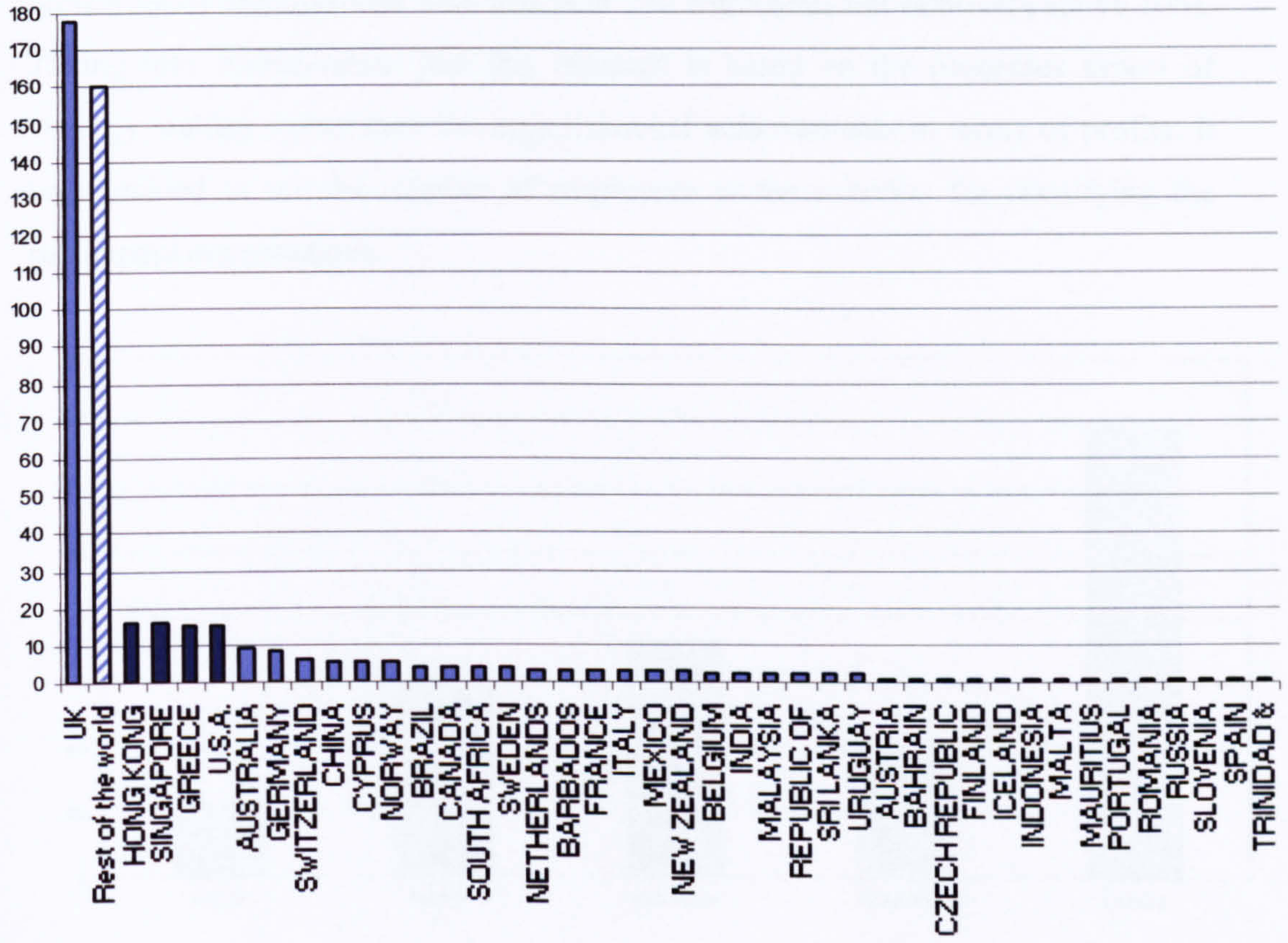
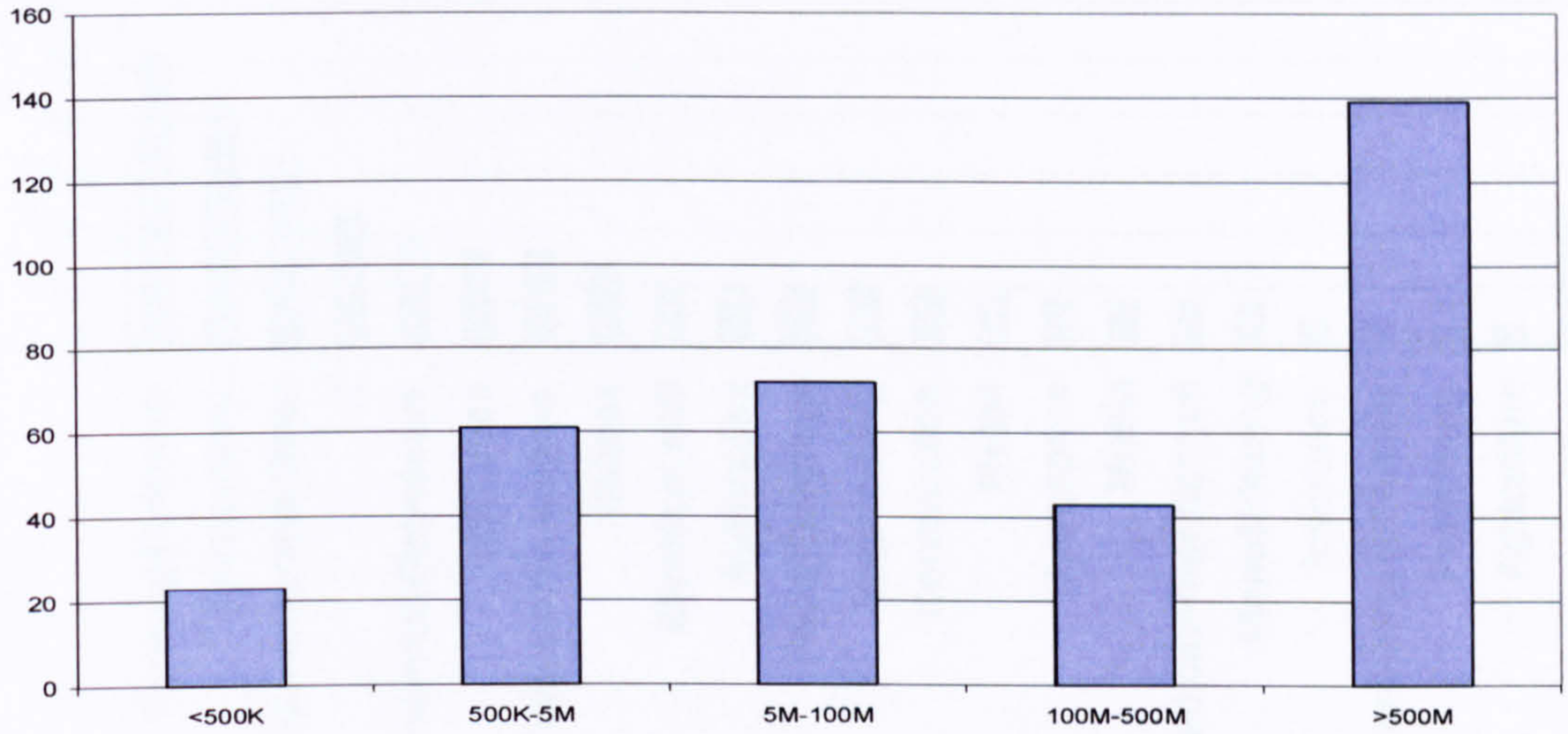


Figure 5.4: Country of responders' organisation

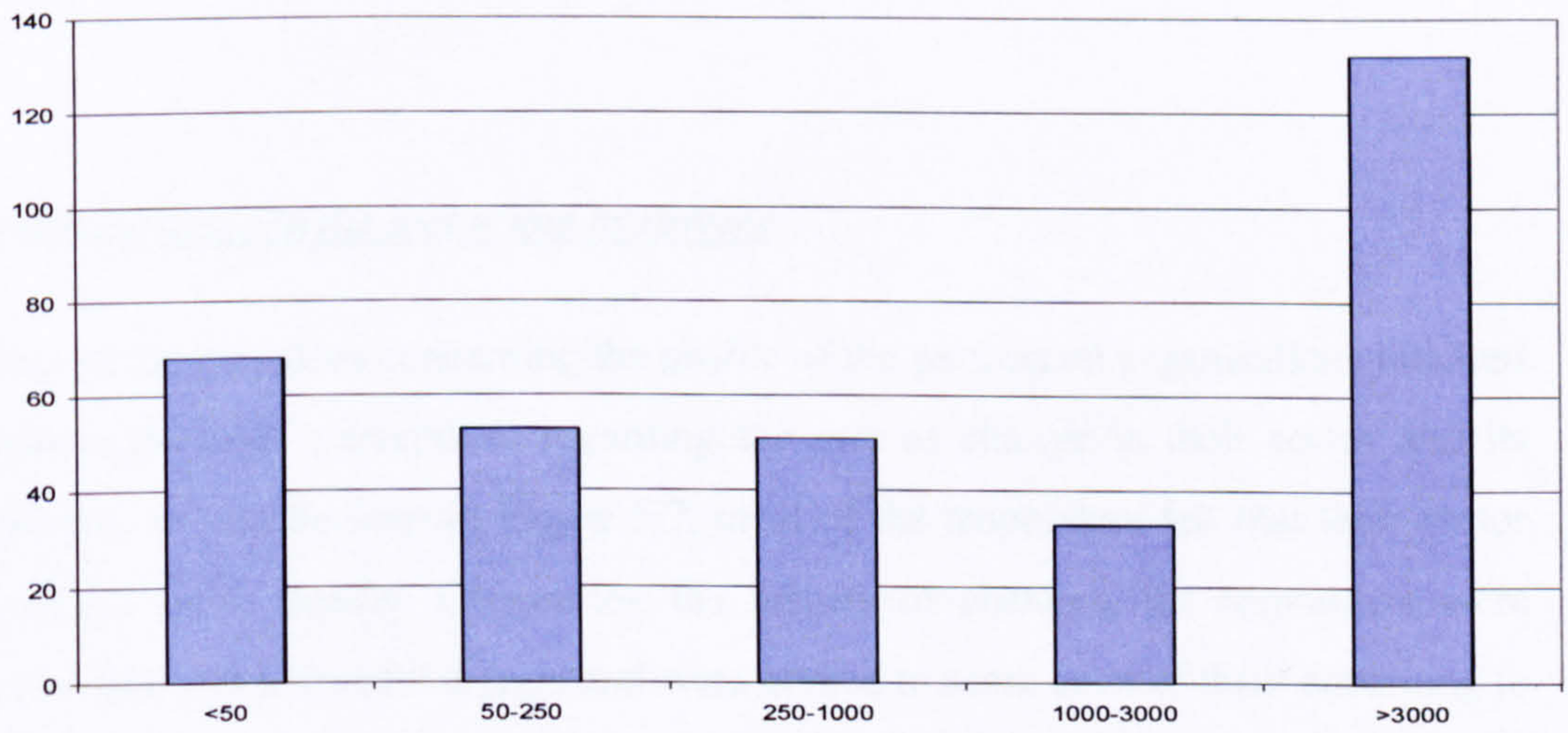
Organisational size

There were two measures of the organisational size: turnover and number of employees. Although the questionnaire provided 5 different options for each measure, as it can be seen in Figures 5.5a and 5.5b, for the analysis in the following stages of the research, only the number of employees was used and the responses were regrouped into two categories: SMEs and Large. This classification was based on DTI's (DTI, 2002) suggestion, that SMEs are organisations below 250 employees, according to this classification 64% of the responders work in Large organisations and 36% SMEs. According to the DTI's and EU's rule of classifying organisations based on their size, SMEs are the organisations with less than 250

employees and less than 10M pounds turnover (DTI, 2002 and EU, 2003). However, a cross-tabulation of these two characteristics showed that there were quite a lot of organisations with less than 250 employees but turnovers above 10M. Taking into consideration that this research is based on the processes aspect of strategy making rather than the organisational achievements in terms of profits, it was decided to use the number of employees as the criterion for classifying the participant organisations.



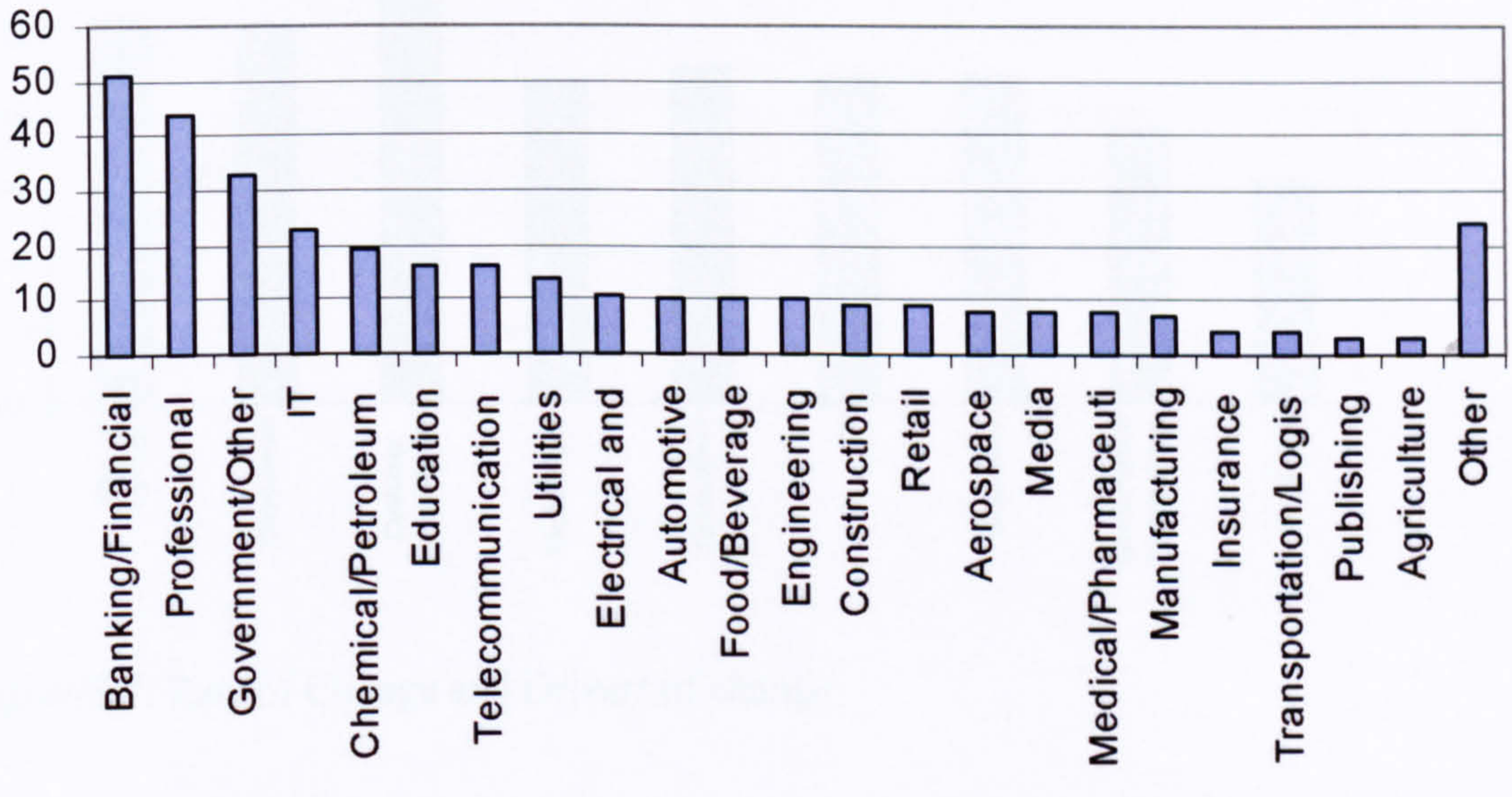
Figures 5.5a: Turnover



Figures 5.5b: Number of employees

Industrial sector

The responses received come from a very wide range of industrial sectors. As shown in Figure 5.6, the most popular ones are: Banking/Financial services, Professional services, and Government/Other public sector.



Figures 5.6: Industrial sectors

Rate of change in the sector and its drivers

One of the questions concerning the profile of the participant organisations inquired into responders' perceptions regarding the rate of change in their sector and its drivers. As can be seen in Figure 5.7, most of the responders felt that their sector changes quite rapidly. Concerning the drivers of changes, the responders were provided with a list of 9 drivers and were invited to score each of them according to the impact they have on the change of their sector. Interestingly enough, a very limited number of responders did add another driver in the option of 'other'. The most influential drivers of change are 'customer requirements' and 'competition'. It

is also worth mentioning that 'stockmarket/shareholders' and 'suppliers' share the least influential positions.

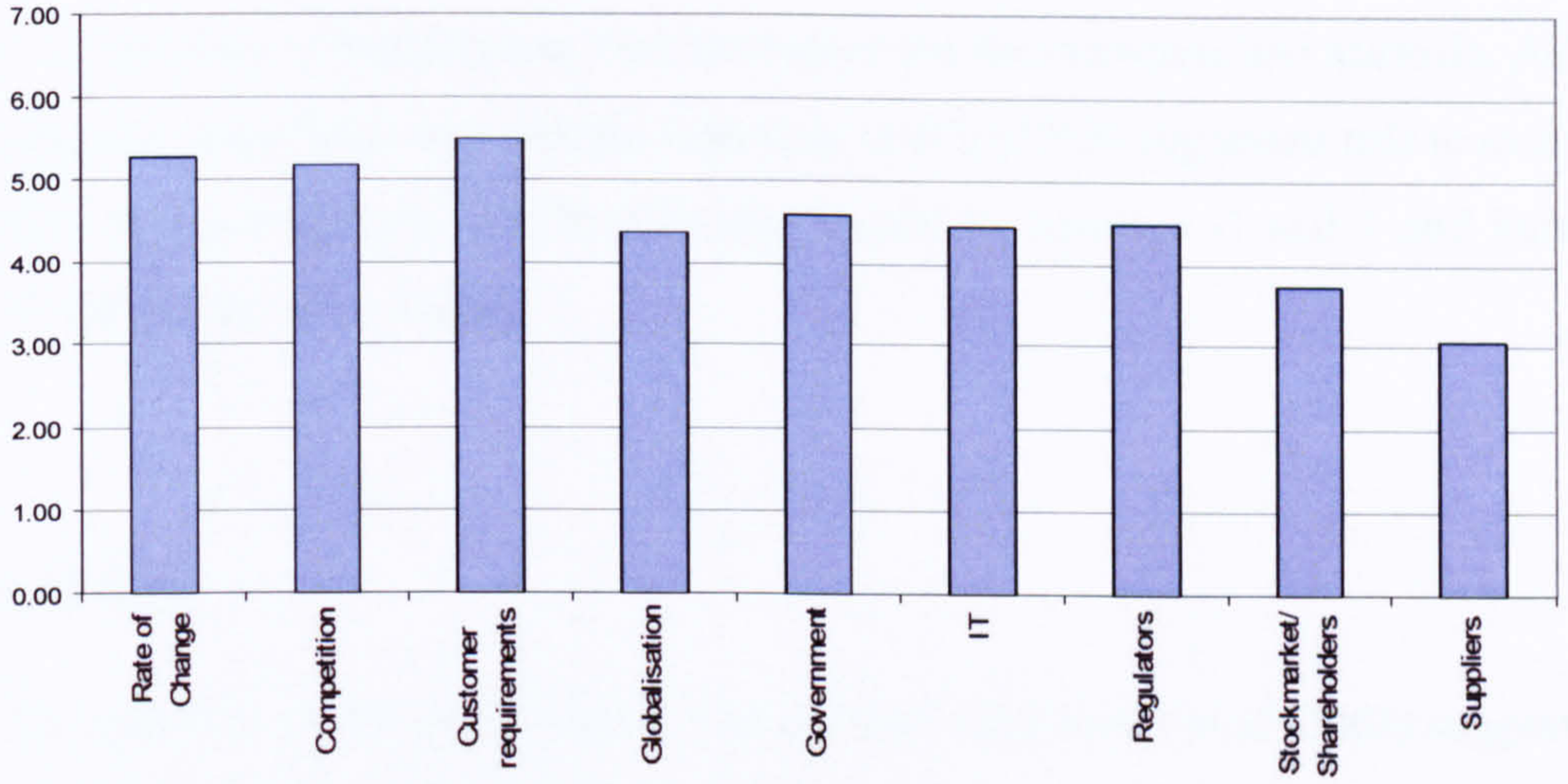


Figure 5.7: Rate of Change and Drivers of change

	Mean	Std. Dev.	Variance
Q10: Rate of Change	5.26	1.453	2.110
Q11: Competition	5.15	1.569	2.462
Q12: Customer requirements	5.47	1.443	2.083
Q13: Globalisation	4.35	1.877	3.525
Q14: Government	4.56	1.909	3.645
Q15: IT	4.43	1.829	3.347
Q16: Regulators	4.46	1.983	3.933
Q17: Stockmarket/Shareholders	3.48	2.096	4.393
Q18: Suppliers	3.03	1.686	2.841

Table 5.1: Descriptive statistics for rate of change and drivers of change

5.4 Descriptive Statistics for the SDP model

In order to present the descriptive statistics of each variable, so as to describe the exploratory analysis of the survey, it was thought that it is most appropriate to present them within the subsections of the questionnaire, which correspond to the Strategic Development Process model.

The normality of the data has been evaluated via the skewness and kurtosis. All the variables, apart from one comply with Hair et al's (2003) suggested rule to evaluate skewness and kurtosis, this is skewness should be between -1 and 1 and kurtosis should be between -3 and 3.

Reliability

The reliability of the questionnaire was assessed after Hair's et al (2003) suggestion, using Cronbach's Alpha for the whole questionnaire and for each section. The results are tabulated in Table 5.2.

Questionnaire's section	Cronbach's Alpha
Organisational Direction Development	.84
Strategic Initiative/Option Development	.8
Strategy Evaluation	.82
Implementation	.81
Strategic Feedback & Control	.85
Performance Measurement	.91
Assessment of Uncertainty	.81
Evaluation of strategic planning	.9
Overall Questionnaire	.96

Table 5.2: Reliability of questionnaire

According to Hair et al (2003) when Cronbach's alpha is above 0.9, then this set of questions or this section of the questionnaire is "excellent" and above 0.8 is "very good". Therefore, the reliability of the questionnaire is overall "excellent" and its elements are between "excellent" and "very good".

Organisational Direction Development

The results of this survey indicate that the value of organisational direction is established within modern management practices. As can be seen in figure 5.6, the mean scores for the development of the organisational direction are quite high, which means that organisations do try to benefit from setting an organisational direction and articulating it. It should be highlighted that the question with the lowest score is the one referring to the wide participation in the development of the organisational direction (Q24).

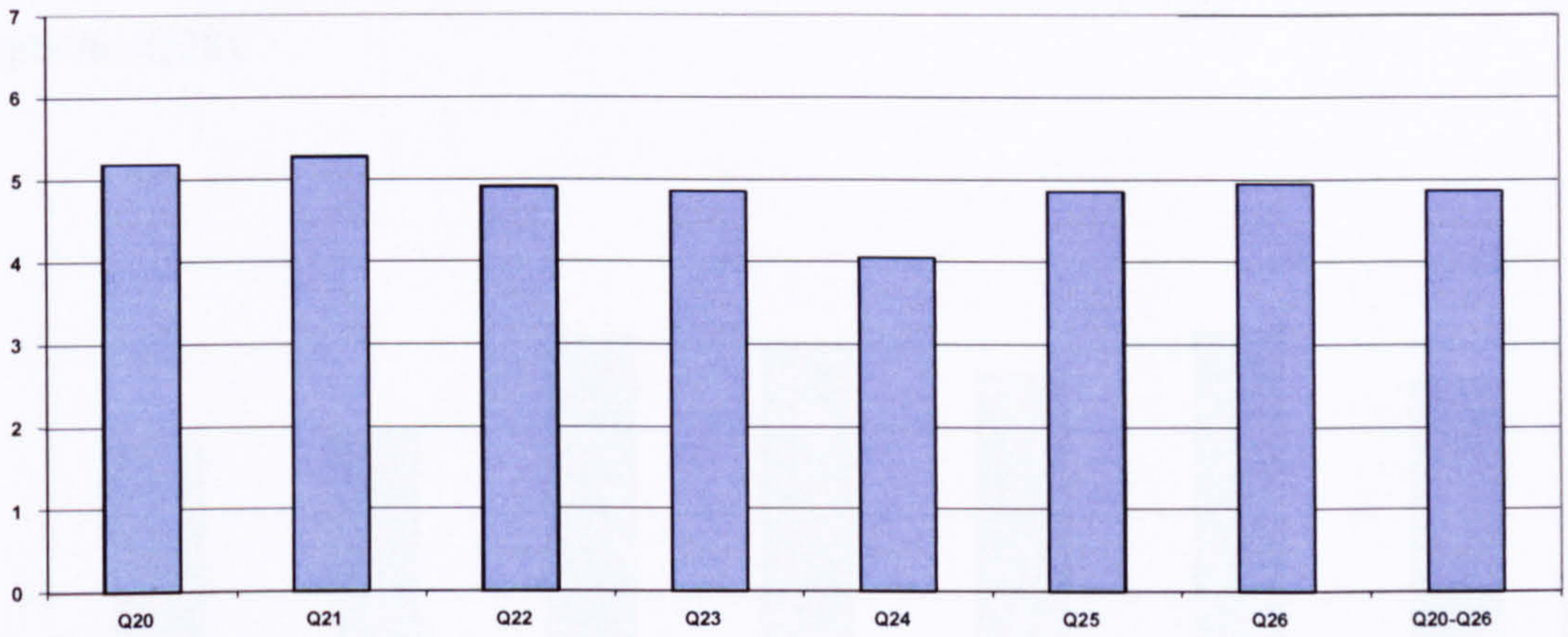


Figure 5.8: Value of mean for 'Organisational Direction Development'

	Mean	Std. Dev.	Variance
Q20: ***the organisational direction is specific***	5.19	1.396	1.950
Q21: ***the organisational direction is formally expressed***	5.28	1.465	2.145
Q22: ***the organisational direction is clearly articulated***	4.91	1.537	2.364
Q23: ***the organisational direction is reviewed frequently***	4.86	1.625	2.642
Q24: ***the organisational direction is developed with wide participation***	4.05	1.723	2.968
Q25: ***the organisation's direction is influenced by the performance measurement***	4.86	1.681	2.825
Q26: ***the organisational direction takes a long term perspective***	4.95	1.567	2.455

Table 5.3: Descriptive Statistics for Organisational Direction Development'

Strategic Initiatives/Options Development

The development of strategic initiatives/options seems to be primarily influenced by the organisational direction (Q29) and the external uncertainties (Q30) rather than the organisational capabilities. As can be seen in figure 5.9, the measurement of the organisational performance (Q31), which shows to a degree the capabilities of the organisation, has a slightly lower score than the organisational direction and the assessment of uncertainty. The same figure shows that in this stage of the strategic development processes, the participation is not wide (Q27); this most probably explains the fact that there is often not an extensive search for possible strategic options (Q28).

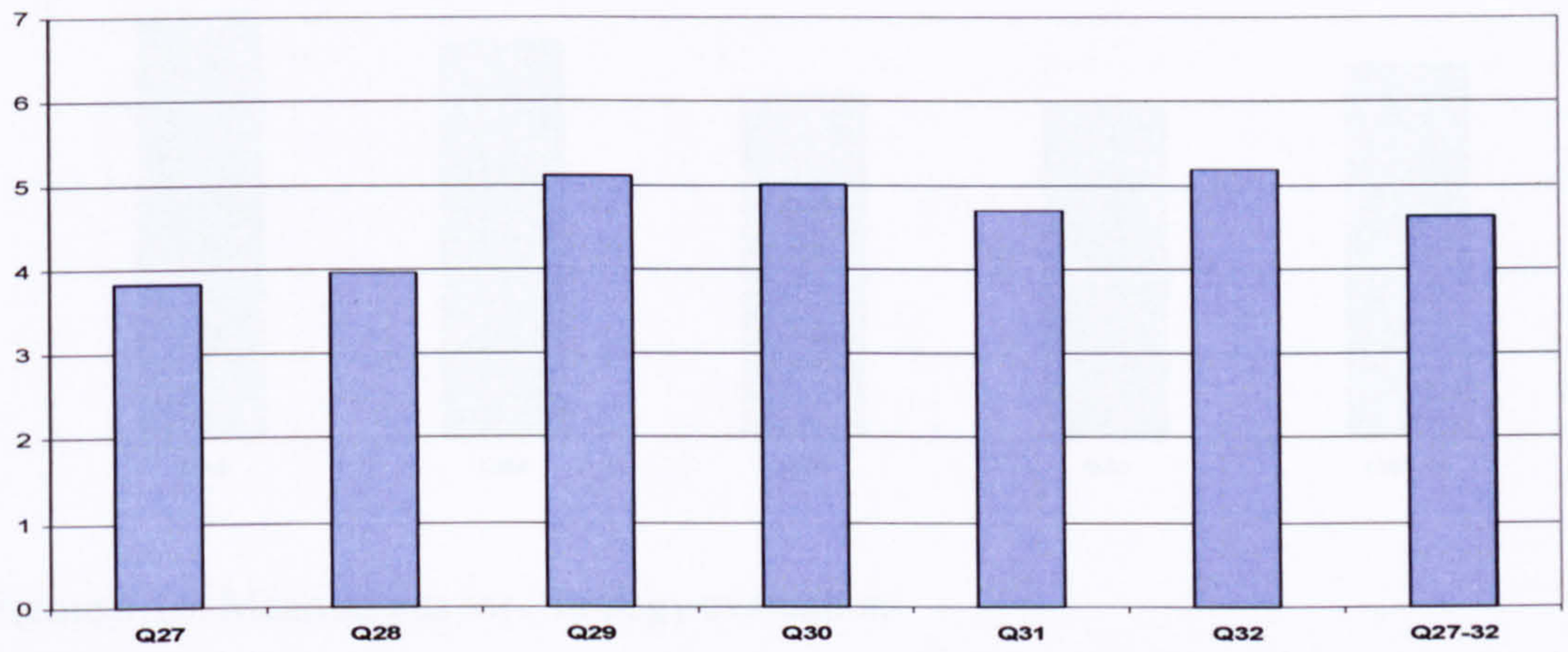


Figure 5.9: Mean scores for 'Strategic initiatives/options development'

	Mean	Std. Dev.	Variance
Q27: ***there is very wide participation in the strategy formulation/generating strategic option***	3.83	1.620	2.623
Q28: ***there is a very extensive and wide-range search for possible strategic option***	3.96	1.511	2.284
Q29: ***uncertainties in the external environment are a major consideration when developing strategic options***	5.11	1.451	2.104
Q30: ***the organisation's direction seems to have a major consideration upon strategic initiative/options development***	5.01	1.453	2.110
Q31: ***performance measurement influences the development of strategic initiatives/options***	4.70	1.630	2.657
Q32: ***a sufficiently wide range of factors are usually considered when generating strategic options***	5.19	1.535	2.357

Table 5.4: Descriptive Statistics for Strategic Initiatives/Options Development

Strategy evaluation

The evaluation of the strategy exhibits similar trends, to the previous two elements. Even if a wide range of factors are considered for the evaluation of strategy (Q33), and to large extent the resource capabilities of the organisation are taken into consideration (Q34), nevertheless there is not so much emphasis placed upon testing the feasibility of the strategies which is a difficult and demanding process. Similarly, the value for achieving consensus (Q35) has got the lowest mean value of all the questions in this section.

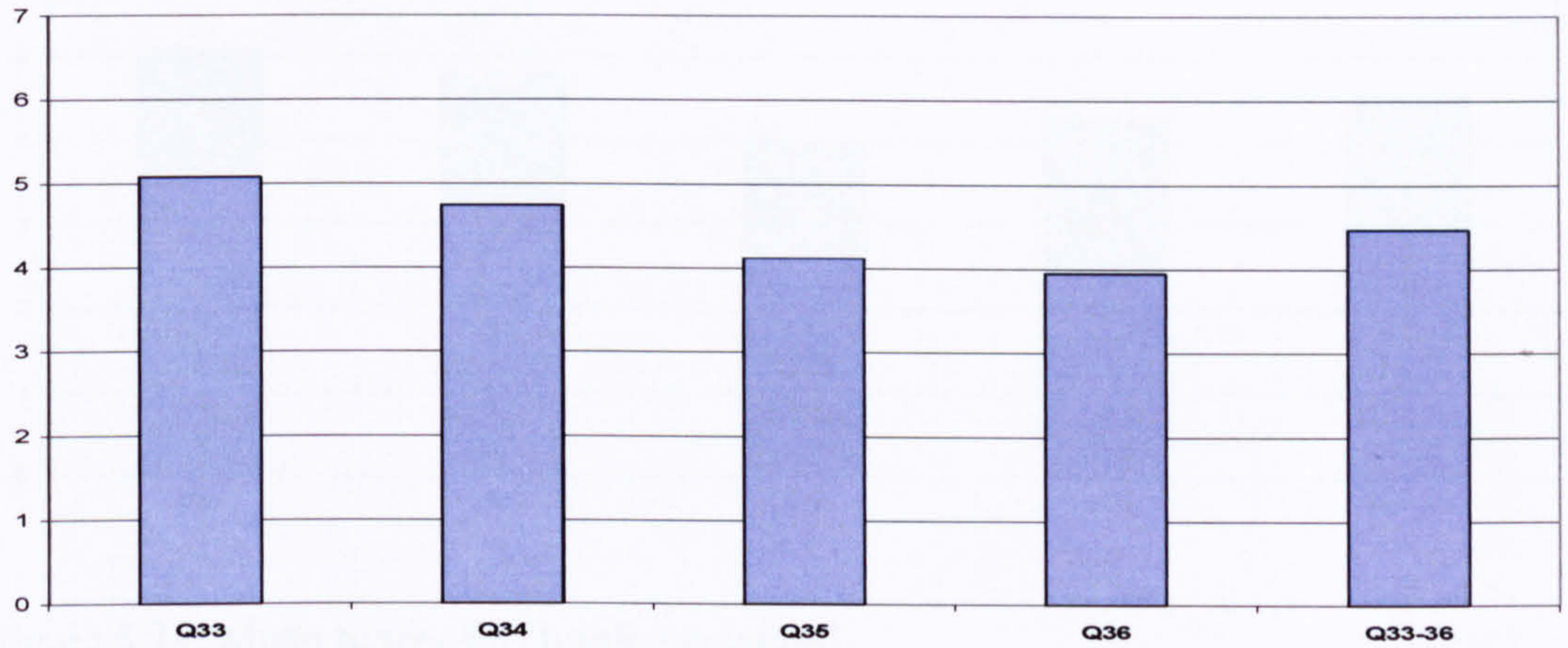


Figure 5.10: Mean scores for 'Strategy evaluation'

	Mean	Std. Dev.	Variance
Q33: ***a sufficiently wide range of factors are usually considered when evaluating strategic options***	5.08	1.538	2.366
Q34; ***the full range of relevant resources is considered as part of the strategic/corporate planning process***	4.74	1.465	2.147
Q35: ***the feasibility of alternative strategies is fully assessed***	4.12	1.540	2.370
Q36: ***the strategy evaluation/selection is based on consensus***	3.95	1.621	2.628

Table 5.5: Descriptive Statistics for 'Strategy Evaluation'

Implementation

In the implementation of the strategies it is apparent, as depicted in figure 5.11, that most of the effort is placed in translating the strategies into action (Q37). Less effort

is put into the communication of the organisational direction; however it is quite interesting that more emphasis is placed on communicating the strategies internally (Q38) rather than externally (Q39). This finding is significant in understanding that the value of the organisational direction which is not for marketing purposes but has an integral role in the implementation of the strategy. It is also worth mentioning the relatively lower score for the supporting activities concerning the implementation of the strategies (Q40).

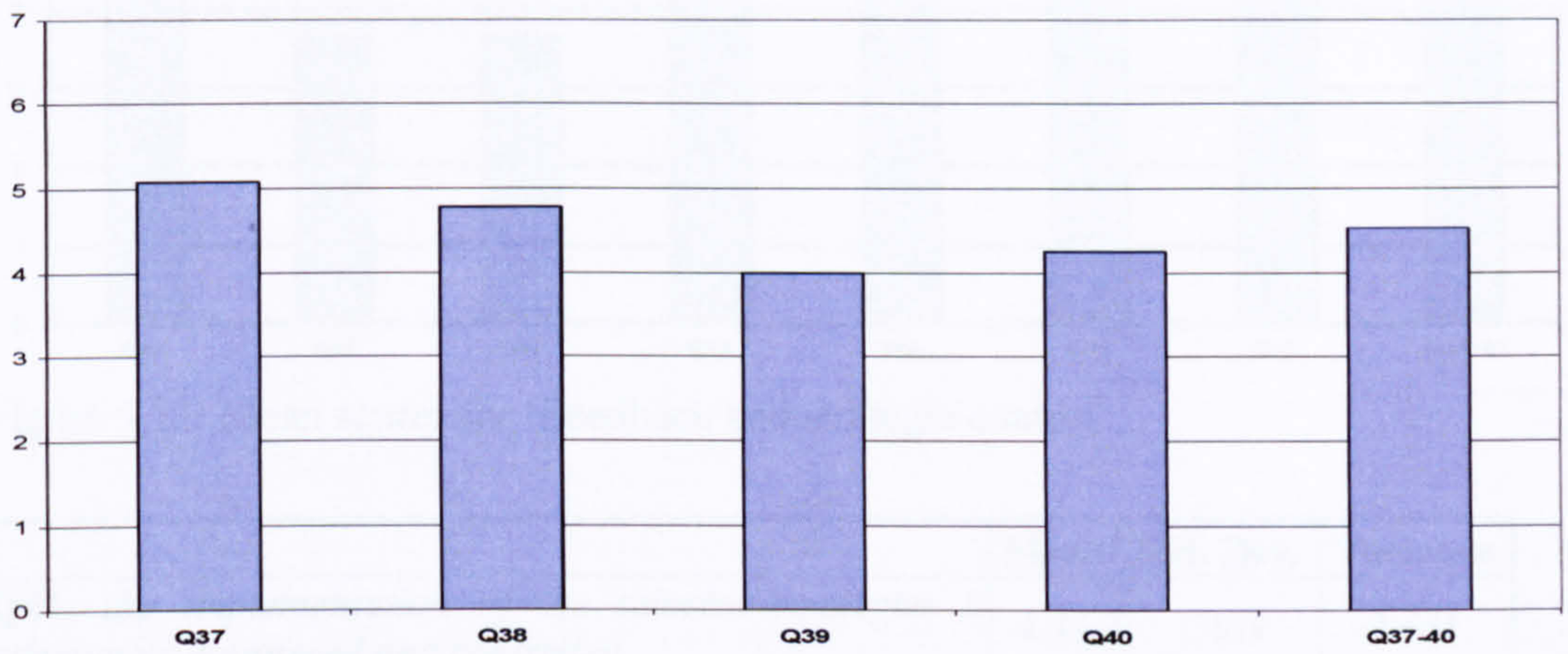


Figure 5.11: Mean scores for 'Implementation'

	Mean	Std. Dev.	Variance
Q37: ***the selected strategies are properly translated into action***	5.08	1.492	2.225
Q38:*there is wide internal communication of the organisation's direction*	4.78	1.699	2.886
Q39: ***there is wide external communication of the organisation's direction***	4.00	1.726	2.979
Q40: ***the implementation of the selected strategies is properly supported***	4.25	1.507	2.271

Table 5.6: Descriptive Statistics for 'Implementation'

Strategic feedback and control

This set of questions, includes one which examined the perceived values of feedback and strategic control as a supporting activity of strategic planning (Q47) and this question has the highest score. However, even if, on average, the

responders of this survey appreciate the value of feedback and strategic control, as can be observed in figure 5.12, the efforts made are less apparent. The evaluation of the effectiveness of communication (Q42 and Q43) is relatively low, while the responses regarding the flexibility of the process (Q44-Q46) are fairly balanced.

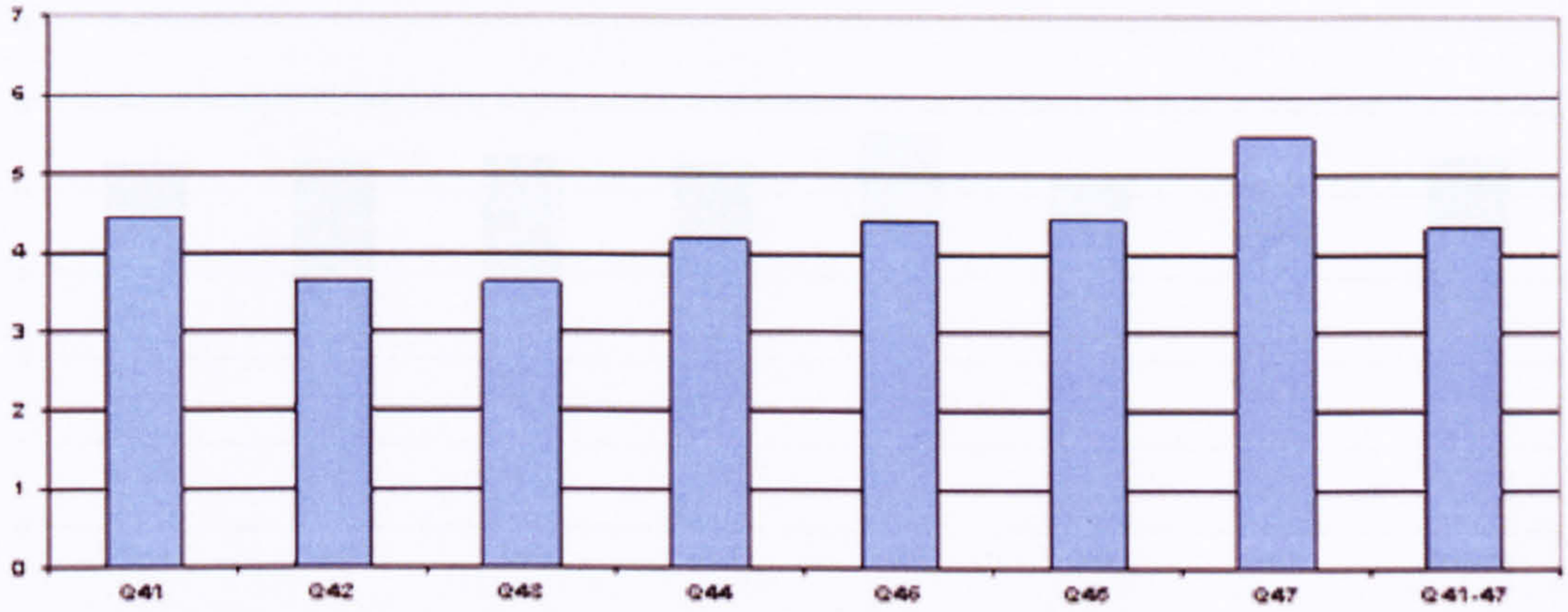


Figure 5.12: Mean scores for 'Feedback and strategic control'

	Mean	Std. Dev.	Variance
Q41: ***the implementation of the selected strategies is adequately monitored and controlled***	4.45	1.463	2.141
Q42: ***the effectiveness of internal communication of the organisation's direction is fully evaluated***	3.65	1.553	2.412
Q43: the effectiveness of external communication of the organisation's direction is fully evaluated	3.63	1.550	2.401
Q44: ***the strategic/corporate planning process is highly flexible, allowing much iteration between stages***	4.18	1.565	2.448
Q45: ***the strategic/corporate planning process is highly flexible, allowing for significant modification to plans, where desired***	4.42	1.615	2.607
Q46: ***the strategic/corporate planning process is highly responsive to new information***	4.43	1.630	2.656
Q47: ***it is extremely important for the strategic planning process to be highly responsive to new information***	5.48	1.450	2.102

Table 5.7: Descriptive Statistics for 'Feedback and strategic control'

Performance Measurement

The responses concerning performance measurement are fairly balanced across with relatively high scores. The question with the highest mean is Q52 referring to the ability of the existing performance measurements to depict the current status of the

organisation. It is also worth mentioning the fact that Q53 and Q54, which examine whether the performance measurement systems are proactive or reactive, have similar mean values.

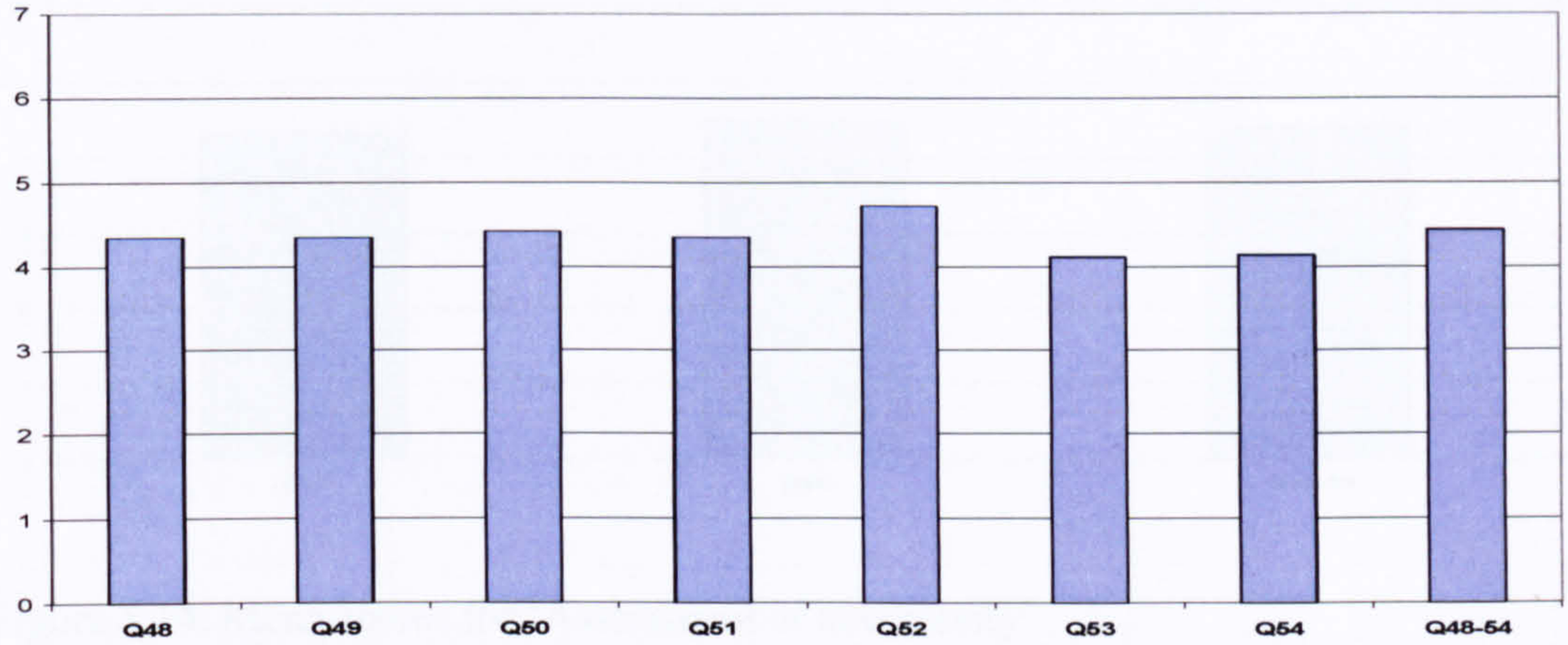


Figure 5.13: Mean scores for 'Performance Measurement'

	Mean	Std. Dev.	Variance
Q48: ***the scope of performance measures used is appropriate***	4.35	1.509	2.276
Q49: ***an appropriate level of detail is used in performance measurement and targeting setting***	4.35	1.626	2.645
Q50: ***an appropriate degree of quantification is used in performance measurement and targeting setting***	4.42	1.541	2.375
Q51: ***performance has a major impact upon all stages of the strategic/corporate planning process***	4.35	1.708	2.918
Q52: ***performance measurement gives a good indicator of organisational performance***	4.72	1.660	2.757
Q53: ***performance measurement system monitors and controls the alignment of the organisation's activities with the organisation's direction***	4.11	1.705	2.908
Q54: ***the performance measurement system monitors and controls the alignment of the organisation's achievements with its direction***	4.14	1.708	2.916

Table 5.8: Descriptive Statistics for Performance measurement

Assessment of uncertainty

The assessment of uncertainty was examined with two questions, and the results show that on average the amount of effort made for assessing the uncertainties and

using the information collected within the strategic planning process is at similar levels.

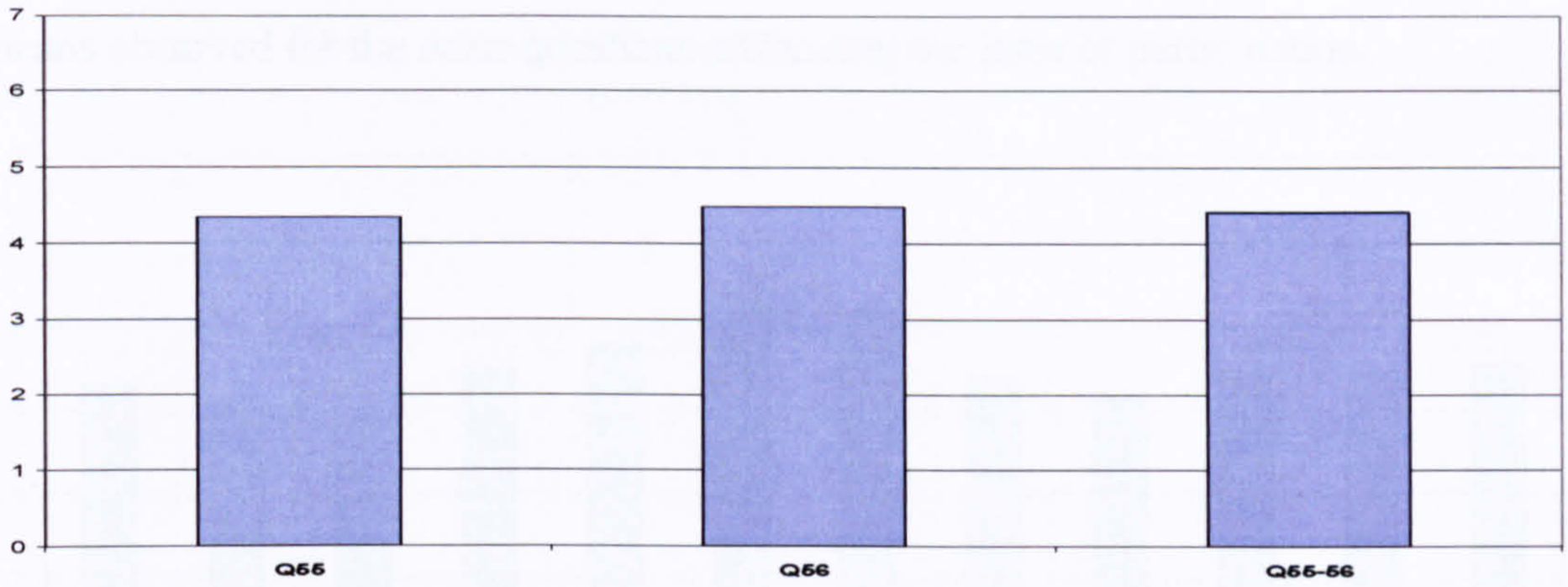


Figure 5.14: Mean scores for 'Assessment of uncertainty'

	Mean	Std. Dev.	Variance
Q55: ***uncertainties in the external environment are adequately captured and assessed as part of the strategic/corporate planning process***	4.34	1.521	2.313
Q56: ***uncertainties in the external environment have a major impact upon every stage of the strategic/corporate planning process***	4.48	1.660	2.756

Table 5.9: Descriptive Statistics for 'Assessment of uncertainty'

Evaluation of strategic planning process

The group of questions in the section of 'Evaluation of strategic planning process' provides a series of interesting observations. There are two questions with significantly greater means, and these are Q62 ('*strategic planning process is strongly influenced by financial planning*') and Q63 ('*strategic planning process supports the achievement of the organisational goals*'). The great value of the mean value of Q62, characteristic interest when compared with question Q61 ('*strategic planning process is strongly influenced by the long term direction*'). This comparison shows that even if the value of long term direction is well established with the modern management practices, financial planning which has a rather short term character, has a definite impact upon decisions made. The great value of Q63 s mean, has an additional importance, since this is one of the five questions used, in

the later stages of the analysis, as dependent variables assessing strategic planning as a process. Another observation that should be highlighted is that Q59 ('*strategic planning is realised with wide participation*') is consistent with the relative low means observed for the other questions addressing the issue of participation.

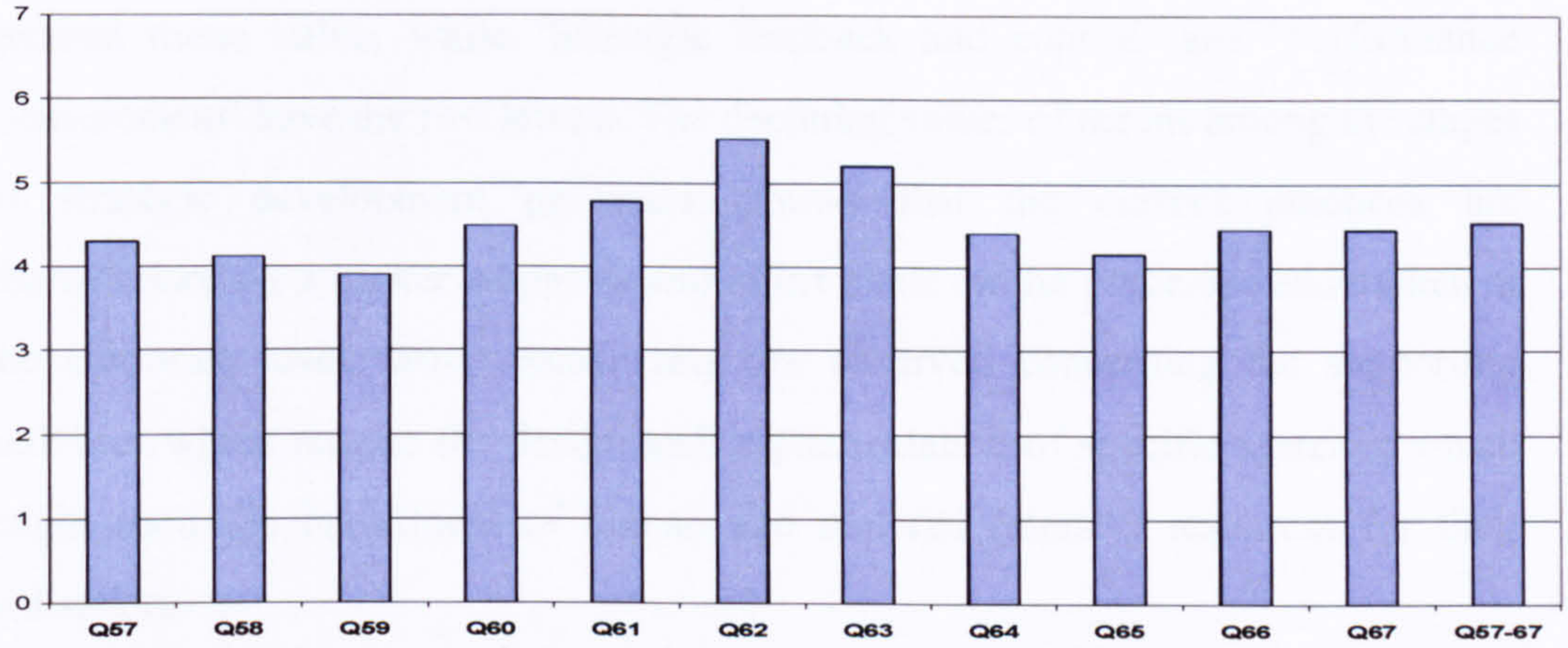


Figure 5.15: Value of mean for 'Evaluation of strategic planning'

	Mean	Std. Dev.	Variance
Q57: ***strategic/corporate planning is a process whose assumptions are made explicit***	4.30	1.452	2.109
Q58: ***strategic/corporate planning is a standardised and formal process***	4.12	1.754	3.075
Q59: ***strategic/corporate planning is realised with wide participation***	3.90	1.709	2.922
Q60: ***strategic/corporate planning is regularly reviewed***	4.49	1.579	2.495
Q61: ***strategic/corporate planning is strongly influence by the organisational long term direction***	4.78	1.573	2.474
Q62: strategic/corporate planning is strongly influence by the financial planning	5.53	1.361	1.851
Q63: strategic/corporate planning supports the achievement of organisation's goals	5.21	1.323	1.750
Q64: ***strategic/corporate planning is considered effective***	4.41	1.469	2.159
Q65: ***strategic/corporate planning is considered efficient***	4.16	1.426	2.034
Q66: ***strategic/corporate planning leads to the adoption of successful strategies***	4.46	1.482	2.195
Q67: ***strategic/corporate planning is a successful process***	4.45	1.478	2.183

Table 5.10: Descriptive Statistics for 'Evaluation of strategic planning'

The SDP model overall

Looking at the mean values for each element of the SDP model, as depicted in figure 5.16, it is observed that overall, the responses are fairly balanced with values ranging between 4.3 and 4.9. The 'Organisational direction development' has the greatest mean value, while 'Strategic feedback and control' and 'Performance measurement' have the two lowest. The declining values of means among the stages of strategic development processes, shows that the current practices are characterised by a higher emphasis and effort made on the processes undertaken at the corporate level, while weaknesses are observed concerning the supporting activities which require the design and implementation of specific systems; which might need the investment of human and material (money) resources for their utilisation.

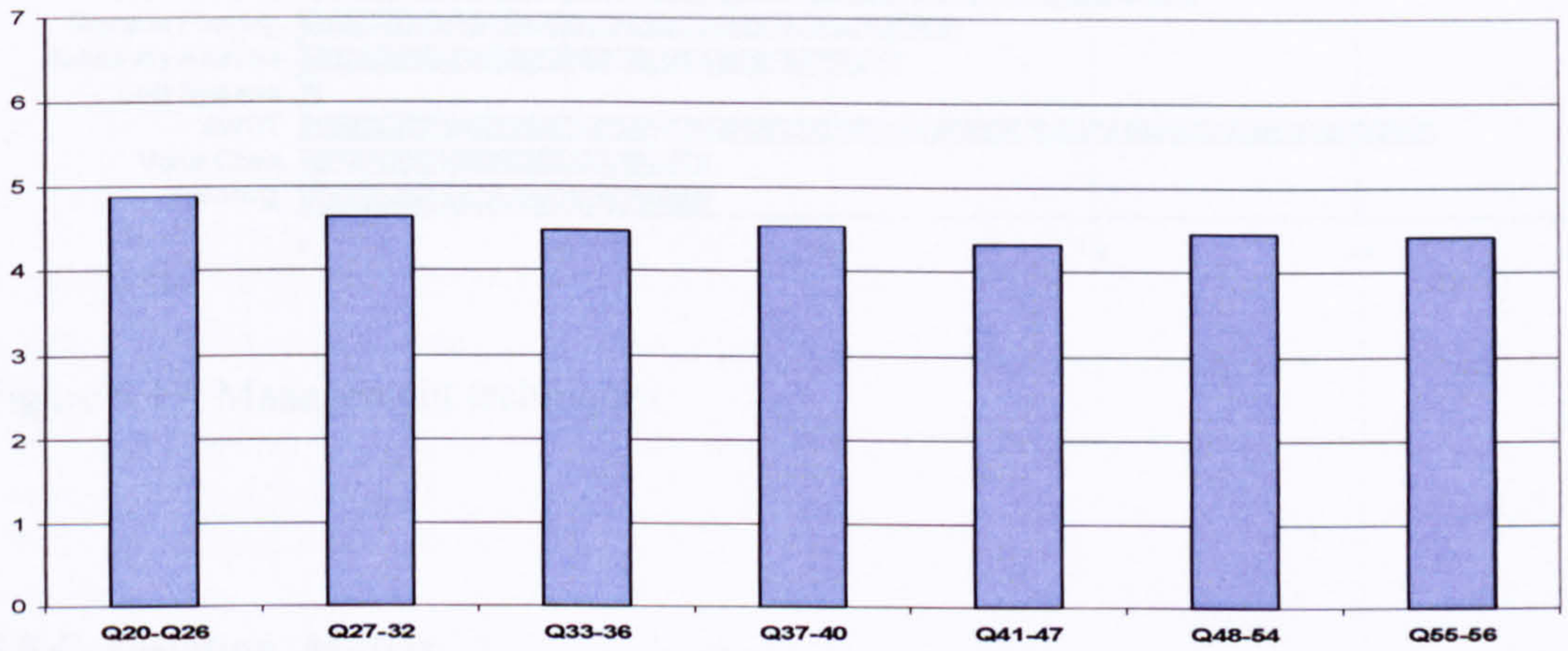


Figure 5.16: Mean scores for 'SDP model's elements'

Management Techniques

The results of this survey indicate that there is wide utilisation of management techniques within strategic development practices. 96% of the responders ticked at least one technique and approximately 15% use more than 8 different techniques. The most popular techniques are SWOT and Benchmarking, followed by Cost Benefit Analysis, Core Capabilities and Risk Analysis. It is quite interesting that the

management technique with a very large number of publications in academic journals, the Balanced Scorecard, is only ninth. This could be explained by the fact that most of the popular techniques can be implemented without the need to implement any other systems. It is fair to claim, that the most popular management techniques are the 'traditional' ones.

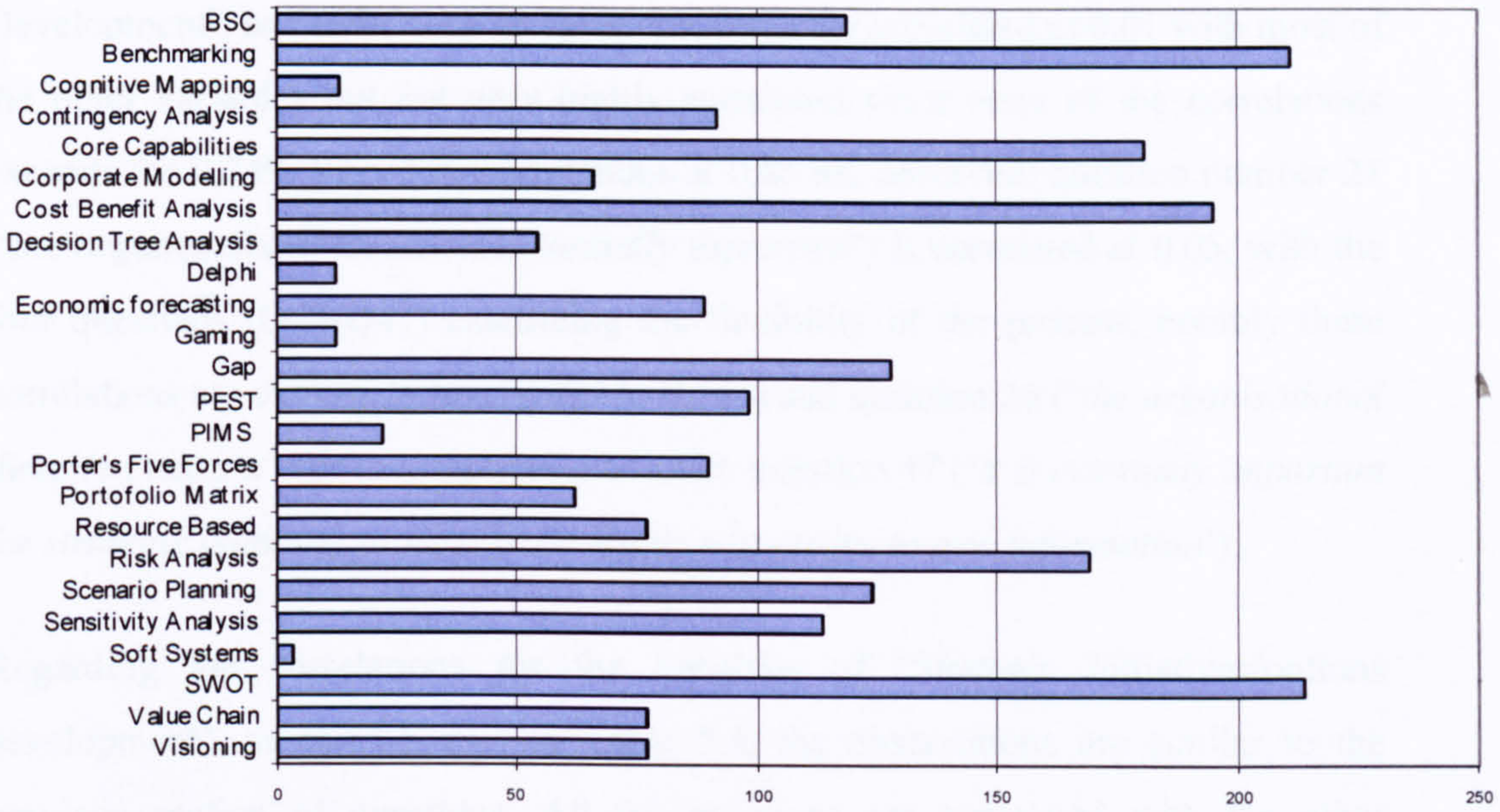


Figure 5.17: Management techniques

5.5 Correlation Matrix

The correlation matrix, attached in Appendix IV, is constructed using the Pearson correlation coefficient to explore the relationship between the variables. Boyd et al (2005) claim that '*correlation between the indicators provide indication of reliability*' urging the researchers in strategy to provide the correlation matrices of their variables even if these can only indicate whether there is strong positive or negative association between the variables. Pearson's coefficient was selected because the survey utilises internal scales (Hair et al, 2003). Pearson's coefficient can take values between -1 and +1. The following discussion for the results of the correlation matrix, are based on the 'rules of thumb' by Hair et al (2003), who suggest that: for ±0.91 to ±1.00 the strength of association is "very strong", ±0.71 to

±0.90 "high", ±0.41 to ±0.70 "moderate", ±0.21 to ±0.40 "small but definite relationship" and ±0.01 to ±0.20 "slight almost negligible". The correlation matrix was constructed with SPSS which provides the correlations for 0.01 and 0.05 level of significance.

Looking at the correlation for the variables of 'Organisational Direction Development', as can be seen in Table 5.3, these are correlated at 0.01 with most of the other variables but not very highly correlated since none of the correlations exceeds the 0.749. Very few correlations at 0.05 are observed: question number 21 ('*the organisational direction is formally expressed*') is correlated at 0.05, with the four questions (Q44-Q47) examining the flexibility of the process, notably these correlations are extremely low (0.123 to 0.143) and question 26 ('*the organisational direction takes a very long perspective*') with question 47 ('*it is extremely important for strategic planning process to be highly responsive to new information*').

Regarding the correlations for the variables of 'Strategic initiatives/options development', as can be seen in Table 5.4, the observations are similar to the previous section of questions. All the questions are correlated with the other questions of the questionnaire, but with moderate coefficients. Only question 27 ('*there is very wide participation in the strategy formulation*') is correlated at 0.05 with very low coefficient with questions 47 ('*it is extremely important for strategic planning process to be highly responsive to new information*') and question 62 ('*strategic planning is strongly influenced by financial planning*').

Investigating the questions coming from the section of 'Strategy evaluation', their association with the other variables is at 0.01 with the great majority of the correlations having small or moderate coefficients. The questions of the 'Implementation' have an increased (compared to the other sections) number of correlations at 0.01, with coefficients at the middle range of the scale (between 0.5 and 0.6). Notably question 40 ('*the implementation of the selected strategies is properly supported*') is relatively strongly correlated with most of the questions from the next element, the 'Strategic feedback and control', which shows that the latter is one of the key supporting activities for the implementation of the strategy.

In addition the same question 47 is relatively strongly correlated with all the questions of the last section 'Evaluating strategic planning' which are used as dependent variables in the following stages of the analysis.

Concerning the questions from the section 'Strategic feedback and control', Q44 ('*strategic planning process is highly flexible, allowing much iteration between stages*'), is high correlated with the two other questions referring to the flexibility of the process. Also, it is worth mentioning that Q41 ('*the implementation of the selected strategies is adequately monitored and controlled*') is relatively strongly correlated with the five assessments (Q63-67) of strategic planning process from the 'Evaluating strategic planning' section. Questions 44 and 47 are correlated at 0.05, both with question 57 ('*strategic planning process is a process whose assumptions are made explicit*').

The questions from the section of 'Performance Measurement' are correlated mostly among themselves, at 0.01; with high coefficients ranging up to 0.85. Identical observations are made for the question of 'Assessment of uncertainty', which are correlated at 0.01, by a coefficient of 0.65. In the last set of questions from the section of 'Evaluation of strategic planning', it can be seen that these are all correlated among themselves at 0.01, and the only correlations worth mentioning are between the last three question Q65-67 ('*strategic planning process is considered efficient*', '*strategic planning process leads to the adoption of successful strategies*' and '*strategic planning is considered a successful process*').

Summing up, the correlation matrix shows that variables of this survey are mostly correlated at 0.01, but without any significantly high coefficients of correlation. This is beneficial for the following steps of the analysis, because it ensures that there is no multicolinearity among the independent variables to confound the results (Hair et al, 2003). The fact that there are correlations among the variables, implies that it will be possible to group the variables into meaningful groups which can be achieved with factor analysis. Also, the fact that most of the relationships are weak, gives grounds for the application of regression analysis.

5.6 Factor analysis

Factor analysis was used to reduce the number of the independent variables, by grouping them. Factor analysis is commonly used in surveys with a wide number of variables.

To undertake factor analysis three basic criteria should be fulfilled (Hair et al, 1997): i) the number of observations must exceed 50, ii) the observation to item of measurement ratio must exceed five and iii) missing values are replaced by the mean series. All these are satisfied by this survey's results.

Principal component analysis (PCA) was used and the method of rotation was Varimax with coefficient of rotation 0.4, following the guide provided by Pallant (1998). Principal component analysis is the most commonly used method for factor analysis, however all the possible methodologies available at SPSS 11.5 were tested and interpreted for both types of rotation, Varimax and Oblique. All these methods produced almost identical results which reinforces the validity of the output.

5.6.1 Number of factors:

The number of factors is usually deduced (Hair et al, 2003) from either the eigenvalue (Table 5.11) or the Scree Plot diagram (Figure 5.18). Regarding the eigenvalue, it should be about 1; therefore the maximum number of factors that can be produced is 8. Pallant (1998) suggest that the number of factors can be determined by the point where the variance explained does not change significantly. Looking at Table 5.11 it is understood that after the fourth factor the variance explained is not significant, for a three factors solution the percentage of variance explained (cumulatively) is 50.253, for a four factors solution it is 54.158 while for a five factors solution, it is 57.721. Simultaneously, based on the Scree Plot diagram, which indicates the number of factors at '*the point which the curve begins to straighten out*' (Hair et al, 2000). The Scree Plot indicates that the factors should be 4. Some authors of research methodologies for business studies (see for example

Pallant, 1998 and Hair et al, 2000) suggest that it is good to examine more than one solution. Therefore, the two closest solutions, 3 factors and 5 factors solutions were tested. For the 3 factors solution the factors produced were not meaningful as far as the strategic planning process is concerned. Similarly, the 5 factors solution produced some factors which were meaningful but they emphasised some 'softer' aspects of the strategic development process. Given that the scope of this survey is concentrated at the process of the strategic planning, it was decided that the 4 factors solution produced the most meaningful factors. In the following section each factor produced is presented and discussed.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	16.603	38.612	38.612	16.603	38.612	38.612
2	2.581	6.003	44.616	2.581	6.003	44.616
3	2.424	5.638	50.253	2.424	5.638	50.253
4	1.679	3.904	54.158	1.679	3.904	54.158
5	1.532	3.563	57.721	1.532	3.563	57.721
6	1.413	3.287	61.008	1.413	3.287	61.008
7	1.302	3.028	64.037	1.302	3.028	64.037
8	1.256	2.921	66.958	1.256	2.921	66.958
9	0.934	2.173	69.131			

Table 5.11: Total variance Explained

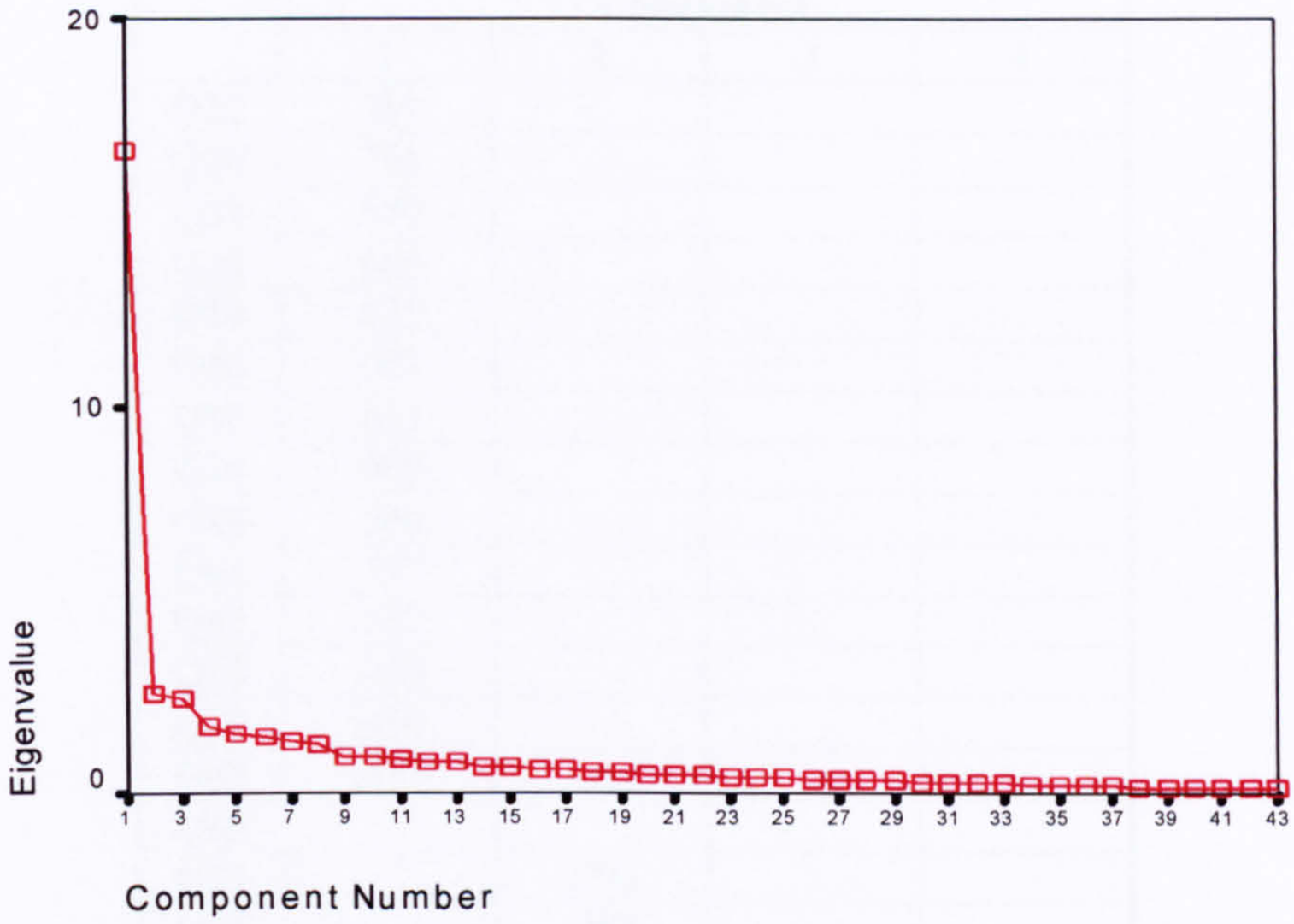


Figure 5.18: Scree Plot

5.6.2 Results

The four factors produced are:

Factor 1: organisational direction

Factor 2: performance measurement

Factor 3: strategic initiatives and options, development and selection

Factor 4: organisational uncertainty and flexibility

Table 5.12 summarises the four factors analysis. Table 5.11 shows the 'Total Variance Explained' which for all the four factors covers 54.2%, this is considered satisfactory for a larger multinational survey in business management (Hair et al, 2003). The reliability of each factor was assessed using Cronbach's alpha, which is for each factor respective: 0.9, 0.9, 0.88, 0.83. Based on the recommendation of Hair et al (2003), the first two factors whose Cronbach's alpha is above 0.9 are 'excellent' and the third and fourth are 'very good' being above 0.8.

	Component			
	1	2	3	4
Q22	.769			
Q21	.766			
Q59	.679			
Q38	.660			
Q20	.635			
Q58	.627			
Q39	.615			
Q24	.609			
Q26	.586			
Q61	.557			
Q42	.517			
Q23	.459			
Q37	.454			
Q43	.451			
Q60				
Q51		.795		
Q53		.787		
Q54		.752		
Q50		.672		
Q49		.651		
Q48		.647		
Q52		.641		
Q31		.640		
Q25		.497	.	
Q41				
Q27			.441	
Q32			.743	
Q33			.730	
Q34			.689	
Q29			.593	
Q28			.541	
Q35			.520	
Q30			.433	
Q36				
Q62				
Q40				.484
Q45				.763
Q46				.759
Q44				.748
Q55				.476
Q56				.424
Q57				.401

Principal Component Analysis, Varimax with Kaizer Normalisation, Rotation Coefficient 0.4

Table 5.12: Rotated component matrix

5.6.3 The four factors:

Factor 1: Organisational direction

This factor groups all the questions referring to the organisational direction. Interestingly enough the questions included do not come only from the first subsection of the questionnaire, but questions from the other subsection (or elements of the SDP model) are included too. Table 5.13 presents all the questions contained in Factor 1. It is worth mentioning that some of the questions from the first subsection of the questionnaire have not been included in this factor. For example Q.25 '*the organisation's direction is influenced by the performance measurement*' was grouped under Factor 2 referring to Performance Measurement.

Questions		Loadings
Q20	the organisational direction is specific	.635
Q21	the organisational direction is formally expressed	.766
Q22	the organisational direction is clearly articulated	.769
Q23	the organisational direction is reviewed frequently	.459
Q24	the organisational direction is developed with wide participation	.609
Q26	the organisational direction takes a long term perspective	.586
Q38	in our organisation there is wide internal communication of the organisation's direction	.660
Q39	in our organisation there is wide external communication of the organisation's direction	.615
Q42	in our organisation, the effectiveness of internal communication of the organisation's direction is fully evaluated	.517
Q43	in our organisation, the effectiveness of external communication of the organisation's direction is fully evaluated	.451
Q58	in our organisation, strategic/corporate planning is a standardised and formal process	.627
Q59	in our organisation, strategic/corporate planning is realised with wide participation	.679
Q61	in our organisation, strategic/corporate planning is strongly influence by the organisational long term direction	.557

Table 5.13: Variables/Questions of Factor 1 with Loadings

Factor 2: Performance Measurement

This factor groups all the questions referring to the measurement of the organisational performance. The majority of the questions in the factor come from

the subsection of performance measurement in the questionnaire; however, Q.25 and Q.31 have been added from other subsections.

Questions		Loadings
Q25	the organisation's direction is influenced by the performance measurement	.497
Q31	in our organisation, performance measurement influences the development of strategic initiatives/options	.640
Q48	in our organisation, the scope of performance measures used is appropriate	.647
Q49	in our organisation, an appropriate level of detail is used in performance measurement and targeting setting	.651
Q50	in our organisation, an appropriate degree of quantification is used in performance measurement and targeting setting	.672
Q51	in our organisation, performance has a major impact upon all stages of the strategic/corporate planning process	.795
Q52	in our organisation, performance measurement gives a good indicator of organisational performance	.641
Q53	in our organisation, performance measurement system monitors and controls the alignment of the organisation's activities with the organisation's direction	.787
Q54	in our organisation, the performance measurement system monitors and controls the alignment of the organisation's achievements with its direction	.752

Table 5.14: Variables/Questions of Factor 2 with loadings

Factor 3: Strategic initiatives/options development and selection

This factor groups questions from the second and third subsection of the questionnaire. However, the questions which were examining the impact of strategic initiatives/options development and selection with the organisational direction have been grouped with Factor 1 and those with the performance measurement with Factor 2. It is quite interesting that two elements from the Strategic Development Process model are grouped together. This potentially implies that they are strongly interrelated and perhaps they take place simultaneously, which means that it is quite possible that at the time that the alternative strategic options are developed, the strategies to be implemented are also selected.

Questions		Loadings
Q27	In our organisation there is very wide participation in the strategy formulation/generating strategic option	.441
Q28	in our organisation there is a very extensive and wide-range search for possible strategic option	.541
Q29	in our organisation uncertainties in the external environment are a major consideration when developing strategic options	.593
Q30	in our organisation, the organisation's direction seems to have a major consideration upon strategic initiative/options development	.433
Q32	in our organisation, a sufficiently wide range of factors are usually considered when generating strategic options	.743
Q33	in our organisation, a sufficiently wide range of factors are usually considered when evaluating strategic options	.730
Q34	in our organisation, the full range of relevant resources is considered as part of the strategic/corporate planning process	.689
Q35	in our organisation, the feasibility of alternative strategies is fully assessed	.520

Table 5.15: Variables/Questions of Factor 3 with loadings

Factor 4: Organisational flexibility and uncertainty

This factor groups questions referring to the ability of the organisation to be flexible and deal with uncertainty. The questions in this factor come from the subsections of implementation and assessment of uncertainty.

Questions		Loadings
Q40	in our organisation, the implementation of the selected strategies is properly supported	.484
Q44	in our organisation, the strategic/corporate planning process is highly flexible, allowing much iteration between stages	.748
Q45	in our organisation, the strategic/corporate planning process is highly flexible, allowing for significant modification to plans, where desired	.763
Q46	in our organisation, the strategic/corporate planning process is highly responsive to new information	.759
Q55	in our organisation, uncertainties in the external environment are adequately captured and assessed as part of the strategic/corporate planning process	.476
Q56	in our organisation, uncertainties in the external environment have a major impact upon every stage of the strategic/corporate planning process	.424
Q57	in our organisation, strategic/corporate planning is a process whose assumptions are made explicit	.401

Table 5.16: Variables/Questions of Factor 4 with loadings

5.6.4: Summarising the results of factor analysis

Factor analysis was used to reduce the number of independent variables. The four factors solution which has been selected, includes four meaningful factors that characterise the current trends in strategic planning processes. This model does not replace nor update the original framework of this research, ('Strategic Development Process' model by Dyson and O'Brien', 1998) but it consists of a comprehensive way to analyse further the data collected in this survey. The factors produced will be used as independent variables in the following stages of the analysis.

5.7 Hypothesis testing

One of the research questions of this thesis is to investigate the determinants of the relationship between organisational direction and performance measurement. The literature review has indicated that organisational characteristics can have an impact upon strategic development processes. Also, it has been explained that this survey is used to examine the impact of those determinants of the relationship under investigation. Therefore, a series of hypothesis have been developed and are tested in this section. Simultaneously, the hypothesis testing seeks to start mapping the differences in the practices of organisations with different characteristics.

Hypothesis testing was conducted with t-tests given that the questionnaire used interval scales (Hair et al, 2003).

5.7.1: Testing Hypothesis 1

Hypothesis 1: *the strategic planning process does not differ in organisations of different size.*

In order to test this hypothesis, the four factors that have been found to characterise strategic planning have been used. The hypothesis has to be tested for all four factors:

Hypothesis 1a: *the characteristics of the 'organisational direction' (factor 1) do not differ in organisations of different size*

Hypothesis 1b: *the characteristics of the 'performance measurement' (factor 2) do not differ in organisations of different size*

Hypothesis 1c: *the characteristics of the 'strategic initiatives development and selection' process (factor 3) do not differ in organisations of different size*

Hypothesis 1d: *the characteristics of the 'organisational flexibility and uncertainty' (factor 4) do not differ in organisations of different size*

Testing Hypothesis 1a

Using the SPSS, table 5.17 is produced.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Conf. Interval of the Difference	
									Lower	Upper
Factor 1	Equal variances assumed	1.077	.300	-2.294	335	.022	-3.1118	1.35635	-5.7798	-.4437
	Equal variances not assumed			-2.341	263.69	.020	-3.1118	1.32935	-5.7292	-.4943

Table 5.17: t-test for Factor 1, SMEs vs Large

Since the value of Sig. (2-tailed) is smaller than 0.05, the null hypothesis is accepted and the difference is not significant. This means that the emphasis and effort made concerning the organisational direction does not show any differences based on the size of the organisation.

Testing Hypothesis 1b

Using the SPSS, table 5.18 is produced.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Conf. Interval of the Difference	
									Lower	Upper
Factor 2	Equal variances assumed	.848	.358	.708	335	.479	1.3548	1.91327	-2.40870	5.11838
	Equal variances not assumed			.719	259.467	.473	1.3548	1.88562	-2.35824	5.06791

Table 5.18: t-test for Factor 2, SMEs vs Large

Since the value of Sig. is greater than 0.05, the null hypothesis is rejected and the difference is significant. This means that the amount of effort and emphasis placed on designing, implementing and using performance measurements is not the same in Large organisations and SMEs.

Testing Hypothesis 1c

Using the SPSS, table 5.19 is produced.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Conf. Interval of the Difference	
									Lower	Upper
Factor 3	Equal variances assumed	.154	.695	-.220	335	.826	-.2232	1.01233	-2.21451	1.76815
	Equal variances not assumed			-.220	248.05	.826	-.2232	1.01304	-2.21843	1.77207

Table 5.19: t-test for Factor 3, SMEs vs Large

Since the value of Sig. is greater than 0.05, the null hypothesis is rejected and the difference is significant. This means that the amount of effort and emphasis placed on developing and selecting strategic initiatives is not the same in Large and SMEs.

Testing Hypothesis 1d

Using the SPSS, table 5.20 is produced.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Conf. Interval of the Difference	
									Lower	Upper
Factor 4	Equal variances assumed	.013	.909	1.965	335	.050	1.5671	.79747	-.00156	3.13578
	Equal variances not assumed			1.957	245.675	.051	1.5671	.80061	-.00982	3.14404

Table 5.20: t-test for Factor 4, SMEs vs Large

The value of Sig. in this case is marginally greater than 0.05 therefore the null hypothesis is rejected and the difference is significant. This means that the amount of effort and emphasis placed upon having flexibility within the strategic development practices and being able to deal with uncertainty is different between SMEs and Large organisations.

5.7.2: Testing Hypothesis 2

Hypothesis 2: *the strategic planning process is not affected by environmental turbulence*

The environmental turbulence is defined by the rate of change in the sector that the organisations operate. This testing makes use of the responses in Question 10 (Q.10: *Do you consider your sector to be rapidly changing?*). The responses have been divided into two groups, those who scored 1-4 (in the 7 point Likert scale), were classified as organisations operating at slowly changing sectors and those who scored 5-7 were classified as organisations operating in rapidly changing sectors. As in hypothesis 1, this hypothesis has to be tested with all four factors.

Hypothesis 2a: *the characteristics of the 'organisational direction' (factor 1) do not differ in organisations operating at environments of different rate of change*

Hypothesis 2b: *the characteristics of the 'performance measurement' (factor 2) do not differ in organisations operating within environments of different rate of change*

Hypothesis 2c: *the characteristics of the 'strategic initiatives development and selection' process (factor 3) do not differ in organisations operating at environments of different rate of change*

Hypothesis 2d: *the 'organisational flexibility and uncertainty' (factor 4) do not differ in organisations operating at environments of different rate of change*

Testing Hypothesis 2a

Using the SPSS, table 5.21 is produced.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Conf. Interval of the Difference	
									Lower	Upper
Factor 1	Equal variances assumed	.737	.391	-2.295	337	.022	-3.5449	1.54443	-6.5828	-.50697
	Equal variances not assumed			-2.370	130.405	.019	-3.5449	1.49554	-6.5035	-.58626

Table 5.21: t-test for Factor 1, rapid vs slow environment

The value of Sig. is smaller than 0.05 therefore the null hypothesis is accepted hence difference is not significant. This means that organisations from both types of rate of change in the environment, put similar amount of effort and emphasis in their organisational direction.

Testing Hypothesis 2b

Using the SPSS, table 5.22 is produced.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Conf. Interval of the Difference	
									Lower	Upper
Factor 2	Equal variances assumed	.271	.603	-1.487	337	.138	-2.1548	1.44890	-5.00477	.69527
	Equal variances not assumed			-1.537	130.606	.127	-2.1548	1.40168	-4.92768	.61818

Table 5.22: t-test for Factor 2, rapid vs slow environment

The value of Sig. is greater than 0.05 therefore the null hypothesis is rejected hence the difference is significant. This means that the amount of effort and emphasis placed on designing, implementing and using performance measurement varies according to the rate of change in the sector.

Testing Hypothesis 2c

Using the SPSS, table 5.23 is produced.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Conf. Interval of the Difference	
									Lower	Upper
Factor 3	Equal variances assumed	.544	.461	-2.422	337	.016	-2.7734	1.14509	-5.02585	-.52099
	Equal variances not assumed			-2.331	117.567	.021	-2.7734	1.18973	-5.12950	-.41734

Table 5.23: t-test for Factor 3, rapid vs slow environment

Since the value of Sig. is smaller than 0.05, the null hypothesis is accepted hence the difference is not significant. This means that the amount of effort and emphasis placed on developing and selecting strategic options does not vary according to the rate of change in the sector.

Testing Hypothesis 2d

Using the SPSS, table 5.24 is produced.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Conf. Interval of the Difference	
									Lower	Upper
Factor 4	Equal variances assumed	.079	.779	-1.789	337	.074	-2.0441	1.14237	-4.29120	.20296
	Equal variances not assumed			-1.821	127.420	.071	-2.0441	1.12267	-4.26560	.17737

Table 5.24: t-test for Factor 4, rapid vs slow environment

Since the value of Sig. is greater than 0.05, the null hypothesis is rejected hence the difference is significant. This means that the amount of effort and emphasis placed for being flexible and able to deal with uncertainty, varies according to the rate of change in each sector.

	Accepted	Rejected
the characteristics of the 'organisational direction' (factor 1) do not differ in organisations of different size	✓	
the characteristics of the 'performance measurement' (factor 2) do not differ in organisations of different size		✓
the characteristics of the 'strategic initiatives development and selection' process (factor 3) do not differ in organisations of different size		✓
the characteristics of the 'organisational flexibility and uncertainty' (factor 4) do not differ in organisations of different size		✓
the characteristics of the 'organisational direction' (factor 1) do not differ in organisations operating at environments of different rate of change	✓	
the characteristics of the 'performance measurement' (factor 2) do not differ in organisations operating at environments of different rate of change		✓
the characteristics of the 'strategic initiatives development and selection' process (factor 3) do not differ in organisations operating at environments of different rate of change	✓	
the 'organisational flexibility and uncertainty' (factor 4) do not differ in organisations operating at environments of different rate of change		✓

Table 5.25: Summing up the results of hypothesis testing

5.7.3: Summarising the results of hypothesis testing

Hypothesis testing using t-tests, revealed that there is a difference in the practices involved in strategic development processes when comparing organisations of different characteristics. The two characteristics which have been investigated are size and environmental turbulence. Table 5.25 sums up the results of the hypothesis testing.

5.8 Regression

The hypothesis testing produced a series of very interesting observations regarding the practices of strategic planning. It has been determined that organisations of different characteristics show different trends in the design and implementation of the strategic planning processes. The next stage of the analysis will investigate how different types of organisations behave regarding the four factors that characterise the strategic development processes. Moreover, regression analysis was utilised to examine to what extent the various factors support the overall process, and to find whether there are some factors which are more important than others.

Using regression analysis (Stepwise), the relationship between the elements of strategic planning and the measures of its assessment has been further explored (for analytic description of the measures/dependent variables see section 3.3.1). Initially the impact of the four factors was examined for the totality of the answers. The results are depicted in Table 5.26. Given that the totality of the responders consists of a very diverse mixture of organisations, and taking into consideration the results of Hypothesis analysis determined that organisations of different size and operating in different environments exhibit different behaviours regarding the emphasis placed on its four characteristic factors within strategic planning. Therefore, regression models were built to compare: i) SMEs with Large organisations, depicted in Table 5.27 and ii) organisations operating in slowly and rapidly changing environments, depicted in Table 5.28.

Assessments of Strategic Planning	*Factors*
strategic planning supports the achievement of organisation's goals	Organisational direction Organisational flexibility and uncertainty Performance measurement *R^2=0.43, F=82, sig=000*
strategic planning is considered effective	Organisational flexibility and uncertainty Organisational direction Performance measurement *R^2=0.507, F=115, sig=000*
strategic planning is considered efficient	Organisational flexibility and uncertainty Organisational direction Performance measurement *R^2=0.37, F=64, sig=000*
strategic planning leads to the adoption of successful strategies	Organisational direction Organisational flexibility and uncertainty *R^2=0.49, F=160, sig=000*
strategic planning is a successful process	Organisational direction Organisational flexibility and uncertainty *R^2=0.44, F=131, sig=000*

**The brackets contain the Standardised Coefficients Beta*

Table 5.26: regression for the totality of the responses

Types of Org. / Asses. of Str. Plan.	*SMEs*	*Large Organisations*
strategic planning supports the achievement of organisation's goals	Organisational direction Organisational flexibility and uncertainty *R^2=0.42, F=43, sig=000*	Organisational direction Performance measurement (0.184) *R^2=0.42, F=75, sig=000*
strategic planning is considered effective	Organisational direction Org. flexibility and uncertainty *R^2=0.49, F=56, sig=000*	Org. flexibility and uncertainty Organisational direction Performance measurement *R^2=0.53, F=77, sig=000*
strategic planning is considered efficient	Org. flexibility and uncertainty Strategic initiatives/ options development and selection *R^2=0.38, F=36, sig=000*	Org. flexibility and uncertainty Performance measurement Organisational direction *R^2=0.37, F=35, sig=000*
strategic planning leads to the adoption of successful strategies	Organisational direction Org. flexibility and uncertainty *R^2=0.44, F=45, sig=000*	Organisational direction Org. flexibility and uncertainty *R^2=0.53, F=115, sig=000*
strategic planning is a successful process	Organisational direction Org. flexibility and uncertainty *R^2=0.44, F=46, sig=000*	Org. flexibility and uncertainty Organisational direction *R^2=0.44, F=84, sig=000*

**The brackets contain the Standardised Coefficients Beta*

Table 5.27: regression comparing SMEs vs Large Organisations

Types of Org. / Asses. of Str. Plan.	*Rapidly Changing Environments*	*Slowly Changing Environments*
strategic planning supports the achievement of organisation's goals	Organisational direction Performance measurement (0.159) Org. flexibility and uncertainty *R^2=0.49, F=82, sig=000*	Organisational direction Org. flexibility and uncertainty *R^2=0.30, F=14, sig=000*
strategic planning is considered effective	Org. flexibility and uncertainty Organisational direction Performance measurement (0.219) *R^2=0.52, F=94, sig=000*	Strategic initiatives/options development and selection (0.431) Organisational direction *R^2=0.53, F=42, sig=000*
strategic planning is considered efficient	Org. flexibility and uncertainty Organisational direction Performance measurement *R^2=0.38, F=52, sig=000*	Strategic initiatives/options development and selection (0.367) Performance measurement *R^2=0.32, F=17, sig=000*
strategic planning leads to the adoption of successful strategies	Org. flexibility and uncertainty Organisational direction *R^2=0.52, F=140, sig=000*	Organisational direction Strategic initiatives/options development and selection *R^2=0.49, F=36, sig=000*
strategic planning is a successful process	Organisational direction Org. flexibility and uncertainty *R^2=0.47, F=114, sig=000*	Organisational direction *R^2=0.40, F=49, sig=000*

******The brackets contain the Standardised Coefficients Beta*

Table 5.28: regression comparing slow vs rapid environment

5.8.1: Summarising the results of regression analysis

As can be seen from Table 5.26 for the totality of the answers the most important influential factor is 'organisational direction', followed by 'organisational flexibility and uncertainty' and third is 'performance measurement'. Analytically, 'organisational direction' has the most significant impact upon the ability of strategic planning process to 'support the achievement of organisation's goals', 'to lead to the adoption of successful strategies' and 'to be a successful process'. The same factor has the second greatest impact upon strategic planning process to be considered 'effective' and 'efficient'. In these two later assessments, it is the factor of 'organisational flexibility and uncertainty' which has the most significant impact. The third most influential factor was 'performance measurement' whose impact is

significant on the ability of strategic planning process to 'support the achievements of the organisational goals', being 'effective' and 'efficient'.

Discussing the results from the assessments of strategic planning processes point of view, it is quite interesting that both assessments of 'effectiveness' and 'efficiency' show identical results. Another very interesting observation is that the ability of the strategic planning process 'to lead to the adoption of successful strategies' and to be 'a successful process' are not significantly influenced by 'performance measurement'. Furthermore, factor 3 of the factor analysis, 'strategic initiatives development and selection' does not appear to have significant impact upon any of the assessments.

These observations were partly addressed by the regression analysis conducted to compare organisations from different sizes and environments of different rate of change. Comparing organisations operating in slowly and rapidly changing environments, it was found, that those in slowly changing environments are significantly influenced by the 'strategic initiatives development and selection' as shown in Table 5.27. The same comparison shows that organisations from rapidly changing environments tend to rely more on 'performance measurement'. A similar observation is made in the comparison between SMEs and Large, which reveals that SMEs are not significantly influenced by 'performance measurements'.

5.9 Discussion

The analysis of this survey produced a series of very interesting observations, concerning the current state of strategic development processes. In this section, the results are discussed, concerning the overall outcome of the survey, and are compared with the literature. As has been explained in the first two chapters of this thesis, this research does not duplicate any previous study and there is a limited number of surveys which have examined strategy from a process point of view. This makes difficult the direct comparison of this survey's results with other ones recorded in the literature difficult.

A very interesting observation comes from the descriptive statistics, the fact that the responses for all elements of the SDP model are balanced (-similar average scores), reinforce the argument of its author (Dyson, 2000) that the elements are all essential for a successful strategic development process. Furthermore, it shows that the SDP model presents accurately the processes involved in the development and implementation of the strategy, which is an additional support for the validity of this research.

McLarney (2003) who examined the impact of components and contextual elements* of strategic planning on its effectiveness, found that the '*most important component was functional coverage and integration and the contextual element was use of planning techniques*'. This is in agreement with Varadarajan and Ramanujam (1987) who identified the same component as the most important one but the same authors found '*resistance to planning*' being the most important contextual element. The present research found that the most important element of strategic planning is the 'organisational direction'.

The importance of organisational direction, which can be expressed in various formats such as vision, mission statements or values or even organisational philosophy, is well documented in the literature (Nanus, 1992, Hamel G. and Prahalad C. K, 1989). It is not surprising that this survey found great levels of effort made on the organisational direction, taking into consideration the latest survey on corporate visioning by O'Brien and Meadows (2000) who found that at 95% of their responders had some sort of organisational direction in their organisation.

Another outcome of this survey that needs to be discussed is the low mean scores for all the questions addressing the issue of involvement and participation in the various activities and processes of strategic planning. Involvement has been identified as one of the most important elements in strategic development processes (Hart, 1992). The existing literature provides contrasting evidence on the role and impact of wide involvement in strategic planning. For example, Collier et al (2004)

summarise the benefits of involvement in strengthening vision, increasing rationality and enhancing adaptiveness. In parallel, the same authors group the potential pitfalls of wide involvement to the fact that it may increase inertia, politics and external constraints. Even if the present survey did not examine the reasons for the levels of participation, it is apparent that the current trends in strategic planning do not fully appreciate the benefits of wide participation. However, the results cannot deduce whether the low participation is a result of the pitfalls associated with it or a matter of organisational culture.

One of the most innovative findings of this research comes from the multivariate statistics analysis and particularly the results of factor and regression analysis. It is very interesting that two elements of the Strategic Development Process model are grouped into one, that is Factor 3 '*Strategic initiatives development and selection*'. These two are meant to be different processes within the strategic planning process, and Dyson (2000) suggests the different techniques to be utilised for the effective completion of each of those processes. This research's outcome needs to be explored in further detail in the follow up interviews. An initial assumption is that when this process is undertaken formally and a great number of strategic options/initiatives are developed, then there is a need to select some of them as the organisational strategy.

Another very important finding of this survey is the identification of the significant and influential role of performance measurement as a key activity of strategic development practices. The linkage of strategic planning and performance measurement has been identified in other surveys too. Epstein et al (2004) examined the impact of performance measurement upon corporate finance performance, and concluded that '*focused performance measurement supported by tight control mechanism improves firm profitability*'. Toni and Tonchia (2001) found that the primary utilisation of performance measurement systems are to i) control, ii) plan and iii) coordinate. Furthermore, Marr et al (2004) found that the

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* McLarney (2003), and Ramanujam and Venkatraman (1987) are using a more generic model of components and contextual elements of strategic planning, which are not directly comparable to this research.

reasons for adopting a business performance measurement are: i) controlling, ii) strategy planning, iii) everyday decision making, iv) strategy validation, v) communication and vi) motivation and reward. The main difference between the other surveys and this one, is that in present survey it has been shown that performance measurement is an integral part of strategic development processes and not a separate activity which has some impact upon strategy making.

Comparing the results for the use of the management techniques with the most widely acknowledged similar survey on this field, by Bain & Co (Rigley, 2003), it has to be made clear that each survey uses different interpretations for each management tool. For example the most popular management tool according to Rigley (2003) is strategic planning, which for the present research is not a just a tool as is fully discussed in Chapter 2. The second most popular tool according to Rigley's survey is Benchmarking which is has the second position in the present survey too. The results for the Balanced Scorecard and Core Capabilities are in agreement between the two surveys.

Another comment that should be made concerning the management techniques is that some of them are meant to be utilised for specific activities of strategic planning. For example visioning is a structured approach for developing vision statements (O'Brien and Meadows, 2000), the Balanced Scorecard is the most widely acknowledged framework for performance measurement, or Scenario Planning which is an established methodology for the assessment of uncertainty. As has been analysed in the section of descriptive statistics, the value of means representing the efforts made towards these activities of strategic planning is above average, nevertheless these management techniques are not so popular, which raises questions about both the quality of the implementation and the reasons why these are not so popular. These questions were further explored in the next stage of the research, the follow-up interviews (Chapter 6), investigating the management techniques which were directly related in the scope of this thesis.

5.10 Conclusions – forward to the next chapter

This chapter presented the analysis of the survey. This survey has been conducted to address the questions raised by the exploratory case study. Regarding, the initial research questions, this chapter has covered the research question which required the investigation of the role of organisational direction and performance measurement within the strategic development process. Also, this chapter has examined the impact of two determinants (-organisational size and rate of change of the environment) upon the relationship between organisational direction and performance measurement. This survey is unique in its design since it examines strategy from a multi-processes perspective and investigates the impact of a strategic development process' elements upon the success of the process itself.

The responders of the survey cover a range of different positions and levels of experience and involvement in a strategic development process, the responses represent a great mix of organisations from varying backgrounds and of different characteristics. The analysis reinforces the argument of the previous chapter that strategy making should be examined in a holistic-systemic approach, since the results of particularly the correlation matrix indicate that most of the variables are correlated to a degree and therefore should all be taken into consideration. The descriptive statistics revealed that the current practices in strategic planning are characterised by a significant amount of effort which is placed on its basic elements, as described by the Strategic Development Process model. More emphasis is based on organisational direction. However, comparing the overall emphasis and effort placed on each element the results provide a fairly balanced picture across all elements.

The multivariate statistical analysis had provided a series of important findings, starting with the identification of four factors: i) organisational direction, ii) performance measurement, iii) strategic initiatives development and selection and iv) organisational flexibility and uncertainty, which characterise the current practices of strategic planning. Concerning the totality of the responses 'organisational direction' is the most influential factor followed by 'organisational

flexibility and uncertainty'. There is significant difference in the emphasis and effort placed on those factors when comparing organisations of different size and operating in sectors of different rate of change. Finally, the assessment of strategic planning as a process exhibits significant variation concerning the most influential factors.

To enhance our understanding on the differences and variations revealed in the analysis of the survey, it is necessary to examine in further detail the underpinning practices involved at each stage of strategic planning. This will provide evidence on the reason why the organisational size and rate of change in the sector determine the practices involved. Furthermore, it will explain why organisations which are supposedly implementing similar management concepts do not show similar levels of success achievements by their strategic planning process. These are presented in the following chapter of the follow up interviews.

Chapter 6

Validating and enhancing the survey's outcome through follow-up interviews

6.0 Summary

This chapter presents the follow up interviews conducted to supplement the outcome of the survey presented in the previous chapter. It starts with an introduction to the reasons for doing the follow up interviews, the research questions and aim of these interviews. Initially the demographics of the interviews are provided in terms of the key organisational characteristics of the participants' organisations and their relationship to the strategic planning process. The interviews were guided by each participant's responses in the survey as explained in Chapter 3 (Methodology), therefore the results are presented based on the subsections of the questionnaire used for the survey. For each element, the main findings are presented and discussed. Then there is a discussion section where all the factors found to have an impact upon strategic development processes are further analysed and discussed. The last section of this chapter summarises the most important outcomes of the follow up interviews.

6.1 Introduction

As explained in Chapter 3 (Methodology), there is a lack of theory and literature on combining survey findings with follow up interviews. Therefore, the research design was primarily based on fulfilling this stage's main research aims. The main scope of the follow up interviews was to validate the results of the survey, explaining some of the variations observed and to enhance the understanding on the practices involved in the strategic planning process. The results of the survey were

not offered in advance to the interviewees in order to avoid biasing their responses. Each interviewee's questions were developed according to their responses in the survey. Before the interviews each participant received a brief comment comparing his/her responses in the survey with the descriptive statistics for organisations of similar sector, size and rate of change in the environment. In a few cases, the basic layout of the interview questions was emailed in advance, upon the interviewee's request.

The total number of interviews conducted was 25 which corresponds to 25% of the UK based participants of the survey who had initially agreed to be contacted for interviews. Some responders stated that they were no longer available to be interviewed either because they had changed jobs since filling in the questionnaire or due to lack of time.

To invite the survey's responders to participate in the interviews, a webpage was set up with a number of files uploaded presenting a limited portion of the survey results (mainly the very basic descriptive statistics were made available); a print-screen of the website is attached in Appendix II.

It should also be highlighted that the structure of the interview and subsequently of this chapter is based on the structure of the survey questionnaire instead of the four factors produced by the multivariate statistical analysis. This choice has been made because the four factors produced do not constitute a new strategy development framework but they aid the analysis of the surveys.

6.2 Profile of the follow up interviews

This section presents some summary statistics concerning the interviewees and the characteristics of the organisations. All the participants in the follow up interviews are summarised in Table 6.1.

Interviewees' demographics

Four interviewees were 'Heads' of their strategic planning team, sixteen interviewees were 'Members' of the strategic planning team and four interviewees are 'Contributing' to the strategic planning process. The latter ones were all working for a team related to the strategy or business development. Thus, they have had visibility of the process even without being directly involved in the development of the strategy. Five interviewees were MDs or directors. However, not all MDs were Heads of the strategic planning teams in their organisations, because in some organisations these are headed by the CEO or Chairman of the organisation. Most of the interviewees (21) were involved at the corporate level, and it is worth mentioning that those who were involved at departmental level and had a contributing role in the corporate planning, preferred to discuss planning at the corporate level.

During the interviews, I was given the impression that all of the participants agreed to participate in the follow up interviews because they were interested in the strategy process, '*I am subscribed to Harvard Business Review; every month I read about strategy, and I do believe that it has an impact*' said the MD of a company; '*I read the McKinsey Quarterly*' (a member of the Business Development Intelligence for a large manufacturing company) or '*I think strategy is fascinating, I enjoy talking about MBA stuff*' (MD of small manufacturing company).

Organisational characteristics

Seven interviewees came from SMEs while eighteen come from large organisations; from the latter ones, four were very large multinational. An interesting observation that was made during the interviews regarding the organisational size, is that some of the interviewees did not accept the classification

SME or Large*. For example, the Infrastructure Technical Manager of a Government/Other Public organisation which employs below 250 people did not see the organisation as an SME, since he/she believed that it is part of the government: '*SME has got a connotation to me about being a business producing something rather than We are a government body*'. Moreover, some of the participants of the Large organisations felt uncomfortable with the classification Large since they explained that they cannot be classified in the same category with large multinationals; '*in some ways it feels to me medium size, not large, not like Microsoft, Shell, Coca Cola*' (Member of the strategy development team for a manufacturing company).

The representation of industrial sectors was not similar to the survey results. As shown in Figure 5.6, in the survey, Banking/Financial Services were the most popular sector with 15% of the total number of responses, but in the follow up interviews, only two interviewees came from this sector. Most participants (6) were from Manufacturing organisations, followed by participation from Utilities (4).

Concerning the rate of change, the percentage of organisations operating in rapidly and slowly changing environments is in agreement with the percentages of the survey: 65% for the rapidly changing and 35% for the slowly changing.

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* SMEs for this thesis are defined according the DTI's (2002) guidelines

Interview No.	Interviewee			Organisation		
	Exper.	Involv.	Job Title	Size	Industrial Sector	Rate of Change in the sector
1	Member	Subsidiary	Operations Manager for Europe for Sales and Marketing	Very Large Multinational	Automotive	5
2	Member	Corporate	Strategy Development Team	Very Large Multinational	Automotive	6
3	Member	Corporate	Financial Control Team	Very Large Multinational	Manufacturing/ Aerospace	6
4	Member	Corporate	Strategy Development working for the Director	Large International	Manufacturing	3
5	Head	Corporate	Director	SME	Manufacturing	2
6	Head	Corporate/Subsidiary	MD	SME	Manufacturing	2
7	Member	Corporate	Finance Director	Large	Construction	7
8	Member	Corporate/Subsidiary	MD	SME)	Electrical/Electronics	5
9	Contrib.	Corporate	business development intelligence	Large	Manufacturing/ Engineering	6
10	Member	Corporate	Commercial project manager for the 'business support unit'	Large	Manufacturing/ Engineering	3
11	Member	Corporate	MD	Large	Chemical/Petroleum	6
12	Contrib.	Corporate	Infrastructure Technical Manager	SME	Government/Other Public	6
13	Member	Corporate	Principal Leisure Manager	Large	Government/Other Public	6
14	Member	Dept	Chief Superintendent	Large	Government/Other Public	6
15	Member	Corporate	Business Integration Manager	Large	Utilities	4
16	Member	Subsidiary	General Manager Operations	SME	Utilities	5
17	Contrib.	Subsidiary	Risk and Value Manager	Large	Utilities	3
18	Member	Corporate	Chief Architect, Head of the IS strategy planning	Large	Utilities	4
19	Head	Dept	Business Development Manager	Large	Media	7
20	Member	Corporate	Director	SME	Prof. Services	7
21	Member	Corporate	COO	SME	Prof. Services	5
22	Member	Corporate	Assoc. Director within Tech. Group	Large	Banking/Finance	6
23	Member	Corporate	Director of Datacentre Development	Large	Banking/Finance	6
24	Contrib.	Corporate	Member of Strategy Team	Large	Telecoms	7
25	Awareness	Dept	Commercial Manager	Large	Retail	6

Table 6.1: Summary of follow up interviews' participants

6.3 Methodology of Analysis

There is no specific theory/literature for the analysis of follow-up interviews, therefore they are treated as interviews, and they were analysed qualitatively (as explained in Chapter 3: Methodology). The interviews conducted are not part of case studies, thus the analysis was based on comparison and synthesis of the responses. This was facilitated by the semi-structured approach used and by the fact that all interviews were based on similar sets of questions which allowed both the comparison of the practices and the synthesis of the responses towards enhancing the understanding on the concepts involved and providing explanation for some of the survey's findings.

The use of qualitative interviews as a data collection approach has been criticised in social science and particularly in business management research, because it offers limited generalisation in the conclusions drawn, nevertheless in this case they are enriching a wider survey. The analysis conducted did not attempt to generalise conclusions for the overall state of strategic planning processes, but through comparing the responses on similar concepts of management, it presents the views of a characteristic sample of the responders in the survey. The fact that there are no significant disagreements in the responses received in the interviews, enhances the generalisability of the conclusions.

6.4 Rate of change in the industrial sectors and its drivers

In the previous chapter describing the survey, it was revealed that the environmental turbulence, expressed by the rate of change in the industrial sector, is one of the determinants of variation in the practices of strategic planning. In this section, the main findings from the follow up interviews are presented, regarding the concept of rate of change in the sectors and its main drivers.

The responses received in this section agree with the findings of the survey where 'customer requirements' and 'competition' (see table 5.1.) were the drivers of changes with the highest mean values. The participants in the follow up interviews, referred to those two drivers primarily, although they emphasised the significance of the competition which is a result of globalisation. Also, the high level of participation by Government/Other Public organisations and regulated or recently deregulated industries like Utilities, resulted in mentioning quite frequently the influence of government and legislation as drivers of change. Regarding global competition, it is quite interesting that China was named most regularly as a driver of change within the industrial sectors. China increases the competition and at the same time offers opportunities both in terms of increased demand by its high growth rates and investment opportunities for cost reduction initiatives.

It is worth highlighting that it is expected that organisations from the same industrial sector would not anticipate identical rates of change, since being in the same sector does not mean offering similar products or services and each organisation competes in different markets. Looking at Table 6.1, the rate of change was fairly balanced for the Utilities and Government/Other Public organisations. However in the manufacturing sector, where lower rates of change are usually assumed, the values in Table 6.1 range from as low as 2 for small manufacturing companies to 7 for Large multinationals with great diversity of activities and markets operating in.

6.5 Development of organisational direction

Following the structure of the questionnaire, the interviewees were firstly reminded of the working definition for 'organisational direction' in this research. Then they were invited to explain what they found to be good practice and which practices were not satisfactory or did not produce adequate results.

The responders who had given low scores in the questions concerning the development of the organisational direction, described the lack of concrete statements of direction as 'bad practice'; for example a member for the strategy development team for a large manufacturing organisation said: '*we have never had a vision, we had a series of ideas and positions*'. In addition, some responders justified the low scores given for organisational direction because it did not express long term vision for the future of the organisation but contained short term operational measures and particularly profit related targets. For example, a member of the business intelligence team for a large manufacturing organisation mentioned '*someone asked me what does XYZ* stands for, what is it that you are all doing. And I couldn't give an answer. I mean there is nothing which stands out as the message from XYZ. Certainly in XYZ, that did not exist. We were very much individual businesses trying to reach profit targets*'. It is also important that most of the interviewees felt that developing a statement of organisational direction without communicating and articulating it, was not adequate for an organisation in order to benefit from its advantages. The most common reasons for a low score in the development of the organisational direction were reluctance to change, organisational culture and poor leadership skills. The interviewees explained these 'soft' factors that do not allow specific processes to exist for the development and articulation of the direction. In particular, it was emphasised by the interviewees, that the lack of leadership, commitment and participation in designing and developing the appropriate processes was a key factor for a low score in the development of the organisational direction.

The interviewees who gave high scores in the development of their organisational direction, mentioned clarity and simplicity as essential ingredients of a good statement of organisational direction. The issue of wide participation in the development of the organisational direction was brought up, emphasising the need

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* the name of the company has been replaced by XYZ for confidentiality

for both top-down and bottom-up process of setting the organisational direction. Most of the interviewees with high scores for the development of the organisational direction also referred to its articulation. They considered that communication channels should be supported by leaders' direct articulation. One very characteristic quote came from an interviewee working for a very large multinational automotive organisation who said: '*we also have live chat, which is an online opportunity to talk to the leaders of the company online. So you submit a question and read their response and you can log in to that online channel to see it real time, this is very effective and powerful*'. At least two interviewees emphasised the practical rule for the organisational direction to be SMART (Specific Measurable Achievable Realistic Timely). This emphasises the links between development of organisational direction and performance measurement.

Focusing on the main scope of this research, the interviewees were asked to name the main drivers and influences for the development of organisational direction and specifically, the impact of performance measurement was also addressed. It has to be emphasised that performance measurement influences the development of the direction when updated or reviewed. However, the influence of performance measurement is not always considered to have advantageous effects on the development of the organisational direction. A significant number of interviewees mentioned that the only drivers of the development of the organisational direction were financial data; this was criticised by some interviewees who suggested that these practices support shortermism and lack of long term vision. Similarly, some interviewees expressed the opinion that the influence of operational measures, is not beneficial for the development of the organisational direction.

The responders who gave high scores in the impact of performance measurement on the development of the organisational direction and were also satisfied with this process, referred to the integration of performance measurement into performance management. The influence of performance measurement becomes substantial when operational measures are translated into strategic ones. It is quite interesting

that some of the interviewees mentioned the role of the Balanced Scorecard which provides the basis for the discussion at the corporate level. A quote from an interviewee working for a large manufacturing organisation supporting this argument, is as follows: '*looking at the scorecard certainly three of them, quality of our product, the delivery in terms of the performance in the organisation and the cost performance in the organisation, are three areas that have been given the most focus in its development*'.

Summing up, performance measurements were described as signalling the need to change or update the organisational direction, and providing evidence for identifying the orientation of the new direction since the information provided emphasises the weaknesses and highlights the strengths, which can be the platform to identify the competitive advantage of the organisation and the best direction for the future. Furthermore, performance measurement systems can frame discussions at the decision making level, ensuring a balanced view of the organisational performance.

6.6 Strategic initiatives/options development and Strategy selection

The development of strategic initiatives/options is not a separate stage of strategic development processes in all organisations. As was mentioned in the previous chapter, and especially in the section (see 5.6 and 5.6.4) describing the outcome of factor analysis, it was determined that strategic initiatives/options development and strategy selection are conducted simultaneously. The multivariate statistics analysis could not explain why these two processes were grouped under the same factor, therefore this issue was investigated in the interviews.

The follow up interviews reinforced this finding and showed that, in very few cases the development of strategic initiatives/options and the strategy selection are undertaken separately. Very few interviewees from large organisations made the

distinction between these two activities. These were cases where either a division or a department of the organisation develops the strategic initiatives/options and brings them forward to the corporate level to be approved; or in very formalised and hierarchical organisations with multiple levels of decision making, there is a different process for the development of the strategic initiatives/options and for the strategy selection.

A limited number of interviewees mentioned a standardised approach for this stage. One of the interviewees presented this process as it would be described in any business-management text book, that was a very structured approach starting with SWOT* analysis at the first stage to find '*where we are today*' (Finance Director of a construction company). Utilising the results of the SWOT analysis, a set of alternatives is developed. These are evaluated based on their expected EVA** in order to select the one to be implemented. Another interviewee who mentioned a standardised approach, came from a large organisation, which uses an external facilitator for the development and selection of strategic initiatives. The approach mentioned is called '*The Core*' which was described as '*a Boston type Opportunity, Attractiveness Evaluation versus Industry Attractiveness* [ ] *by a guy called Zook*'*** (Commercial project manager of large manufacturing company).

Interviewees coming from SMEs suggested that the discussions taking place at these stages of the strategic planning process, concern a very limited number of different options; for example an interviewee from a small professional services company mentioned about the development of their strategic options: '*informally we have done that, the business being at such a size* [ ] *there are not a lot alternatives that we could choose from*'. This is justified by the fact that they

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* SWOT: Strengths Weaknesses Opportunities Threats

** EVA: Economic Value Added

*** Chris Zook is that the author of the books 'Profit for the core' and 'Beyond the core', which suggests a specific management approach for strategy development and implementation (Zook, 2001, 2004)

operate in niche markets and there are not a lot of different options available. Interestingly enough, some of them referred to the informal processes that take place in order to determine these limited number of strategic initiatives. These processes are rather personal: '*this process takes place in my head*' said the Director of a small manufacturing company.

The interviews examined the drivers for both the selection and the development of the strategic initiatives. The organisational direction is the greatest driver for the development of the strategic options: '*strategy is to meet the business priorities*' said a member of the strategy development team for a large automotive company. This is the stage that the organisational direction is translated into strategic objectives which are fulfilled by the implementation of the strategic initiatives: '*our direction is clear,* [ ] *but we are always looking to stay ahead in technology and we are always looking for new markets on which to use our technology*' (Member of Financial control team of large aerospace company).

Performance measurement seems to have a supportive role in the development of the strategic initiatives. Its influence was acknowledged only when a weakness of the organisation was brought up by the measurement of organisational performance. The most common example provided by the interviewees was low profitability that would signal the need for changes and the development of new strategic initiatives. In SMEs, it was mainly operational measures which would be taken into consideration. While in large organisations, performance measurements are not so influential as external pressures by shareholders primarily and industry analysts: '*this is where corporate America comes in Wall Street, this is where XYZ's stock is listed and is very much dependent*'.

One of the most paradoxical findings of the interviews concerning this stage of strategic development processes was the fact that the feasibility and resource availability are considered at this stage of development and not at the selection, as the SDP model suggests. This could imply that the stages and elements of the actual

strategy development process are strongly interrelated and sometimes take place simultaneously. Strategic options whose feasibility is debatable or where resources are lacking for their implementation, are not really considered. This shows that in most cases the process of developing strategic options is very restricted by the organisational capabilities.

For some of the interviewees, the development of strategic initiatives, is the reaction to the changes in the environment. This incorporates the assessment of the external uncertainties into strategic planning: '*the position we have reached* [ ] *is to identify what is happening in the environment* [ ] *we have identified the opportunities there*' (Member of the strategy developing team for a large manufacturing company). Obviously, environmental scanning, and the assessment of the environmental uncertainties are filtered by the prism of the organisational direction. The environment's threats and opportunities are evaluated according to the underpinning strategic orientation of the organisation. For example, the organisations with aggressive growth strategies, search continuously for the opportunities, while organisations following a more organic model of growth are mostly concerned with the threats of the environment.

It is also worth mentioning that interviewees who did not come from the corporate levels of the organisations had limited visibility on the development of the strategic initiatives/options: '*as far as I know, because here we are getting at really high levels, I think they do* [develop strategic initiatives]' (Operations manager for European sales and marketing of large automotive company). When the same interviewees were asked to describe the same process at their level, their responses were similar to the ones received by those from smaller organisations. The departmental decision making is so focused that there are not really a lot of different options to be developed, for example an interviewee working for a division of a large manufacturing company said: '*it is my perception that* [at the corporate level this process] *is more random;* [ ] *at the businesses it is more sophisticated because the businesses are naturally more focused, they are smaller in their*

markets and so there is some more discipline or rigorousness to that process'. Another very interesting observation that can be made is that those who referred to the departmental planning could more easily explain the performance measurements that influence the development of the strategic options. Obviously at the departmental level these were a mixture of strategic and operational measures.

Strategy selection is based on potential benefits. The most commonly mentioned expected benefits were: profitability, value added and project fit. The benefits have to match the strategic objectives and to a large extent the organisational direction: '*the vision provides the priority for the allocation*' said the MD of a manufacturing company. Performance measurement influences the strategy selection by identifying which areas need to be addressed or covered with the strategic initiatives: '*our business performance measures indicate where we need to focus our attention*' mentioned the COO of SME professional services company. It has to be highlighted that in most cases it is the financial performance that interests the decision makers and therefore there is not always a balanced approach in the performance measurements taken into consideration: '*the financial performance and the longer term of the company and the shareholders value count*', was highlighted by a member of financial control team for a large aerospace company.

Some interviewees mentioned that time and money were the resources that determine their selection of strategy. Resources availability in terms of funding available, was mainly mentioned by the interviewees coming from Public/Other Government organisations. It is quite characteristic that in these organisations the direction and the expectations are much higher than the possibilities and available resources: for example an interviewee working for a municipality said: '*they will give us the direction but not the resources to deliver that sort of thing* [ ] *you know that there is always a political agenda on which they want to go things*'.

One of the most important comments regarding strategic options is that they are usually developed as part of the annual planning cycle, but at the time that the

organisations proceed to their implementation these choices might not be adequate to respond to the current needs of the organisation. This comment was made by interviewees coming from very rapidly changing organisations; for example the Managing Director of a company operating in the sector of Chemical/Petroleum highlighted very characteristically: '*as soon as you write the plan it is out of date*'.

6.5 Implementation

The interviewees found the questions on the implementation most difficult to answer. It was very difficult for them to draw the distinction between the implementation of the various organisational strategies and their other every day jobs. In the question concerning the translation of strategy into specific activities, most of the interviewees did not mention any specific approach. The key process in the implementation of the strategy is to identify the targets which will fulfil the requirements of the strategy, as described by the General Operations Manager for a utilities organisation: '*we set out our targets and say we need to develop those projects* [ ] *to do that, we need to communicate the strategy to all the employees in order for them to respond if any opportunities come up*'.

A very interesting view on the implementation of strategy was provided by the Head of Information Systems Strategic Planning of a large utilities company, who suggested that the implementation takes place on two levels: operational and strategic, '*when it came to the operational businesses, I think the strategy was well articulated* [ ] *but when it came to the growth initiatives, the targets are rather vague and the actual plans were not very specific*'.

One of the basic parameters of strategy's implementation is the communication practices. The responders with high scores on the questions of implementation of strategy highlighted the effective communication practices adopted in their organisations. The high scores in the communication of the strategies were given by

interviewees whose organisations had standardised and clearly structured processes for communication; for example the MD of a large manufacturing company said: '*we focus our communication at the three key areas of strategy. That's at the corporate level. It is then brought down to departmental meetings through discussing specific initiatives* [ ] *we also have a company intranet; we are updating the intranet and people will have access to all sorts of information*'.

A significant number of the interviewees see the implementation of strategy as a rather political process. This is in agreement with some authors from this field (Pettigrew, 1992, Eden and Ackerman, 2003). The interviewees, who stressed the political dimension of the strategies' implementation, highlighted that the most important resistance is the organisational culture. For example a member of the strategy team of a large telecommunications organisation explained that '*the communication is there to inform everybody of the mission and vision etc, but some people do not accept them. People in XYZ have been there for 30, 40 years and influencing change is very difficult*'.

Concerning the supporting practices, there were two main outcomes from the responses received. Firstly, the implementation of strategy was largely viewed as project management and therefore project management practices are adopted, as the Director of development for a division of Banking/Finance organisation said very characteristically: '*the Strategic Planning Committee* [is responsible for the support of the strategies' implementation] *by standard project management processes* [ ] *the tactics by their nature will be a strategic project in its own right and therefore we manage it as* [we do with] *project management*'. Secondly, interviewees who gave both high and low scores for the implementation of strategy, highlighted the importance of monitoring and control as a supporting activity of the implementation. For example, the Associate Director for one of the groups of a Banking/Financial services company (who gave low scores on strategy implementation) said: '*we spend two days discussing it* [the strategy], *we come away with a sort of agreed plan for what we are going to do over the next 6 month*

period and then basically because there is no follow up, everybody is going back to their dispersed office structure and old portfolio of investments'. Similar comments were made by an interviewee who gave high scores on the implementation of strategy: '[we support the implementation of strategy] *by our monitoring and control, we know whether we are doing enough activity*'.

The examination of the supporting mechanisms for the implementation of the strategies, brought up the role of performance measurements. Smaller organisations highlighted the strictly financial emphasis which is linked to their viability; the MD of small manufacturing company said: '*I look at the order book, and see where the orders are coming from and whether they are enough*', the Director of a small professional services company said: '*we look at our revenue position against targets and we measure quite hard against that* [ ] *we do manage by revenue on the basis that if we do not get revenue, we will go out of business*'. Large organisations also referred to the monitoring and control as means of supporting implementation; the MD of a division for a large manufacturing organisation said: '*I monitor* [the implementation] *on a monthly basis at board level* [ ] *we review the progress against the strategic measures that have been approved*'.

The ineffectiveness of the strategy implementation has been attributed to organisational culture and to the leadership which does not establish the appropriate processes, the director of Banking/Financial services organisation suggested very characteristically: '*if there were someone in there who would actively be leading that implementation process, it would get done; I think the person at the top of the chain at the moment is not a very good leader*'.

6.6 Feedback and strategic control

The main areas investigated in this set of questions were the processes involved in strategic control and the feedback utilised at this function. Along these lines, the

flexibility of strategic planning was investigated in terms of the influence by the strategic control in the iteration, and the ability to change and adapt during the implementation of the strategy.

One of the dominant issues in the strategic control is the assessment of the effectiveness of the communication of organisational direction and the strategies implemented. All the interviewees who gave high scores in the questions on the evaluation of strategy mentioned similar practices such as employee surveys; some of the participants in the follow up interviews coming from large organisations named some of the questions included in the staff survey, a Business Development Manager for a large media company said: '*we had surveys, questionnaires, emails asking: are you aware of this and this?, are you clear on what the strategy is and why we are trying to achieve this?*', and the member of the Strategy Development Team of a large automotive company added: '*how are our objectives set? Are you familiar with the key strategic direction? and we ask them to list them*'.

It is quite interesting to note some of the reasons which provoked low scores in the feedback and strategic control. An interviewee who was a member of the Business Development Intelligence for a large manufacturing company, said: '*the devil is in the detail; theoretically there is a mechanism* [ ] *but when each division sends 200 pages there is nothing you can do with it*'. Another source of dissatisfaction with the feedback and strategic control is created with the process itself. The Operations Manager for Sales and Marketing in Europe of a large automotive company explained that the feedback should be provided at the decision levels where it is meaningful and can be effectively used. There is no use in strategic control function providing feedback at the level where no changes can be made. This particular interviewee whose company comes from the automotive sector where large investments are made and flexibility is limited beyond a specific point of the implementation, said very characteristically: '*what is happening when you get feedback and they say you are in the red;* [and at this point] *there is no action that I can do, to get it to what it was budgeted for*'.

A very insightful point was made by a Technical Manager for a Government/Other Public organisation, who highlighted that '*we are very data hungry organisation, [ ] but the information is not always fed to the right person, at the right level of decision making*'. This remark shows the need to align the system that produces the feedback information and the strategic control function, so as to collect the information which is required and useful, and to provide this piece of information to the person in the organisation who needs it for the relevant decision making.

The issue of flexibility is a rather subjective issue since there is not any acceptable definition of when an organisation is flexible enough. This implies that there are different aspects of the strategic planning process which are considered flexible for each organisation. For example, an interviewee from a large automotive company said: '*in a company as large as XYZ, the investments timelines are significant; for example a vehicle product might be of the order of 1bn $ [ ] in terms of flexibility there is only a descript amount of flexibility that we have, at the start of the process you have quite a high degree of flexibility as you progress to the strategic information phase the ability to change that strategy is that much lower. Once you have committed the investment, and the investment horizons are 2.5 years for manufacturing facilities and R&D. The marketing strategies of course can change. Markets, economies change as time goes on, and we can respond to that, to a certain extent. But for wider scale changes, it is not so easy to do.*' Even if the levels of flexibility are not the same, a very good definition of the expectation from a flexible strategic planning process was provided when talking with the Chief Architect and Head of the IS strategic planning for a large utility company, who said: '*the process is iterative and responsive to feedback, therefore I think it is flexible*'.

One of the most challenging questions for the participants of the interviews, was to name the reasons that made them give high scores in the flexibility of their strategic planning process. Interestingly enough, a significant number of interviewees mentioned the frequent reviews to be the driver for flexibility; an interviewee from

a large manufacturing organisation said: '*because we are doing it* [reviewing the performance achievements] *so often, we are very responsive to change, so we pick up change in the marketplace or in the technology, and we can introduce change very rapidly*'.

In the literature review (Chapter 2), the relationship between strategic control and performance measurement was presented and there it was explained that performance measurement is an integral part of strategic control (referring to the work of Simons, 1995). This was reinforced in the interviews when a member of the Financial control team for a large aerospace company highlighted '*our performance process, is now geared to the long term strategy. From that point of view it is embedded in the organisation, it is part of the control function of the organisation*'.

6.7 Performance measurement

The discussion in the interviews concerning the performance measurement was concentrated on the development of the measurements of organisational performance, their functionality in terms of their scope, appropriateness, and role within the strategic planning process. The difficulties anticipated with this set of questions were on the interviewees' initial hesitation to include in the discussion non-financial measures. It was understood that even if a significant number of non-financial measures are used, the interviewees could more easily discuss the financial ones.

The discussion on the appropriateness of performance measurement showed that it is related to their focus. The use of only operational measures was a reason for the interviewees to give low scores concerning their appropriateness. A member of a strategy development team for a large automotive company justified the low scores given for the appropriateness of performance measures in his/her company by

saying: '*I think they are more operational,* [ ] *these measures do not do anything to assist strategic thinking*'. This set of questions also brought up, an issue which currently attracts a lot of academic research (Barr et al. 2004), that it is the measurement of the intangible assets '*intangible* [metrics] *are more difficult to measure*' (member of a strategy development team for a large automotive company). This scepticism expressed by this interviewee reflects the fact that the integration of performance measurement is taken very seriously in some organisations. Nevertheless, the integration of performance measurements is not easily achieved and there is a lack of methodologies available to fulfil the requirement of modern management practices.

Discussing the appropriateness of the performance measurement, a member of the Strategy Development Team for a large automotive company explained that part of integrating the measurements into a concrete system is to identify the interrelationships between them. For example, the interviewee explained that '*the man-hours is a legacy measurement and it is familiar to all senior leaders; how much relevance does this have with the automation now? Personally, I think that it can be misleading, because the investment to put the automation is significantly greater*'.

Investigating the relationship between performance measurement and target setting, a member of the strategy development team from a large manufacturing company expressed the opinion that the process of target setting is rather political and to a certain extent '*there are areas where they would be allowed to negotiate in terms of what is required and what is delivered*'. Similarly, a member of the Financial Team for a large manufacturing organisation explained that the dimensions of the politics involved in target setting are not only influenced by the internal negotiation/buying-in processes: '*yes, we recognise performance, but also recognise market expectations so we would very often set targets, without knowing how we are going to deliver them*'.

Another interviewee for a large manufacturing organisation, who gave a low score for the appropriateness of their performance measurements, was of the view that top-down approaches cannot put in place measurements that are really useful for the organisation because '*sometimes they* [the measurements] *lack realism*'; the same interviewee stated that bottom-up approaches would benefit the company in '*measuring the performance rather than imposing the objectives*'. This last statement reinforces the arguments made in the exploratory case study (Chapter 4) concerning the ability of the performance measurement systems to communicate targets and strategies. However, in this interview, it was found that if they are not properly designed they might be imposing, rather than implementing strategies. On the debate between top-down and bottom-up approaches in the designs and implementation of performance measurement, the MD of a large chemical/petroleum organisation, who gave a very high score for the appropriateness of their measurements explained that this was achieved by asking '*the staff to come up with measures that they feel reflect their jobs and their role and they can see the impact they have on the business*'.

Discussing the ability of the existing performance measurements to be a good indicator of the organisational performance, the majority of the interviewees expressed the opinion that even if their performance measurement systems are focused on the financial measures, these provide an accurate picture of organisational performance because, as a member of a business development team said: '*ultimately whatever you do, feeds into the financial performance; so ultimately it is a good measure*'.

The responses received on the ability of existing performance measures to depict accurately the organisational performance achievements gave the chance to some interviewees to praise the 'culture of measurement' which has enhanced the management of the organisations. An interviewee from a large automotive organisation highlighted: '*when you look at our performance against our main competitors, then it has enabled us to assume a position that many people did not*

think that we could get anywhere near. [ ] *one of the key drivers* [for our success] *is the way we actually measure ourselves*'.

6.8 Assessment of uncertainty

The area of assessing the uncertainty included only two general questions in the survey questionnaire (see Chapter 3 and Appendix I); these were, whether the organisations assess their future environmental uncertainties adequately and the extent to which the assessment of uncertainty influences the strategic planning process. Given the high value of the scores' mean determined in the descriptive statistics of the previous chapter (see section 5.4), the follow up interviews examined which practices are characterised as adequate for the assessment of uncertainty and how this influences significantly the other stages of the strategic planning process.

A large number of interviewees consider forecasting and in particular forecasting of financial indicators to be an adequate practice for the assessment of uncertainty, as the Operations Manager for the European Sales and Marketing of a large manufacturing organisation said: '*the financial uncertainty and the exposure to the exchange rate that is the most common answer, which is analysed by the finance department*'. There were a limited number of interviewees who referred to more structured approaches for the assessment of uncertainty. The Project Manager for the business support unit of a large manufacturing company, whose organisation did have assessment of uncertainty beyond forecasting modelling explained that the development of scenarios are driven by the potential financial implications for the organisation: '*ultimately you have 5 different factors you need to think about, and to compare the best and the worst possible scenarios. You want to say what the maximum revenue is and what the minimum revenue is. So non-financial factors are translated into financial factors*'.

The most integrated approach described in the interviews was provided by the MD of a SME (which a subsidiary of a large organisation) who referred to scenario planning and explained that in order to use its results in strategic planning they would perform a sensitivity analysis '*which provides what happens if a particular amount of capacity is allowed* [ ] *in terms of risk management and scenario planning is that we have contingency plans for what happens if the market disappears*'.

Two groups of responses were identified for the participants who gave low scores in the assessment of uncertainty. Firstly, there were those who thought that their organisations did not do enough and in some cases they justified the weak performance of their company on the poor assessment of uncertainty: '*no,* [the assessment of uncertainty was not adequately performed] *you see the state of XZY today* [ ] *we did not manage to predict the decline in the market*' (member of the business development intelligence for a large manufacturing organisation). And secondly, there were some interviewees who thought that the assessment of uncertainty does not have any value for their organisation: '*I am not sure that I would assess them* [external uncertainties], *even if a regime occupies this country they will still print*' (MD of a small printing firm).

Those interviewees who gave high scores in the assessment of uncertainty were asked whether they use any specific techniques. The responses received indicate that most of the organisations that try to assess uncertainty are addressed to 'experts' or industry analysts from whom they buy reports which are concentrated on a limited number of key parameters. Examining whether scenario planning is used, some of the interviewees from large multinational companies expressed the opinion that it may be used at the very top levels of the corporate, but they had no contact with it as part of the strategy implementation or themselves do not have to provide some data or opinions which may be used in the development of the scenarios. For example a member of the strategy development team for a large automotive company said: '*there are at high level, there is corporate scenario*

planning, but it is not one of the organisational strengths, it is looked at as one of the black art in a way'.

6.9 Evaluation of strategic planning process

From the set of questions on the evaluation of strategic planning, the discussion in the follow up interviews was concentrated on the five assessments of the strategic planning process which were used as dependent variables for the regression analysis of the survey (see Chapter 3). As has been explained in the introduction to this chapter, the interviewees did not have access to the multivariate statistics results prior to the interview. In addition, considering that the interviews were semi-structured, the interviewees responded to this set of questions freely, without being biased by the results of the survey. This part of the interviews examined why the participants had given high or low scores in the questions assessing strategic planning as a process.

The strategic planning process supports the achievement of the organisational goals

The survey's results indicate (see table 5.25) that the most influential factor for the ability of the strategic planning process to support the achievement of the organisational goals is 'organisational direction', and that was determined from the overall number of responses as well as for the four different divisions of organisations (see Table 5.26 and 5.27). The results of the follow up interviews revealed that the influence of the organisational direction is not only linked with positive outcomes, but its lack results in the inability of the strategic planning process to support the achievement of the organisational goals. Analytically, those who gave low scores in the first assessment of the strategic planning process

referred to the lack of organisational direction. In particular, the business integration manager for a large utilities company demonstrated through a series of examples how the lack of clear direction and the regular changes in the business principles and values led to disorientation of the organisation and eventually to its bankruptcy.

The value of the organisational direction was also mentioned by some of the interviewees who gave high scores for this question. For example, the Associate Director of a group within a Banking/Financial services company, emphasised the influence of being focused on the organisational direction which supports the achievement of the organisational goals: '*the overall strategic objective of XYZ is to make a return on shareholders' funds* [ ] *we are primarily focused on delivering value from the assets we are investing in*'.

Other interviewees who gave high scores on this assessment of strategic planning concentrated their comments on regular and well structured control activities. For instance, the Director of a division within a Banking/Financial services company said: '*it is the monitoring and control* [that leads to the achievement of the organisational goals]'. Moreover, the MD of a SME, subsidiary of a large Electrical/Electronics company, explained that '*regular reviews of our achievements and clear communication of the results are the main elements in order to achieve our organisational goals*' while he/she specified that '*continuous measurement and review on a quarterly basis, it directly feeds into the results*'. The comments made referring to control activities reinforce the findings of the survey regarding the significance of performance measurement in the ability of the strategic planning process to support the achievement of the organisational goals. Performance measurement was found to be the third most influential factor in this assessment of strategic planning process' success.

Another dimension of strategic planning which contributes to the achievement of the organisational goals is the operationalisation of strategy '*we do turn our strategic plan and strategy into operational plans quite effectively and we are very*

clear about what we are going to do about marketing and very clear about our new targets and our business development' pointed out the Director of a small Professional services company. Similarly, the Chief Architect and Head of Information Systems strategic planning for a large Utility company explained that the ability of the strategic planning process to support the achievement of the organisational goals was located in the fact that '*the linkage between environment and strategic KPIs was very clear and we had a robust process for turning the KPIs into operational measures*', which reinforces the argument that performance measurement can have a critical role in the operationalisation of strategy. The comments regarding the operationalisation of strategy could be considered as an additional support for the value of performance measurement. The quote of the Chief Architect and Head of Information Systems shows that the operationalisation of strategy should be aided with the appropriate tools and practices, and as he/she explains this is role that strategic KPIs have. This shows that the significance of performance measurement, as depicted in the regression models built with the results of the survey, is not limited in monitoring and controlling activities, but it is an essential part of strategic development processes which aids in the implementation of the organisational direction.

<u>The strategic planning process is considered effective</u>

The results of the survey in the examination of the effectiveness for the strategic planning process, showed that for the totality of the responses 'organisational flexibility and uncertainty' is the most influential factor, while significant variation is observed in the comparisons between different types of organisations. Large organisations were found to be more strongly influenced by 'organisational flexibility and uncertainty' while for SMEs, it is the 'organisational direction' which has the great significance (see Table 5.8). The organisations operating at the rapidly changing environments were more significantly influenced by

'organisational flexibility and uncertainty'; while 'strategic initiatives/options development and selection' is the most influential factor for the organisations operating in slowly changing environments.

The interviewees of follow up interviews expressed similar opinions with the survey's findings, and some of their responses explain the reasons why these variations are recorded in the survey. For example, the high levels of effectiveness were justified by the adequate processes involved in dealing with uncertainty and being flexible; a Member of a Financial control team for a large manufacturing company, highlighted the beneficial impact of risk management, while the MD of a SME, subsidiary of a large Electrical/Electronics company emphasised that an effective strategic planning process '*must consider the micro environment, ensuring that you have a bottom-up analysis*'.

The discussion of the effectiveness of the strategic planning process with the interviewees who had given low scores, revealed the lack of setting properly the organisational direction in terms of clearly articulating the manifestations of the organisational direction and integrating its communication within the process of strategy implementation. For example, the Business integration manager for a large Utility company explained that the ineffectiveness of the strategic planning process was due to the fact that the organisational direction and the strategies selected reflected the personal agendas of the top management team. In parallel the associate director of a division for a Banking/Financial services company explained that the lack of consensus in decision-making results in poor commitment in the implementation of the selected strategies which creates the ineffectiveness of the process '*I would say that it is not effective because it does not get the buy in of everybody in the team*'.

The responses of the interviewees with high scores in the assessment of effectiveness for the strategic planning process reinforced the value of the organisational direction as determined by the survey. The Business Development

Manager for a large media company said: '*clear objectives, clear understanding of what we wanted and why we wanted and how we would achieve it* [ ] *the strategy at XYZ was very clearly defined*'. This actually shows that well defined organisational direction can potentially enhance the process of developing and selecting strategies. The value of strategic initiatives development and selection was praised for the effectiveness of the strategic planning process by the COO of a small Professional services company who said: '[strategic planning process is effective] *because I think the options and the quality of those options and therefore the quality of the decision that we are making, are far better than if we did not have adopted this process!*'.

The responses received from the interviewees whose organisations operate at slowly changing environments provide very useful insights in order to explain the variation exhibited in the results of the survey when comparing organisations operating in environments with different rate of change. The Director of a manufacturing SME operating within slowly changing environment said very characteristically about the effectiveness of their strategic planning process: '*nothing has changed in our direction for the last 50 years, we have made a few small changes in the strategy but after careful consideration and a lot of discussion, it is not easy to change something in our business*'. A similar opinion was expressed by the Strategy Development manager of a large manufacturing organisation who thought that the rate of change in their sector is 3 out of 7; he/she explained that '*it is also part of the effectiveness, the ability of the corporate centre to identify the opportunities and to select the right strategies* [ ] *these has to be communicated to the Business Units*'.

Strategic planning process is considered efficient

The results of the survey showed that the efficiency of the strategic planning process is influenced most significantly by the 'organisational flexibility and

uncertainty' (see table 5.26). The only exception is the factor of 'strategic initiatives/options development and selection' which is the most influential only for the organisations operating at slowly changing environment. The MD of a manufacturing SME who had given 2 out 7 for the rate of change in their sector, explained very characteristically: '*we spent a lot of time talking about them* [strategic initiatives], *we can afford to spent a lot of time thinking and discussing; and then to action, in our sector, decisions should not be made instantly*'.

During the investigation of the factors determining the efficiency of strategic planning process, it was very interesting that none of interviewees referred to bureaucratic and time consuming processes. The participants who gave low scores on the efficiency, focused their criticisms on inadequate processes involved with setting the organisational direction. The Director of a division for a large Banking/Financial services company mentioned that their strategic planning process is inefficient due to poor communication practices. Similar comments were made by a Commercial manager for a retail company who suggested that frequent change in the organisational direction and its inadequate articulation made the process of strategic planning inefficient.

Reinforcing the arguments of the interviewees who gave low scores for the efficiency of the strategic planning process, the ones who gave high scores attributed the efficiency of their process to a large extent to the well articulated organisational direction and the effective communication of the strategies; as a member of the strategy team for a large telecommunications company explained that the multilevel communication strategies which ensure that organisational direction is articulated at all levels of decision making. The same interviewee explained, that having the organisational direction as a driver for the decisions made in strategic planning process enhances the efficiency of the process, since it is well articulated what the ultimate goal is and what the orientation of each decision should be.

'Performance measurement' as a factor was found to be of significant influence in the survey. Hence, the General Manager of Operations for a division of an utility company said: '*it becomes more structured as we get more performance measurement and controls in place,* [ ] *now with the performance measurements we have got everything in place and we are more tidy and the process is easier to take*'.

Interestingly enough, a significant number of interviewees suggested that the formality of the process contributed to its efficiency: '*I do not think that formality creates bureaucracy for us; it makes sure that we consulted the right people*' said the Infrastructure Technical Manager for a Government/Other Public company. Nevertheless, there were those who believed the opposite, that the informality of their practices had a definite effect on the efficiency of the strategic planning process: '*it is entirely value added, very little bureaucracy*', suggested the Director of a small Professional services company.

The discussion of the efficiency and its relationship with the organisational flexibility gave the chance to some interviewees to praise the beneficial role, for the efficiency of the process, that the adaptability and the ability to assess the uncertainty have; the Operations Manager for European Sales and Marketing of a large automotive company said very characteristically: '*the ability to adapt to the changing environment, if it is not efficient, it means that it is not able to change as quickly as it needs to*'.

Strategic planning process leads to the adoption of successful strategies

The results of the survey have identified that the most influential factor, for the ability of strategic planning process to lead to the adoption of successful strategies is the 'organisational direction' (see table 5.26). A significant number of interviewees referred to the organisational direction which has a positive impact

upon the adoption of successful strategies; for example the Director of a small Professional services company justified the high score by saying: '*we have a commitment to making our targets happen*'.

Discussing the results of the survey in chapter 5, it was noted that the influence of the 'strategic initiatives/options development and selection' factor is statistically significant in a limited number of assessments and mostly for the organisations operating at slowly changing environments. Interestingly enough, some of the interviewees from the rapidly changing environments praised the value of developing alternative strategic initiatives and selecting some of them to implement. The Associate Director of a division for a Banking/Financial services company emphasised that the inadequate and poor processes for developing and selecting strategic options was one of the parameter which leads to the adoption of unsuccessful strategies: '*strategies get formed and then discussed and do not always get the buy in* [ ] *the strategy has a hole because it is reflecting the operational practicalities issues*'. The beneficial role of the processes involved for the development of strategic initiatives, was also mentioned by some of the interviewees who gave high scores. For example, a member of the strategy development team for a large automotive company said: '*I think that the strategic planning process gives a way of filtering and selecting*'.

Based on the survey's results, 'performance measurement' influences significantly the ability of strategic planning. Some of the participants in the follow up interviews reinforce this argument, suggesting that performance measurement and strategic control contribute to the ability of the strategic planning process to lead to the adoption of successful strategies, '*the important thing is to have continuous measurement, because it provides you, the flexibility to change the strategy during the financial year*' said a manager from Business Development Intelligence division of a large manufacturing company. The last quote is very important because it shows that the use of performance measurement is strongly related to flexibility of the strategic planning process.

The importance of formality and structured approaches was also highlighted by the Chief Architect and Head of Information Systems strategic planning for a Utility company, who explained that the high score given in this question was because '*it was formalised, clear and rigorous*'.

According to the regression analysis' results the impact of 'performance measurement' is not statistically significant for the ability of the strategic planning process to lead to the adoption of successful strategies. However, the follow up interviews showed that its lack can explain why in some organisations the strategic planning process does not lead to the adoption of successful strategies. The majority of the interviewees who gave low scores, on the ability of strategic planning process to lead to the adoption of successful strategies, mainly concentrated their criticisms on the lack of sufficient control mechanisms, as the Infrastructure Technical Manager for a Government/Other public company suggested.

Strategic planning process is a successful process overall

According to the survey, 'organisational direction' is the most influential factor for strategic planning to be overall a successful process. The follow up interviews reinforced this argument and some of the comments made explained why organisational direction is such a powerful element of the strategic development processes.

Those interviewees who gave low scores referred mainly to the crucial impact of the organisational direction and the pivotal role of strategic control and performance measurement. The Infrastructure Technical Manager for a Government/Other public organisations stressed the lack of clear direction: '*if it was successful it would leave me with a feeling that I knew what exactly the strategy was and where we are going and I would have completely bought into it. I guess I am not*'. Similarly the Risk and Value manager of a large utilities company said very characteristically:

'*there was the desire of directors and managers to come up with wonderful optimistic promises that we never managed to deliver*'. From the 'softer' factors point of view, the Associate Director of a division for a Banking/Financial services company explained that overall '*there is a lack of leadership*' which influences all the elements of the strategic planning process.

The interviewees who gave high scores on the overall success of the strategic planning process mentioned the inspirational role of organisational direction which is embedded in the organisational culture (Business development manager for a large Media company). Also, the value of communication of the organisational direction: '*it is important for the group centre to communicate why they are doing it, how it affects them and why it is so important*' (MD of a subsidiary of a large Electrical/Electronics company).

Interestingly enough, even if the statistical analysis of the survey showed that 'performance measurement' does not have a significant influence upon the overall success of the process a significant proportion of the participants in the follow up interviews referred to the performance management tools '*better application of the BSC, this will help to have a more cohesive strategy for going forward*' said the Finance Director of a large construction company.

Finally, some other interviewees, referred to the nature of the overall process stressing that it is: '*comprehensive, fairly well disciplined, and very robust*' (Member of a strategy team for a large automotive company) and '*simple*' (Director of a SME Professional services company).

6.10 Discussion:

The findings of the follow up interviews offer the chance for a great range of discussions concerning strategic development processes. However in this section

the discussions presented are based on the issues related to the research questions of this thesis. For this reason, this section contains a series of discussions on the outcome of the interviews regarding the determinants of the relationship between setting the organisational direction and performance measurement within the strategic development processes. Initially, the two parameters which were identified in the survey to be of significant impact: organisational size and the rate of change in the industrial sector, are analysed and discussed in conjunction with the results of the survey. Then a discussion is developed on a concept that was found to have an influential role and which has never been addressed before; that is the concept of 'maturity'. Finally, the impact of 'softer' factors is further analysed and discussed.

The impact of organisational size and the rate of change in the environment was examined firstly within the responses of the interviewees in each question and through a series of direct questions at which the participants were asked to comment on how they perceive that these two factors influence the development of the strategic planning process and the performance measurements in their organisation. The discussion developed on the influence of the 'soft' factors is based on responses received in the interviews. The discussion on the impact of 'maturity' is a result of interpreting the interviewees' comments in an attempt to explain how organisations which implement similar management approaches achieve different levels of success.

6.10.1 The impact of organisational size

From the survey, the comparison of the influence by the four factors on the five assessments of strategic planning process' success, between large organisations and SMEs showed that there exists variation in the practices adopted by organisations of different size. The most characteristic observation made, from the results of the regression analysis (see section 5.8, and table 5.25) is that large organisations are significantly influenced by 'performance measurement' while SMEs are not. This

observation created two areas which were investigated in the follow up interviews. Firstly, it was examined why in Large organisations performance measurements have a more influential role and secondly why in the SMEs that the measurement of the organisational performance does not have significant influence upon the success of the strategic development process.

Addressing the first point, the participants in the follow up interviews provided a series of explanations and examples why performance measurement has a critical role in the strategic development process of larger organisations. Investigating the influence of organisational size in terms of turnover, number of employees and diversity of activities, the interviewees made clear that it is the number of employees and the diversity of activities that create complexity which may require a range of specialised approaches as far as strategic development processes are concerned. The increasing number of employees requires the expansion of monitoring and controlling activities and in some cases the development of more organisational levels. The increase in the diversity of activities increases the complexity of the strategic development processes because the number of parameters that need to be taken into consideration and be addressed within the strategic planning process increase. A very characteristic response to this question was provided by a member of the strategy development team for a large automotive company: '*the complexity of an organisation grows exponentially with size. The information that you need to control is massive and the organisation wants to have control of all this information*'.

Synthesising the responses from the interviewees who work for large organisations and from those who work for SMEs which are in the process of growing, it is understood that when organisations grow, they increase the formality and standardisation of the processes involved, in order to deal with the increasing complexity in their strategic development processes. A very interesting opinion, on the influence of organisational size in formalising the processes involved in strategic planning, was expressed by a member of the Financial control team for a

large aerospace company, who said that: '*the size of the organisation dictates that we have a fairly sophisticated system*'. The same interviewee explained that the sophistication in their strategic planning process was shown by the fact that '*performance measurements have an influence in the overall process because they are such an integrated part of our process that there is a lot of learning that it is transmitted through the company on a fairly easy basis*'.

The increase in the intensity of utilisation for strategic planning processes as the organisations grow, is supported by Mintzberg's (1994) claim that larger organisations are more dependent on formal strategic processes in order to co-ordinate and ensure alignment between the various organisational levels. The existing literature confirms that there is a strong relationship between organisational size and formality of the strategic planning process (Al-Bazazz and Grinyer 1981, Drago 1996).

The issue of formality and standardisation of strategic development processes has been at the centre of the academic debate over the last decades, as presented in the literature review. The literature presents contradictory findings and a distinct lack of consensus concerning the relationship between formality and organisational performance. For example, French et al (2004) found no significant relationship between organisational performance and formality, while they confirm '*a significant relationship between net profit and informal planning*'. On the other hand, Andersen (2004) found that '*effective organisations engage in more complex strategy formation processes*'. Also, Kaplan and Beinhocker (2003) report, that under the necessary conditions '*formal planning processes need not be a waste of time and can in fact be a real source of competitive advantage*'.

The increase in the formality and standardisation of the processes involved is rather concentrated on the monitoring and controlling activities and not in the totality of the strategic development processes. It is quite important to emphasise that during the twenty five interviews, very few of the responders who gave high scores

referred to some established management technique or tool. The most commonly mentioned management technique was the Balanced Scorecard. This reinforces the findings of O'Brien and Meadows (2003) who found that '*formal methodologies are rarely adopted in vision development*'.

The increase in the size and diversity of activities has a definite impact upon the setting of organisational direction. The interviewees from larger organisations, which operate in different markets and are engaged with a great variety of products and services, pointed to the difficulty they face when trying to develop manifestations of the organisational direction which are inclusive enough for all the different parties involved. They also highlighted the need for integrated communication practices to ensure the dissemination of organisational direction and the strategies implemented. It is interesting to note the emphasis with which the interviewees of large multinationals expressed the efforts made by their senior management teams in the communication of organisational direction, using every possible technology available. The value of organisational direction becomes even clearer considering the efforts made to assess the effectiveness of the communication for the organisational direction; as it has been shown the organisations, for some of the interviewees, believe so much in achieving a shared understanding of the organisational direction between all employees that they regularly assess employees' familiarity and alignment with the organisational direction through staff surveys.

The influence of organisational size in the expansion of monitoring and control activities and particularly in performance measurement was further investigated in the follow up interviews. The responses show a dichotomy of perceptions regarding the use of performance measurement. A limited number of the interviewees suggested that the expansion of performance measurement creates bureaucracy in the strategic development system: '*it is more bureaucratic and slower to react*' said a member of the strategy development team for an automotive company. A second

group of interviewees suggested that the expansion of performance measurement is a necessity as the organisation grows.

Performance measurement is not a standard concept, and therefore it can be understood that its role depends on its design and implementation (Bourne et al, 2002). The interviewees who suggested that the expansion of the performance measurement is a necessity as their organisations grows, explained that their performance measurement is integrated within the overall system and is properly supported with the appropriate IS/IT systems, which obviously requires an investment of resources: human and money. For example, the MD of a manufacturing company said that '*I would like to see a standardised set of reports generated automatically by a computer* [ ] *if you a have a live system and you just press a button and it produces the report* [then] *the usability of the performance measurement system increases because it is doing what you want it to do, instead of taking up an enormous amount of time*'. The required investment for effective use of performance measurement was discussed by the MD of Chemical/Petroleum company who said very characteristically: '*I do not see smaller organisations wanting to go down the road of a fully blown balanced scorecard, because they will not have the resources and the staff availability to administer and manage those levels of performance measures. They have to be selective on what are the key ones and they have to be personally in touch more than using the metrics*'. Substituting the performance measurement systems with the personal view is a practice which is quite common in SMEs as suggested by the MD of a small professional services organisation and the Director of a small manufacturing organisation. The same interviewee suggested that the investment for a performance measurement system is so great for the finance of his/her organisation that it would be difficult to pay off.

In larger organisations performance measurements should provide different type of information at each level. Therefore, the differentiation between operational and strategic measures becomes more apparent. Moreover, the interviewees from larger organisations were those who referred to the need to integrate performance

measurements from the operational ones used at the lower levels of the organisation into the strategic ones which will provide a more broad view of the organisation and will enhance decision making. The quest for measures or KPIs (key performance indicators) which will have a strategic orientation is a topic which has recently gained a lot of attention in the academic literature (Franco and Bourne, 2003). It is widely acknowledged that it is a vital need for organisations to develop strategic performance measures which will enhance their decision making (Marginson, 2002).

6.10.2 The impact of rate of change in the environment

The statistical analysis of the data collected from the survey showed that the rate of change is a determinant for different practices in strategic development processes. The comparison between organisations operating in rapidly and slowly changing environments produced two notable variations. Firstly organisations operating within rapidly changing environments are more strongly influenced by 'performance measurement' while organisations in slowly changing environments are not. Secondly, 'strategic initiatives/options development and selection' has a significant influence upon the success of strategic planning process only for the organisations that operate in slowly changing environments.

The findings of the follow up interviews agree with the results of the survey concerning the value of 'organisation flexibility and uncertainty' for the organisations operating in rapidly changing environments. The dynamic environments are considered to be the main drivers of the strategies developed and adopted by all the interviewees whose organisations operate in rapidly changing environments. Thus, it was easy for them to describe the strategies that are developed to deal with environmental turbulence. However it was very difficult for them to answer directly how the high rate of change influences their strategic development processes.

Investigating why organisations in rapidly changing environments are not significantly influenced by 'strategic initiatives/options development and selection', a very interesting and characteristic quote was given by the MD of a large chemical/petroleum company, who said: '*as soon as you write the plan it is out of date*'. This actually shows that the main problem with dynamism of the environment is located in the inability of some organisations to integrate the assessment of uncertainty within their strategic planning processes. This argument is supported by the responses received concerning the practices adopted by the organisations for the assessment of uncertainty. In section 6.6 it was described that most of the organisations consider the use of forecasting financial indicators to be adequate practices. Synthesising the responses received in the follow up interviews, it can be understood that the organisations that struggle to deal with unexpected or rapid changes in the environment, suffer from poor strategic options/initiatives development and selection or ineffective implementation processes.

The participants in the follow up interviews concentrated their comments on the flexibility of the organisation which can provide the basis of overcoming effectively the rapid changes in the environment. It is very interesting to note, that the rapid changes in the environment were mostly seen as a threat for the interviewees rather than opportunities for greater organisational achievements; even if authors like Sharma and Vredenburg (1998) believe that, within a resource-based view of the organisation, the assessment of uncertainty and proactive strategies can become the sources of competitive advantage. The linkage between assessment of uncertainty and flexibility has been explored in the existing literature (Shimizu and Hitt, 2004). It is not surprising that in turbulent environments, organisations with a high degree of flexibility have been found to perform better than those with lower levels of flexibility (Dreyer and Gronhaug, 2004). However, it is quite surprising that a significant number of interviewees found that tighter monitoring and control as well as regular reviews, are the factors that enhance the ability of their organisations to deal with rapid changes in the environment.

In rapidly changing environments, performance measurements should be more 'intelligent'/dynamic; for example a member of the strategy development team for an automotive company said: '*some of the measures we have, assume that the world is very static* [ ] *what you need to do is to start developing much more dynamic measures, much more adaptable measures than trying to measure more and more things all the time*'. This shows that the organisations confronted with rapid changes in the environment, try to cope by adding new measures while what is suggested that they should be doing, is to develop predictive or proactive measures. The need for predictive or proactive performance measurements has been addressed in the literature (Wilcox et al, 2004). Some of the proposed solutions come from the Quality Assurance/Control (QA, QC) and Total Quality Management (TQM) literature (see for example Ishikawa 1976, Crosbly, 1980). However, the suggested methodologies which are developed based on the Shewhart's (1931) Statistical Process Control's (SPC) principles (Montgomery, 2001) have so far been applied only for operational measures (Wilcox and Bourne, 2003) and are mainly applicable in the manufacturing industry.

The integration of performance measures was mentioned as a response to the environmental turbulence; for example a member of the strategy development team for a large manufacturing company said: '[to deal with environmental turbulence] *we are broadening the things that we look and formalising it. We have to formalise and not continuously change what we are doing. We are going through a process of identifying a broader scope of KPIs and we are going to formalise the systems and procedures for collecting them*'. Therefore it is understood that the dynamism in the environmental changes should be tackled by broadening the scope of performance measures, which again can be interpreted as integrating them into strategic ones. This brings back one of the initial arguments of Effective Strategic Planning (Dyson and Foster, 1981) which states that it is essential for the development of performance measures to clearly define their scope. This proposition may be seen as obvious, however the alignment of the performance measurements with the organisational direction to support the implementation of the strategies is a rather

challenging process which is not always addressed and achieved in organisations (Neely, 2000).

6.10.3 The impact of 'maturity'

One of the main questions which was raised upon the completion and analysis of the survey was to determine why organisations which implement or attempt to implement similar management concepts or similar strategic development processes do not achieve the same results. The analysis of the interviews led to the identification of another parameter which was found to be of great importance in the attempt to explain the different levels of performance achievements for organisations implementing similar concepts. This is the 'maturity' of the processes and people involved.

Given that the concept of 'maturity' in strategic development processes has not been explored in the existing literature, it is worth explaining firstly how this was identified. A significant number of interviewees tried to justify why they had given high score in some questions by comparing the practices involved with what had happened in the past. Some of them described a progressive, perhaps evolutionary*, stage-process through which their organisations achieved what they perceived as adequate or appropriate practice. Comparing the responses for the same questions it became apparent that those who gave the highest scores were referring to similar levels of maturity achieved.

It has already been acknowledged in the introduction of this chapter that statistical comparison between follow-up interviews cannot provide valid results, given the qualitative approach of the semi-structured interviews. Nevertheless, it is still worth

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* there is a range of criteria (see for example Alvarez and Merino, 2003) in order for a change to be characterised as evolutionary, and in this case it was not possible to assess those criteria.

mentioning that, even if the concept of maturity was not covered in the interview questions, still there were ten out of twenty five interviews, where maturity could be identified to influence the strategic development processes discussed.

In the interviews that the existence of different levels of maturity was identified there was always a clear statement about the beginning of an intervention or strategic change initiative. For example, a member of the strategy team for a large manufacturing company set the starting point of the management change programme which resulted in achieving different levels of maturity when the company's performance was extremely poor: '*the XYZ lost a lot of its power* [ ] *I would say that it has changed significantly maybe in the last one or two years, when we reorganised*'. Sometimes, it was the change of head of strategic planning or managing director which signalled the start of a management change and the development of different levels of maturity. For example, the MD for an electrical/electronics company said: '*we had the Chief Executive changed a couple of years ago and before that there was very poor central direction and everything was very financially driven*'. Another characteristic case was provided by the Director of division for a Banking/Financial services company who explained that '*when I first joined, there was not a documented technical strategy inside*' and added that '*it took us a while but I actually managed to get a technical strategy team as a separate division, a separate group within my team, so we could make sure that we will use the dedicated resources and then look at the longer term goals*'.

It is very interesting to discuss which aspects of the strategic development processes were found to be subject to different levels of maturity. There is clear evidence that the development and articulation of the organisational direction can have different levels of maturity, for example the MD of a chemical/petroleum company said: '*I came to this organisation and there was not any clear vision; it was: we are doing*

what we are doing [ ] *now we are clearly articulating that, we want to be the first choice in* [company's specialisation*] *in our sector of our industry*'. Similarly, the stages of strategic initiatives development and selection and identification of strategic objectives were mentioned to be going through different levels of maturity; for instance, the Director of a division within a Government/Other Public organisation mentioned: '*I was given 22 objectives for the department and I looked at it from a strategic point of view and said "Oh most of those are not relevant and are not giving us a strategic clear lead". So then I analysed what we have got, what are our main objectives and what supports that. And we set up one objective, so we have reduced from 22 to one clear objective*'.

Different levels of maturity were observed for the implementation of strategy: '*10 years ago, developing a strategy was very much the form, I think it is now the execution of that strategy which has been more important*' said a member of the strategy development team for a large automotive company. In addition, the different levels of maturity were recorded for the supporting activities like the strategic control function and the performance measurement '*certainly I recognise that there is a point where we would be developing, probably in the late 80 s-early 90 s, where a lot of our performance measurement systems were quality based, and I suppose the real answer is that over time we have actually learnt which are more important* [ ] *we had these measures for the old system, we translated them for the new system and we have ended up with a mixed system. There is a long way to go on that*' (Member of the financial control team for a large aerospace company).

Interestingly enough, the concept of maturity does not apply only to the processes but to the people related with the strategic development processes, too. For example, the MD of a chemical/petroleum company discussed the efficiency of their strategic planning process by saying: '*next time probably it will not take so much time, because we are more familiar with the process*'. This is reinforced by

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* 'company's specialisation' replaces the exact wording of the interviewee for confidentiality reasons

the arguments of the Finance director of a large construction company who emphasised that '[strategic planning process is efficient] *because the team is well experienced and trained in the process. This is the fourth time that they have been through the loop of the process*'.

6.10.4 Other influences of the strategic development processes

The methodology adopted at this stage of the research – semi-structured interviews – provides the chance to capture parameters which are not initially considered in the research design. In the previous section, the impact of maturity for the processes and people involved was presented; in this section a range of other parameters which can influence the development of strategic processes are summarised. The parameters presented in this section are not directly related to the processes involved. However their impact may provide explanation for some of the findings of the previous stages of this research.

An interesting observation made from the outcome of the interviews is that even if the interviewees were asked about the processes and their elements, a very frequent phenomenon was to justify some of their scores, referring to the influence of 'softer' factors. The most commonly mentioned 'soft' factors are the leadership, commitment and organisational culture. Interpreting the responses received it can be deduced that to a large extent the success of the strategic planning process depends on the people leading the process and their commitment.

Moxley (2004) explains that leadership is one of the key factors for the success of strategic planning because the process itself may require the organisation to be able to change, therefore it is apparent that leadership skills should drive the changes and provide the basis for the transformation and to overcome possible resistances. This also relates to the political character that the strategic development processes have in some organisations, as described in the implementation (section 6.6) and the

necessary negotiations and buying-in mechanism that are used (Eden and Ackerman, 2003).

The importance of identifying commitment as a key parameter for the practices adopted in strategic planning, is related to the Pearce et al's (1987) research which found that formal strategic planning enhances involvement and commitment of those involved in the processes and not just the leader of the process. The observations made in the follow up interviews, are in agreement with the existing literature, for example Glaister and Falshaw (1999) found different levels of commitment for the various stages of the strategic development process but they also recognise that the commitment to strategic planning processes is beneficial for the process itself.

Regarding organisational culture, the responses received in the interviews matched with the outcome of published literature. Organisational culture can facilitate the processes involved within strategic planning (Cono 1990, Bittici et al 2004) or it may be an obstacle to the changes that might be required (Marx, 1991).

6.11 Conclusions – Forward to the next chapter

This chapter presented a series of twenty five interviews conducted to supplement the results of the survey which was presented in the previous chapter. The main purpose of this research stage was to validate the results of the survey and develop further insights regarding the processes involved in strategic development as to explain the observations made in the survey. As explained, surveys tend to examine research questions of 'what is happening', while more qualitative types of research, like follow up interviews, can provide insights on 'why something is happening' and 'how it is happening'. The follow up interviews reinforced and complemented the findings of the survey; there was no notable outcome from the follow up interviews which contradicted any of the survey's findings.

The follow up interviews support the outcome of the survey regarding the value of organisational direction; however it is highlighted that organisational direction is not valuable only as a statement, but it is important that the organisational direction is developed to address the needs and aspirations of the totality of the stakeholders, is well articulated in order to be shared by all staff members and effectively implemented. The organisational direction was found to be influencing all the stages of the strategic planning process. One of the most interesting observations made in the follow up interviews, concerned those who had provided low scores in one or more assessments of the strategic planning process; they justified the poor performance of their strategic planning process by the lack of organisational direction. This demonstrates that the organisational direction is not only linked with the success of the strategic planning processes but its lack is linked with poor performance.

The follow up interviews reinforced the dynamic role of performance measurement within the strategic development processes. The follow up interviews provided some explanation for the reasons that performance measurement is not statistically significant in all types of organisation. It has been understood that a lot of organisations hope to be able to cope with the inadequacies of their strategic initiatives/options development and selection, via regular reviews of the performance achievements as indicated by the performance measurement. Another observation which is complimentary to the survey's findings, concerns the need for integration of performance measurements. The results of the survey referred to performance measurement in general, while some interviewees in the follow up interviews discussed the distinction between strategic and operational measures; this enhances the understanding of the practices involved in performance measurement. The integration of performance measurement requires alignment between organisational direction and performance measurement and between the strategic and operational measurements used.

The interviews also identified a series of parameters which were not considered in the design of this research, given that its scope is focused on the process aspect of the strategic planning. It was concluded that the design and development of the strategic development processes are linked with the leadership and levels of commitment by the people involved in the process and particularly those leading/heading the process. Also, the organisational culture can be either an enabler or a source of resistance to the potential changes coming from the strategic development processes. Finally, this stage of the research found that all the processes and people involved in strategic planning are subject to maturity and the effectiveness or success of each process is linked to the level of maturity achieved.

Chapter 7

Discussing the relationship between organisational direction and performance measurement

7.0 Summary

This chapter builds on the research findings of the three empirical chapters, to discuss the relationship between organisational direction and performance measurement. The first two sections of this chapter present and discuss the overall findings for the two main concepts investigated in this thesis: organisational direction and performance measurement. Then, the three determinants of their relationship are discussed combining the outcome from the three empirical investigations. The last section of this chapter discusses the relationship between the organisational direction and the performance measurement, synthesising the observations from the research conducted with other published studies.

7.1 Organisational direction

The importance of organisational direction is well established in the literature (Hamel and Prahalad, 1989, Var De Heijen, 1993, Collins and Porras, 1998), however in this study it is proven that overall it is the most influential factor for the success of strategic planning, when compared with other elements of the strategic planning process. The role of organisational direction, as described by interviewees who participated in the follow up interviews, is that it makes clear the orientation and intentions of the organisation so as to guide the decision making at all stages of the strategic development process.

The results of the survey indicated that organisational direction is the most influential factor in the strategic development process. This is reinforced by the outcome of the follow up interviews. Organisational direction has been acknowledged by the majority of the interviewees as the most influential parameter in the strategic planning process. The participants in the follow up interviews believed that the organisational direction plays a pivotal role in the strategic development process, under the conditions that its communication is effective and the buy-in process is properly managed. Organisational direction is the driver for decision making, however the interviewees suggested that it should be envisioning a desired future state of the organisation that every employee can buy into and at the same time it should be realisable. The organisational direction should also be within the capabilities or potentials of the organisation, to develop and implement the strategies to achieve it.

The essential role of organisational direction was highlighted in the questions concerning the five assessments of strategic planning, whether the strategic planning process supports the achievement of the organisational goals, is efficient, is effective, leads to adoption of successful strategies and is considered a successful process overall. As presented in Chapter 6, the interviewees described how a clear and well articulated organisational direction can influence the success of strategic planning process. Even the interviewees with low scores in the assessment of strategic planning referred to ineffective practices in setting the organisational direction. This finding is complementary to the survey outcomes which indicated that organisational direction has a strong influence on each of the five assessment variables.

Another aspect that should be further discussed is how the content of the organisational direction influences strategic planning as a process. The responses from the qualitative investigations of this thesis revealed that the influence of the organisational direction is beneficial under a number of conditions. The organisational direction should be inclusive and envision a future desired state of

the organisation which is achievable, and is mutually beneficial for all stakeholders and particularly the staff.

The relationship between organisational direction and the strategic development process has been addressed through a theoretical investigation by Whittington (2001) who suggests four generic types of strategic development process: classical, evolutionary, systemic and processual, for a graphical representation of the four generic perspectives on strategy see Appendix VI. Whittington (2001) explains that each type of perspective is characterised by different types of organisational direction; subsequently different strategic development processes are put in place in order to achieve the organisational goals. Briefly, the classical approach is based on the quest for profitability, hence according to the same author, it is based on rational planning principles of '*analyse, plan and command*'. In the evolutionary approach there is less confidence upon the top management's ability to plan, so there is the expectation that profit maximisation will be a result of market trends. The strategic development processes in this approach are more flexible and opportunistic with limited planning. For the processual approach '*organisations and markets are often sticky phenomena, for which strategies emerge with much confusion and in small steps*' (Whittington, 2001). According to the same author, the strategic development processes in this approach, are a product '*political compromise, not profit-maximising calculations*'. Finally, based on Whittington's analysis, the systemic approach proposes that the '*rationalities underlying strategy are peculiar to particular social contexts*', therefore there is not any 'best practice' for the strategic development processes but strategy should '*play by the local rules*'.

It is important to understand that different types of organisational direction create variation in the strategic development processes because it explains why, in this research, organisations with similar characteristics do not exhibit similar trends in their strategic planning process. This is reflected in the relationship of organisational direction with the other elements of strategic development processes.

7.2 Performance measurement

One of the most important findings of this research is that performance measurement stands as one of the key factors for strategic planning. This has a twofold value. Firstly it reinforces the arguments that performance measurement systems have a critical role in translating strategy into action (Kaplan and Norton, 1992), and secondly it shows that performance measurement has a supporting role in the development of strategies. The latter was also one of the major observations made in the exploratory case study where the conclusion drawn was that performance measurement can influence the setting of the organisational direction, from the point of view of its development, articulation and implementation.

The analysis of empirical data showed that performance measurement is a dynamic factor within strategic development processes even if it is not the most influential one and it does not have statistical significance from some of the assessments of strategic planning process' success. Analytically, the statistical analysis has showed that performance measurement has a significant influence on the ability of the strategic planning process to support the achievements of the organisational goals and to be considered effective and efficient, while it does not have a significant impact on the adoption of successful strategies and making strategic planning a successful process.

It is evident from the literature that there is an increasing need to link performance measurement with strategic planning, however it is also known that the design and implementation of performance measurement is not always successful (McCunn, 1998). Ittner and Larcker (2003) report that most of the companies they had investigated have made '*little attempt to identify areas of nonfinancial performance measurement that might advance their strategy*'. Therefore, the insignificant impact of performance measurement in the areas detected may not be a result of the inadequacies of performance measurement itself but of weaknesses in its implementation. This may be due to the fact that the factors that determine the

'success' of performance measurement initiatives require commitment, effort and resource allocation at all organisational levels (Bourne et al, 2002).

Another aspect of performance measurement which needs to be discussed is the differentiation between operational and strategic performance measures. One of the most common pitfalls of performance measurement is the development of an excessive number of measures, as was described in the follow up interviews and as recorded in the literature (Neely, 1995). Another pitfall of performance measures is their relevance and usability (Smith, 1995); the qualitative investigation of this thesis identified that one of the challenges that managers face is the identification of appropriate measures and the use of information and data collected at the relevant level of decision making. There are some calls in the literature to limit the number of performance measurements (Gunasekaran et al, 2001) or to identify the ones which provide a more clear 'picture' of performance achievements. At the same time the interviewees in the follow up interviews suggested that there is a huge number of measurements that should take place to ensure that they monitor and control effectively their business. Summarising the comments collected regarding the different types of measures, it is understood that the performance measurements should be divided into operational and strategic. The operational measures should be relevant to the organisational functions and should provide information required for the every day running of the organisation. The strategic measures should provide collective information which would aid the strategic decisions.

7.3 Determinants of the relationship between organisational direction and performance measurement

The relationship between organisational direction and performance measurement has been found to be influenced by three parameters: organisational size, rate of change in the environment and maturity of the strategic development process. The first two parameters are two elements of organisational complexity and their

influence has been detected in the survey and reinforced in the follow up interviews. Environmental turbulence had also been assumed influence the relationship between organisational direction and performance measurement in the exploratory case study. The level of maturity of the strategic development process was identified as a determinant of their relationship in the follow up interviews.

7.3.1 Determinant 1: organisational size

The findings of the follow up interviews revealed that large organisations rely more on performance measurements because they are structured means of monitoring and controlling performance and at the same time they provide an accurate 'picture' of the organisational activities and achievements. As discussed in Chapter 6, due to the size and complexity of large organisations, it is not possible to rely on personal perception for the performance since the pluralistic variables that constitute the organisation and its activities should be properly organised and managed. Furthermore, large organisations have multiple levels of decision making and the performance measurement systems should feed the right type of information at the appropriate level.

Combining the responses from the interviewees working in SMEs, it is understood that there is a reluctance to use the established performance measurement frameworks because they feel that their implementation is too expensive for the capabilities of their organisations and secondly they expressed the opinion that these do not fully address the requirements of SMEs. Synthesising the results of the survey and the findings from the follow up interviews, a very interesting observation can be made: the fact that SMEs are not significantly influenced by the performance measurement is not because the performance measurements cannot have a beneficial role; as the follow up interviews revealed SMEs either do not implement performance measurements systems or they do not use the information provided because they rely on informal practices and personal perceptions on the

performance achievements. None of the interviewees working for a SME suggested that they have a formal performance measurement system and the information produced would not be useful for them. Those interviewees who claimed not to have any substantial performance measurement explained that the organisation was simply too small to require any specific performance measurement system.

Organisations of different size are not expected to have similar trends in their strategic planning process. There is a growing number of studies (Hill and Steward, 2000, Calogirou et al, 2003) which confirm that the strategic planning techniques and activities undertaken at larger organisations are not appropriate for SMEs; because, as Curtis (1983) explains, the practices involved in larger organisations address the needs of large scale operations, and they do not appear to account fully for the limited resources of the SMEs. Shuman and Seegar (1986) have outlined that it is quite frequent that models for large organisations are utilised as given and that SMEs are assumed to be smaller versions of larger organisations. Storey (1994) explains that SMEs are not '*little big businesses*' and their management practices mainly reflect the personal characteristics of their owner or director. This supports the outcome of the survey that found organisational direction to be the most influential factor for the success of the strategic planning process of SMEs. It is the entrepreneurial character that drives the strategic development process in smaller organisations.

It is worth exploring why performance measurement's impact was not found to be significant in SMEs. Hudson et al (2001) identified that for performance measurement in SMEs, '*the most significant of the flaws was a lack of reference to strategy*'. This shows that the design of performance measurement systems in SMEs is not properly linked to the overall process of strategic planning. The inadequacies of the design and implementation of performance measurement systems is also explained by the fact that most of the integrated frameworks for performance measurement have been designed to address the needs of mainly large organisations (Hudson et al 2001). This is evident in our survey, considering that

only 16% of the SMEs have implemented Balance Scorecard, while almost half (45%) of the large organisations are making use of it.

Hudson et al (2001) found that the majority of the SMEs examined in their study did not have a formal feedback system in place. This means that the information collected by performance measurement systems cannot be used for strategic planning. This could be explained by the limited abilities of the SMEs to have '*data processes and information technology support*' which, according to Franco and Bourne (2003), is one of the main factors that play a role in 'managing through measures'.

Discussing the influence of performance measurement in large organisations, it is understood that their complicated structures, diversity of activities and size in terms of employees, products/services and multi-layered decision-making are strongly related to the use of information. The information required can only be provided as the feedback produced by performance measurement. Therefore, it is deduced that the importance and impact of performance measurement increases with the increase of complexity in the organisational structure.

7.3.2 Determinant 2: rate of change in the environment

The comparison between organisations operating in slowly and rapidly changing environments, produced two main observations: i) organisations from a rapidly changing environment are not as influenced by 'strategic initiatives development and selection' as the organisations from the slowly changing environments are and ii) the latter are not influenced by 'performance measurement'. The significant influence of 'strategic initiatives development and selection' on the strategic planning process for organisations only from slowly changing environments, shows that environmental turbulence makes them 'out of date', given the difference of time between their development and their implementation. These observations were

justified by the interviewees in the follow up interviews who explained that within turbulent environments it is very important to be flexible in order to deal with unexpected changes. Furthermore, in rapidly changing environments, the success of the strategic planning process is vitally linked with the assessment of uncertainty. Similarly, in less dynamic environments, it is the organisational direction that influenced the success of strategic planning since no changes are anticipated.

Concerning the fact that organisational direction is highly influential for organisations operating within rapidly changing environments, Grant (2003) explains that '*if uncertainty precludes planning in any detailed sense, then strategy is primarily concerned with establishing broad parameters for the development of the enterprise with regard to 'domain selection' and 'domain navigation*' (Bourgeois, 1980)'. The same author explains that environmental uncertainty requires that the strategy is '*concerned less with specific actions and more with establishing clarity of direction*'. This also explains why strategic initiatives/options development and selection are not influential for the environments operating within turbulent environments.

The dominant role of 'organisational flexibility and uncertainty' represents what Minztberg (1994) described as 'emergent strategies'. Harrington et al (2004) show that emergent strategies are a direct result of dynamism in the environment. According to Minztberg (1994), emergent strategies are a result of organisational learning, while Liedtka (2000) reveals a dynamic relationship between organisational learning and strategic planning even within the 'design metaphor' of strategy development. Therefore it is understood that even in organisations of rapidly changing environments, where the development and selection of strategic initiatives does not have a significant impact on the assessments of the process' success, these are still linked with the function of the other more dominant factors.

Grant (2003) offers a compromising view on the 'design vs process debate' with reference to Mintzberg's claim for the dominance of 'emergent strategies'. Grant

(2003) suggests that even if '*critical strategic decisions that fundamentally affected the business portfolios and direction of development of the companies were, for most part, taken outside formal systems of strategic planning* [ ] *strategic planning systems were mechanisms for improving the quality of strategic decisions, for coordinating strategic decision making, and for driving performance improvement*'. In other words, Grant considers the strategic planning process to be the frame which prepares managers to deal with unexpected changes and rapid decisions even if these are not taken within a formalised process.

In the present study, the comparison between the organisations that operate in rapidly and slowly changing environments showed that there is an interesting variation in the impact of performance measurement on strategic planning. Strategic planning is significantly influenced by the measurement of organisational performance in the organisations that operate in the rapidly changing environments. A similar observation to this has been made by Franco and Bourne (2003) who found that one of the most important factors that plays a role in 'managing through measures' is the 'business and industry' (organisational sector).

The measurement of organisational performance provides feedback required for quick responses so as to enhance rapid decision making which is required in organisations operating at environments of high turbulence. Furthermore, some interviewees found that there are linkages between performance measurement and organisational learning which they thought it enhanced decision making and their ability to think strategically making the most of the strategic development process. Also, if the performance measurement system is proactive it can detect areas of improvement in order to identify opportunities in changes in the environment, instead of being a threat.

Performance measurement has been found to be one of the top 'management development practices' to deal with rapid changes (Longenecker and Fink, 2001). This is explained by the need for information in organisations that face uncertainty

(Dumond 1994). Feurer and Chaharbaghi (1995) link environmental turbulence with the need for strategic change, and therefore suggest that its success depends '*on constant feedback which can be provided by a performance measurement system*'. It could have been claimed that performance measurement should have a greater impact on effectiveness rather than efficiency, given that there is always the potential problem of creating bureaucracy and slowing down the process, as highlighted by Dumond (1994). Apparently, the significance of performance measurement's impact on the efficiency of organisations from slowly changing sectors suggests the opposite. This means that performance measurement's benefits enhance the efficiency of strategic planning by providing the data and controls that are required either in the development or implementation stages and by avoiding having to do ad hoc performance appraisals.

7.3.3 Determinant 3: maturity

The third determinant of the relationship between organisational direction and performance measurement is the level of maturity achieved for the processes and people involved in strategic planning. This determinant has been identified in the follow up interviews. There is not any literature referring to the maturity of strategic development processes. An extensive review of the literature identified that in the field of strategic development processes, a number of authors have examined the evolution of the strategic planning, from a process point of view, (Robinson and Pearce, 1984, Scott and Bruce, 1987 and Shuman et al, 1989) and found that particularly in small companies '*the type of planning employed will be contingent upon its stage of development that this activity will evolve and become more formal and sophisticated over the life cycle of the business*' (Berry, 1998).

Most of the researchers (Romano and Ratnantuga, 1994, Wijewardena et al, 2004) in this field have considered the formalisation of processes as advancement in the sophistication of the strategic development processes. Hahn (1999) offers a more

board view of strategic planning sophistication which he defined '*in terms of the five generally accepted steps*[*] *in the strategic management process*'. Thus, for Hahn (1999) the evolution of the strategic development process is concerned with the engagement to all the activities which define strategic planning.

All the studies on the sophistication of the strategic planning process have concentrated on the relationship between sophistication and performance. The findings are not always in agreement; for example some researchers (Rhyne, 1986, Bracker et al, 1988, Armstrong, 1991, Berman et al, 1997) found positive correlation between the sophistication of the strategic planning process and enhanced performance, while others (Kudla, 1980, Robinson and Pearce, 1984, Lyles et al, 1987) found no direct relationship for these two concepts. Although, these researches contribute significantly in the debate of the strategic planning's formality, their examination of the concept is limited to the formalisation of the process which is very narrow as the follow up interviews have shown. The concept of maturity as identifying in this research, does not concern only the processes, but it concerns the people involved and activities undertaken. Also, the follow up interviews showed that formalisation is one stage of the maturity but not the ultimate one.

An extensive review of the literature identified one published model which describes the concept of maturity for performance management, developed by Verweire and Van Den Berghe (2004). According to these authors performance management is '*a process that helps an organisation to formulate, implement, and change its strategy in order to satisfy its stakeholders' needs*'. This means that Verweire and Van Den Berghe (2004) suggest that a strategic development process model which is based on the principles of performance management. This model proposes the alignment of the five core elements: i) direction/objectives, ii)

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[*] the five step are: i) defining the mission, ii) performing environmental scan, iii) establishing objectives, iv) implementing, v) reviewing the performance (Hahn, 1999)

operational processes, iii) support processes, iv) evaluation and control and v) organisational behaviour. According to this model each core element has four stages of maturity: i) start, ii) low, iii) medium and high. The authors suggest that the organisations should try to align the level of maturity across all the elements. The graphical representation of the model is attached in Appendix V. It is worth highlighting that according to Verweire and Van Den Berghe (2004) the highest level of maturity for the element of 'direction' is 'broadly revised' and for 'evaluation and control' is 'learning'.

7.5 Linking organisational direction and performance measurement

Synthesising the results from all three empirical investigations, organisational direction and performance measurement are found to be potentially linked with a dynamic two-way relationship. In order to make this argument more explicit, it has been depicted graphically in figure 7.1. The organisational direction sets the objectives and targets, and these influence the design and development of performance measurement. In addition, in order to achieve the requirements of the organisational direction, different strategies are developed and implemented. Each strategy requires a different approach in measuring the performance achievements, since the content of the direction and its strategies dictate the need to measure different aspects of organisational performance.

This research has also found that performance measurement influences the setting of the organisational direction. The measurement of organisational performance produces information which can be used for the development of the organisational direction, the identification of alternative strategic options available and for the selection of strategies to be implemented. Furthermore, as the case study research and the follow up interviews showed, performance measurement has a key role in the implementation of the strategies both as a supporting activity which monitors

and controls the implementation and as a means of communicating the organisational direction.

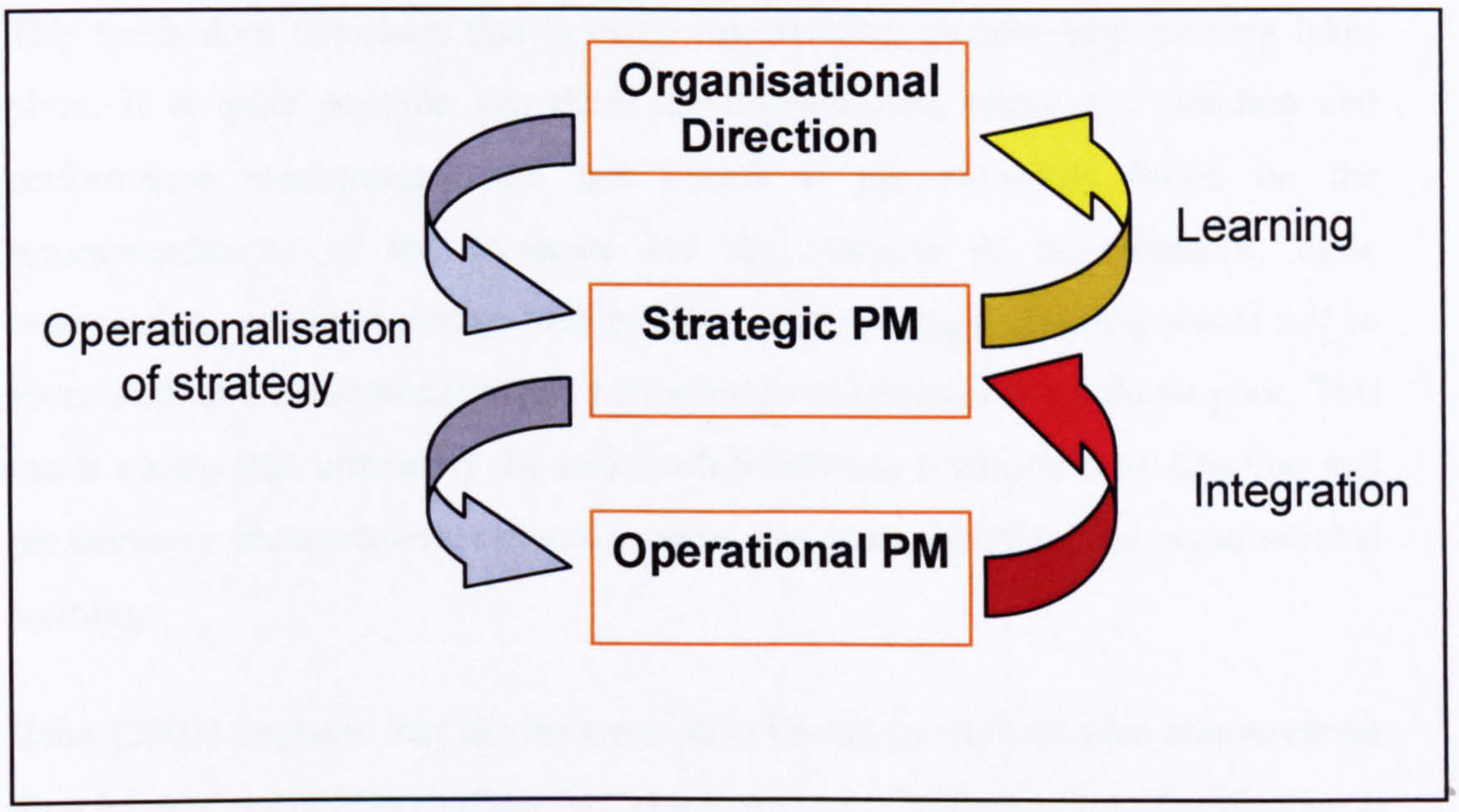

Figure 7.1: Organisational direction and performance measure

The two-way relationship between organisational direction and performance measurement described exhibits commonalities with the concept of organisational learning as developed by Argyris and Schon (1978), who define organisational learning as '*the detection and correction of error*', while Fiol and Lyles (1985) suggest that organisational learning is '*the process of improving actions through better knowledge and understanding*'. Three types of organisational learning exist according to Argyris and Schon (1996): single loop, double loop and deutero loop learning. 'Single loop' learning occurs when errors are detected and corrected, without changing the strategies and the goals of the organisation. 'Double loop' learning, according to the same authors, occurs when apart from the detection and correction of errors, the organisation puts into question the existing objectives and strategies and modifies accordingly the organisational practices which have produced those objectives and strategies. 'Deutero loop' learning is when

organisations learn how to carry out and manage effectively single and double learning loops.

This thesis does not claim that in every organisation, deutero-loop learning takes place. It is quite possible that there are organisations where the direction and performance measurement are not linked at all. However, based on the recommendations of the literature and the outcome of this research, those organisations would constitute 'bad practice', their strategic planning would not be successful, and consequently their performance achievements would be poor. This thesis claims that ultimately the relationship between organisational direction and performance measurement can reach what has been described as organisational learning.

Behn (2003) explains that the information collected by performance measurement '*can be used not only to evaluate but also to learn* [ ] *the objective of evaluation is to determine what is working and what isn't. The objective of learning is to determine why*'. Single loop learning takes place when the performance measurement of the organisation has a reactive character. When the information collected by performance measurement does not meet the objectives of the organisation which express the organisational direction; then corrective action is taken in order to ensure that the same problem will not continue to influence the achievements of the organisation. Double loop learning takes place when the feedback produced by performance measurement is used not only to correct the error but also to review and update the strategies and the processes which produce those strategies. This means that if double loop learning takes place then the output of the performance measurement is used to enhance decision making in the organisation. The research conducted in this thesis has shown that potentially performance measurement can influence the development of the organisational direction, as well as the strategies implemented.

Another finding of this research which reinforces that organisational learning is at the core of the relationship between organisational direction and performance measurement is one of the main outcomes from the exploratory case study, where the process of setting the direction in the University of Warwick has been characterised as a 'learning exercise'. Considering that this thesis accepts direction setting as an integral part of the strategic development process, the observation that direction setting can be a learning exercise is consistent with the literature; for example DeGeus (1988) suggests that the overall strategic planning process is a learning exercise. In Chapter 4, it was explained that the development of formal statements of the organisational direction does not have a major role in the implementation of the University's strategies; nevertheless, the senior academic officers expressed the opinion that the process of developing the University's direction enhanced the learning of the organisation, at the corporate level, since it required those involved to analyse the capabilities, activities, potential and achievements of the organisation in order to envision the desired future state and to develop and select strategies to achieve their vision and objectives. The information or data required for the learning exercise of the top management team was provided by the performance measurement system of the organisation.

On this matter, Kravchuk and Schack (1996) make a very important statement regarding performance measurement and organisational learning: '*organisational learning cannot depend upon measurement alone*' because as they explain '*performance measurement systems cannot replace the efforts of administrators to truly know, understand, and manage their programs*'. That is the reason why this thesis claims that organisational learning is the linkage between organisational direction and performance measurement; as Kravchuk and Schack (1996) suggest that, '*measures should be placed in a management-by-exception frame, where they are regarded as indicators that will serve to signal the need to investigate further*'.

DeGeus (1999) creates a metaphor between organisations and human beings, explaining that organisational survival and success are not related only to financial

achievements. It is the ability of an organisation to make effective use of its learning abilities and activities that help it to develop the capability to deal with environmental turbulence and to remain alive over time. The same author suggests that there are two types of learning: i) learning by assimilation and ii) learning by accommodation. Briefly, learning by assimilation means '*taking the information for which the learner already has structures in place to recognize and give meaning to the signal*'; while learning by accommodation is when '*you undergo an internal structural change in your beliefs, ideas and attitudes* [ ] *it is an experience process by which you adapt to a changing world*'. DeGeus (1999) notes that learning is incorporated in decision, and both these forms of learning are '*successful precisely because they are embedded in decision making*'.

Both dimensions of learning can potentially exist in the relationship between organisational direction and performance measurement. A well established performance measurement system can provide the framework and structure for learning by assimilation; DeGeus (1999) suggests that learning by assimilation concerns mostly the information used in operational decisions, which is reflected in figure 7.1, by the differentiation of performance measurement into strategic and operational. Furthermore, learning by accommodation is what has been described in this thesis as deutero-loop learning, when the organisation can use the information collected by performance measurement not only to correct the error but also to review and update the processes which have produced this error.

Van den Heijden et al (2002 and 2004) suggest that there are three ways that an organisation learns: 'i) *by affecting the mental models of the people in it*, ii) *by filtering the type of people selected to belong to it*, and iii) *by embedding the learning in practices and procedures surviving the individuals who create these*' (Galer and Van der Heijden, 1992). The proposition of the present thesis, regarding learning being ultimately at the core of the relationship between organisational direction and performance measurement, supports the first and the third propositions by Van der Heijden. The same author explains that learning is a

process that may create the change of 'mental models' in organisations, the markets they compete in and their competitors. The same is suggested by the present thesis when explained that if organisational learning reaches the status of 'deutero-loop' learning, then by processing the information collected by performance measurement and using it to update and review the organisational direction, the changes that will take place will affect the 'mental models' of the organisation. This might result in radical changes in the direction which will be translated into changes regarding the marketplace, and the practices that the organisation will use to compete.

Interestingly enough, DeGeus (1999) suggests that one of the key characteristics of longlived companies is their sensitivity to the environment which '*represents a company's ability to learn and adapt*'. However, the same author suggests that it is impossible to forecast the future, so he suggests a specific approach, scenario planning to enhance the learning capacity and the adaptability of the organisation. Van der Heijden (2002 and 2004) also agrees that management tools like scenario planning enhance organisational learning. This shows that organisational learning does not take place only within organisational direction and performance measurement, but there are a variety of organisational practices which can result in the enhancement of the organisational learning. Therefore, this thesis does not suggest that organisational learning exists only at the relationship between organisational direction and performance measurement.

Considering that organisational direction and performance measurement are linked through organisational learning, this explains some of the variation exhibited by the strategic development practices of different types of organisation. As shown in the previous chapters, strategic initiatives/options development and selection does not influence significantly all types of organisations. In an attempt to explain this phenomenon, and particularly for organisations operating in turbulent environments, it is worth referring to Mintzberg (1999) who suggested that the strategies implemented are emergent, instead of the intended ones (-strategic plans). Mintzberg (1999) believes that organisational learning creates the ability of an

organisation to produce emergent strategies which deal with unexpected changes and replace the initial plans/strategies of the organisation.

It is worth mentioning that according to the model of maturity discussed in the previous section of this chapter (attached in Appendix V), the highest level of maturity for the performance measurement is when it can become learning. Also the highest level of maturity for the organisational direction is when it can be '*adjusted proactively, according to changes in the external environment or when performance is unsatisfactory*' (Verweire and Van Den Berghe, 2004). This reinforces the argument of this thesis that organisational learning is ultimately the link between organisational direction and performance measurement. Nevertheless, organisations should work on the maturity of their processes and people involved, in order to achieve the highest level of maturity, when the organisation is able to use the information collected by performance measurement in order to adjust its direction and objectives.

Operational and strategic performance measurements are linked with a two-way relationship: strategic measures should be translated into operational ones and at the same time the operational ones should be integrated into strategic ones. This relationship creates a series of challenges and implications for those involved in these processes. The development of a performance measurement system should take into consideration that the operational measures are required for the every day functions of the organisations and the strategic ones are needed to enhance the strategic decision making. Considering that organisational direction and the strategies to be implemented are reflected in the development of the strategic performance measurements, then the translation of strategic performance measures into operational ones should be part of the operationalisation of strategy. Furthermore, as has already been explained, performance measurements can potentially influence the processes involved in setting the organisational direction, and then the input of operational measures to the strategic ones should be part of the integration of the performance measurement system with the strategy.

The model presented in figure 7.1, expresses the calls in the literature (Dyson, 1998) to create an alignment between organisational direction and performance measurement. This is a challenge and a necessity for the managers. The alignment between organisational direction and performance measurement will ensure that performance measurement evaluates the parameters of the organisational performance which are necessary to support the implementation of the strategies and the achievement of the goals. Simultaneously, the alignment of organisation direction with performance measurement ensures that the information collected can be used effectively for the success of the organisation.

7.6 Revisiting the Strategic Development Process model

This research is framed by the Strategic Development Process model (Dyson, 2000) as explained in the literature review. This model depicts explicitly the linkages between the elements of the strategic development process. This thesis does not seek to develop a new model of strategic development process, but to explore the relationship between organisational direction and performance measurement. However, having undertaken three different empirical research investigations, it would be useful to reflect on the original model, contributing to the literature of strategy process. There are three observations made which can contribute to an enhancement of the understanding of the underpinning principles of the strategic development process and which can offer the chance for potential future confirmatory research which would modify the original model.

Firstly, both the survey and the follow up interviews indicated that 'strategic options/initiatives development' and 'strategy evaluation' do not take place individually. Factor analysis showed that these two elements of the SDP model are strongly linked, so one of the factors produced included both of them. This was explored in depth in the follow up interviews, which showed that current practices in strategy formulation require organisations to undertake these two activities

simultaneously. Having suggested this modification, it is worth exploring which are the implications for the SDP model. Strategy evaluation in the SDP model is linked by strategic options development and the assessment of uncertainty. However, there is evidence in the literature (Dyson, 2004) that the assessment of uncertainty can become the basis for the development of strategic options*. Then the SDP model will take the shape of figure 7.2. The 'strategic options development and selection' as a factor, does not seem to be of significant influence for some types of organisations. Nevertheless, this does not show that these activities do not take place within the strategic development process, but it can be deduced that the way these activities are performed cannot significantly influence the success of the strategic development process. It should be noted that in Figure 7.2 the objectives have been eliminated since they can be considered part of the organisational direction (see Kotter, 1992).

The second finding of this research which can provide the basis for another contribution on the SDP model, is the conclusion drawn concerning the relationship between organisational direction and performance measurement. This research has shown that the relationship between organisational direction and performance is a two-way dynamic relationship, which can ultimately have at its core, organisational learning. An attempt has been made to distinguish which linkages in the SDP model are part of learning and these have been highlighted with red colour. Organisational learning is not considered in this thesis as a processual element of the strategic development process, since it has been accepted in section 7.5, that it is not necessary that in all organisations there is learning at the core of this relationship. Therefore, this thesis has examined this relationship and has explained its nature, but the author of this thesis does not suggest that organisational learning is always present in strategy development. There are numerous suggestions in the literature

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* Dyson (2004) shows how SWOT analysis is used as TOWS matrix to develop strategic initiatives after having evaluated the Opportunities and Threats of the future.

(see for example Var de Heijden, 2002 and DeGeus, 2004) for the conditions that learning can occur.

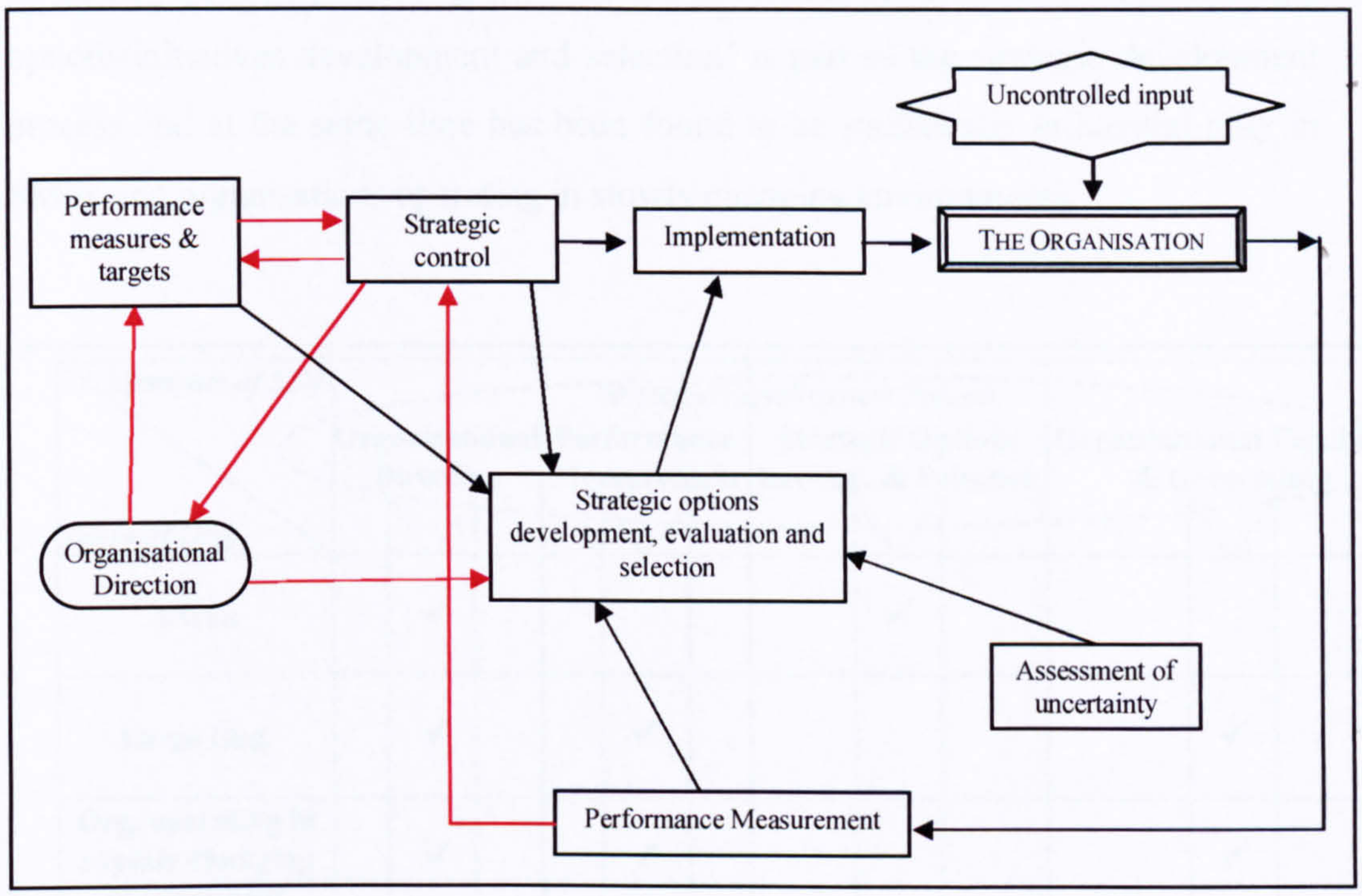


Figure 7.2: Revisiting the SDP model

The third finding of this thesis which should be reflected on the SDP model is the identification of the determinants of the relationship between organisational direction and performance measurement. To this end, it should be emphasised that the results of the factor and regression analyses cannot produce direct conclusions about the relationships between the various factors. However, interpreting the results of the regression analysis, the author of this thesis was able to explain that there are two determinants (organisational size and rate of change in the environment) in the relationship between organisational direction and performance measurement. Regression analysis shows which factors are influential for the success of the strategic development process in four different types of organisations (SMEs, large organisations, organisations operating in rapidly and slowly changing environments). To summarise the results of the regression analysis, a graphic representation has been developed in Figure 7.3. This figure shows that each factor

is an integral part of the strategic development process and at the same time each factor contributes significantly, for the success of the strategic development process, in some types of the organisations. For example, the factor of 'strategic options/initiatives development and selection' is part of the strategic development process and at the same time has been found to be statistically influential only in SMEs and organisations operating in slowly changing environments.

Figure 7.3: Reflecting the results of the thesis on the SDP model

To summarise, this research has examined in depth the relationship between organisational direction and performance measurement. Discussing the results of this thesis with regards to the original framework used in this research, the outcome of this research has shown that the relationship between organisational direction and performance is ultimately a two way dynamic relationship and at the core of this relationship there is ultimately organisational learning. Also this research has shown that there exist three determinants of this relationship, these are: organisational size,

rate of change in the environment, and the level of maturity achieved by the processes and people involved in the strategic development process.

Chapter 8

Conclusions

8.0 Summary

The final chapter of this thesis consists of a summary of the research conducted, then a summary of the conclusions drawn and a list of its limitations. Finally, there is a discussion on further research based on the conclusions of this thesis.

8.1 Summarising the research conducted

This thesis set off to investigate the relationship between organisational direction and performance measurement. These two concepts are both integral parts of the strategic development process. The initial assumptions of this thesis, supported by the literature, is that there should be an alignment between organisational direction and performance measurement, in order for the strategic development process to be successful.

Reviewing the literature, it has been understood that organisational direction and performance measurement are both essential elements of the strategic development process, and a series of studies have shown that they can both contribute to the enhancement of performance achievements of organisations. The literature review includes numerous recommendations on how to manage effectively the relationship between organisational direction and performance measurement. Nevertheless, it has been concluded that there is limited empirical evidence on current trends and practicalities about their relationship. Therefore, this thesis was designed to examine the interrelationship and interdependencies between organisational direction and performance measurement.

In addition, the literature review showed that even if there is considerable research investigating the influence of organisational size and environmental turbulence upon the strategic planning process, most research is concentrated on the characteristics of specific groups of organisations and examines how these affect their performance. This has led to investigating in further depth the determinants of the relationship between organisational direction and performance measurement. Also, by reviewing the literature, it has been understood that the majority of published research examines the impact of strategic planning's elements on the performance of the organisation and particularly on the financial performance. However, there is a lack of research examining strategy from a process point of view. Therefore, this research was set up to examine the process of strategic planning, and to assess the impact of its main elements upon the success of the process.

Regarding the methodology of this thesis, its development has been driven by the research focus and the research questions, hence three different methodologies have been combined: an exploratory case study, a survey and a set of follow up interviews. Given that this thesis investigates the relationship between organisational direction and performance and examines their impact upon the success of the strategic planning process, it has a rather interpretivistic character, concerning its epistemological stances, nevertheless a multimethodological approach has been adopted. As discussed in the methodology chapter (Chapter 3), multimethodological approaches are becoming increasingly popular in social science research and particularly in the field of business management. The utilisation of three different approaches has offered the chance to address more holistically the research questions since each approach offered different insights. The survey provided a wide overview of the current trends concerning the relationship between organisational direction and performance measurement, while the case study and the follow up interviews enhanced the understanding of the interdependencies and interrelationships explaining how things happen and why they happen in that way. Combining three different approaches is beneficial for the

research but at the same time, it requires additional effort to ensure consistency across the different research activities.

8.2 The Conclusions

The case study had a twofold role, it provided insights in a field – academic institutions – with increasing interest in business management research and it aided the design of the next stages of the research. The main conclusion drawn from this case study, is that the development of the organisational direction is a process of great value even if the direction is not formally communicated within the organisation. The actual process of developing the organisational direction enhances the organisational learning for the participants in the process. Regarding performance measurement, it has been found that it influences the setting of the organisational direction, contributing to the development and selection of strategy. Performance measurement has also been found to have a pivotal role in the implementation of strategy, since it is one of the main communication channels for the organisational direction, across all levels of the organisational hierarchy.

One of the main observations made in the case study was that the majority of management practices within the University of Warwick are informal. Attempting to explain the informality of the practices, it has been understood that there should be a number of determinants which influence the relationship between organisational direction and performance measurement; which were addressed in the following stages of this research. The conclusions of the exploratory case study have limited generalisability. However it is clearly shown that organisational direction and performance measurement can potentially have an impact on each other. Finally, it should be emphasised that this case study showed that setting the organisational direction is not a single exercise, which produces a mission or a vision statement, but it contains a variety of elements from the strategic development process, such as identifying strategic targets, selecting strategies,

implementing and communicating the strategies. Hence, the conclusion drawn was that it is valuable to study the relationship between organisational direction and performance measurement within a greater framework of strategic development processes.

The survey was designed to map the current practices of the strategic development process and at the same time to explore the role of organisational direction and performance measurement in the success of the strategic planning process. Also, the impact of two determinants of the relationship between organisational direction and performance measurement were examined. The results of the descriptive statistical analysis showed that there are strong interdependencies and interrelationships between the elements of the strategic planning process. The multivariate analysis consisted of three different activities: factor analysis, hypothesis testing and regression analysis.

Factor analysis was used in order to group the independent variables of the questionnaire. A four factor solution was found to be most suitable for the research focus of this study. The four factor model produced does not substitute the research framework, the SDP model, but it facilitates the analysis of the data. One of the most important outcomes of factor analysis was that organisational direction and performance measurement were identified as distinct elements of the strategic planning process, together with strategic initiatives/options development and selection, and organisational uncertainty and flexibility. The fact that one of the four factors characterising the modern practices of strategic planning is performance measurement is a very important finding and reinforces the argument that there is a growing culture of performance management within the organisations.

Hypothesis testing examined whether organisational size and rate of change in the environment influence the effort placed on each of the four factors of the strategic development process. The results indicate that organisational direction is equally important for organisations of all sizes and operating in different types of

environment. Interestingly enough, there is a significant difference in the effort made concerning the use of performance measurement both for organisations of different size and for those operating in different environments. Hypothesis testing established that organisational size and rate of change in the environment influence the strategic development process significantly.

Regression analysis was used to examine the impact that each factor has upon the success of the strategic development process; the success of the strategic development process has been assessed through five perceptual measures. Initially regression models were built for the totality of the participant organisations and then comparisons were made for organisations of different size (SMEs and large) and for organisations operating in environments of different rate of change (rapidly and slowly changing environments). The results for the totality of the responses showed that organisational direction is the most influential factor for the success of the strategic development process, followed by the organisational uncertainty and flexibility. It should be highlighted that performance measurement is the third most influential factor. Interestingly enough, it has been noted that for the totality of the responses, the development and selection of strategic initiatives has been found statistically not to have significant influence upon any of the five assessments of strategic planning process' success.

The comparison between organisations of different sizes produced a series of important conclusions. Firstly, it has been found that organisational direction is more influential in SMEs than in large organisations which depend more on organisational flexibility and uncertainty. Secondly, it has been found that large organisations rely more on the feedback produced by performance measurement, for their strategic decision making. Finally, it was found that strategic initiatives/options development and selection has a significant impact upon the efficiency of the strategic planning process only in the SMEs.

The comparison between organisations operating in environments of different dynamism also produced important conclusions. It has been found that the organisational direction is more influential in the organisations operating in slowly changing environments, while those operating in rapidly changing environments are more strongly influenced by organisational flexibility and uncertainty. Another very interesting conclusion, is that organisations operating in more demanding and dynamic environments are more strongly influenced by their performance measurement. Simultaneously, it has been found that organisations operating in slowly changing environments are the only organisations significantly influenced by strategic initiatives/options development and selection.

The follow up interviews were undertaken in order to reinforce the findings of the survey and to explain the variation exhibited in the practices of different types of organisations. The follow up interviews have supported the findings of the survey. The value of organisational direction as the most influential factor for the success of the strategic planning process has been reinforced by the majority of the interviewees. Attempting to explain the variation in the results of the regression analysis, it has been concluded that the increase in complexity, either expressed in organisational size or environmental turbulence, creates the need for more information which is satisfied with the effective use of performance measurement. This explains why larger organisations and those operating in rapidly changing environments are more strongly influenced by performance measurement. Another interesting conclusion drawn is that one of the greatest challenges faced by managers is the development of their performance measurement in such a way that it monitors and controls the organisational activities and functions and at the same time it can provide strategic feedback that can be used for the support, implementation and review of the organisational direction. Finally, even if the generalisability of the conclusions drawn in the follow up interviews is limited, it has been found that there is an additional determinant of the relationship between organisational direction and performance measurement, and that is the level of maturity achieved for the process and the people involved in strategic planning.

The research conducted in this thesis has determined that organisational direction and performance measurement can be ultimately linked with a two-way relationship. The organisational direction defines the orientation of the organisation, as well as its strategic objectives and goals. The latter are the base for the development and design of performance measurement; performance measurement assesses the activities and performance achievements that are suggested by the organisational direction that need to be monitored and controlled. On the other hand, performance measurement involves the collection of information which is used at various levels of the decision making. The feedback produced by the performance measurement can potentially influence the development of the organisational direction, as well the development and selection of the strategies to be implemented.

One of the most important conclusions drawn in this thesis is that performance measurement's relationship with organisational direction is not limited to the monitoring and control of performance. It is an integral part of the strategic development process and it aids both the development and the implementation of strategy. This is demonstrated by the communicating role that performance measurement can potentially have, as seen in the research conducted in this thesis.

Synthesising the results from all three research stages in this thesis, the conclusion drawn is that, ultimately, at the core of the relationship between organisational direction and performance measurement is organisational learning. The development of organisational direction is a learning exercise for the participants and at the same time, performance measurement contributes to and enhances organisational learning. Performance measurement can either signal when something is wrong in order for corrective action to take place or (apart from signalling the error) it can provide information in order to review the process or strategies which produced this error. Finally, it is concluded that there exist three determinants for the relationship between organisational direction and performance measurement, and these are: i) organisational size, ii) rate of change in the

environment and iii) maturity of the processes and people involved. A graphical representation of the relationship, and its determinants, between organisational direction and performance measurement is provided in Figure 8.1.

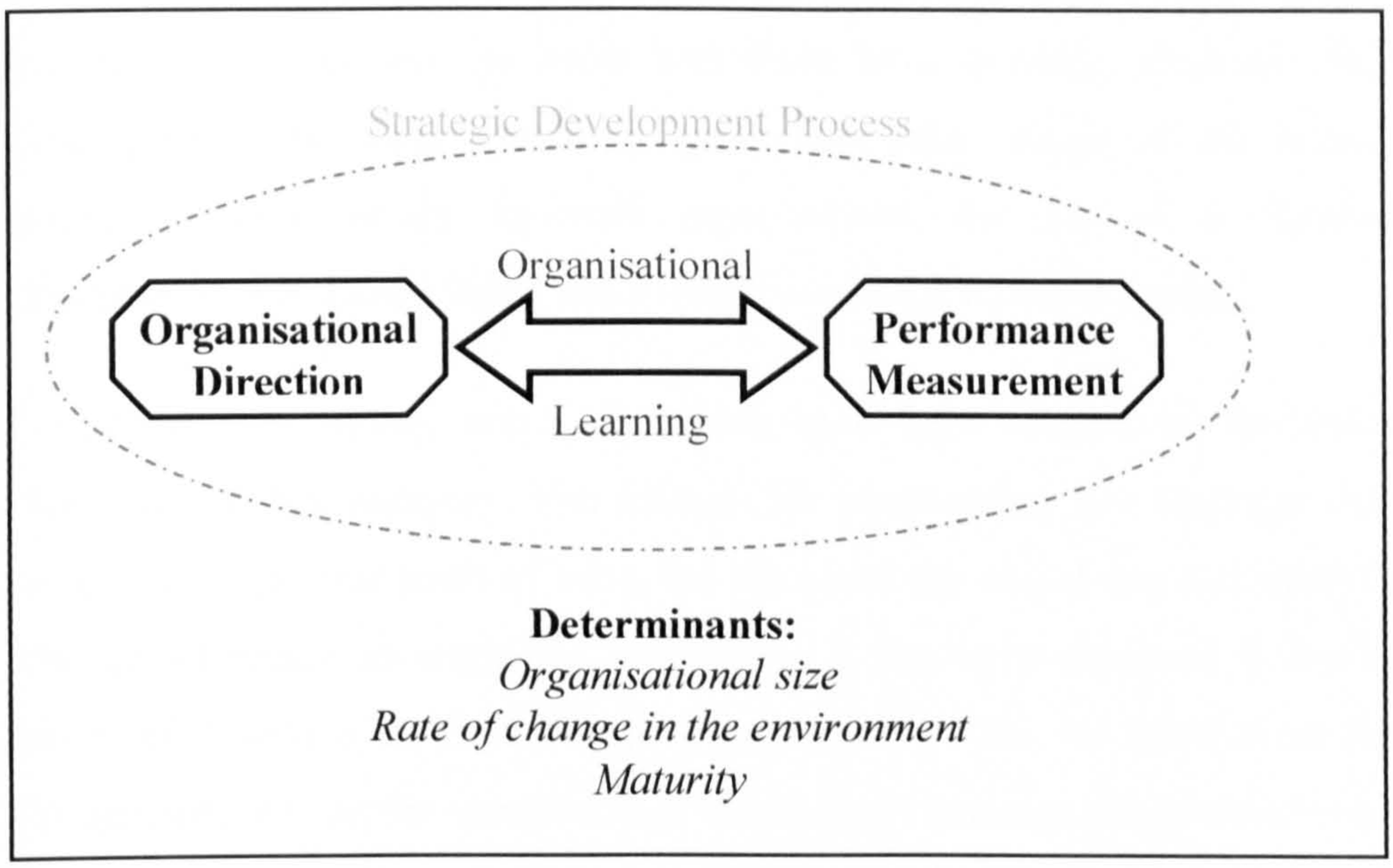


Figure 8.1: Graphical summary of the overall conclusions

8.3 Limitations

This study has a number of limitations despite my continuous attempt to avoid any research activity that would undermine the quality of this thesis. The limitations have been carefully taken into consideration at each stage of the research project so as to minimise them.

The thesis has adopted a multi-methodological approach whose different research activities were used to validate the results of the previous stages. Nevertheless, a general limitation might be the result of short-term or selective memories by the participants (Converse and Presser, 1986).

Limitations may also be created by the design and implementation of the research techniques. An obvious limitation is the use of a single case study which is from a non-conventional type of organisation, used in the exploratory stage of this study. As explained, academic institutions are very interesting organisations in which to investigate management practices and there is a growing academic literature developing in the field. However, given that other stages of the thesis were conducted with mainly for-profit organisations, the use of a 'third-sector' organisation may have created some limitations in the research design.

Concerning the survey, some limitations have been created by the innovative character of this research. The choice of investigating the strategy from the development process point of view, did not allow the use of any established scale. The questionnaire as explained in Chapter 3, has been designed following the advice of experts in the field (Meadows et al, 2003). Also, the fact that the focus of this research was on the assessment of the strategic planning process and not on the performance of the organisation, required the utilisation of perceptual measures whose use as dependent variables has been criticised as explained in Chapter 3 and Chapter 5.

8.4 Innovations and Contributions

This thesis is characterised by its innovative character and contributes in a number of academic fields. Specifically, the present thesis has a very innovative research focus, since it has investigated the relationship between two concepts in a unique way. There is considerable research published examining the elements of the strategic development process, but this is the first study which investigates their influence upon the success of the process. This provides the chance to compare their contribution on five different dimensions of the strategic development process' success. Also, this study has examined strategy from a process point of view which is innovative, because the overwhelming majority of the existing studies have

examined the impact of specific concepts upon the success of the organisation usually expressed by financial ratios.

The methodology of this thesis is very innovative, too. The multistage and multimethodological approach which combined an exploratory case study, a large scale survey and a series of follow up interviews, is not frequently encountered in the strategic management field. This approach is definitely beneficial concerning the breadth and depth of the data collected but at the same time it was very challenging to align the research activities and ensure that the data collected can be synthesised in order to address most effectively the research questions.

Regarding the contributions, this thesis contributes in the field of management of academic institutions. In addition, it contributes in the field of the strategic development process and particularly in the area of strategy evaluation since it is one of the few studies to suggest five dimensions for the success of the strategic development process. A significant contribution has been also achieved in the field of performance measurement, where there is a distinct lack of large scale surveys and comparison of the current practices established by different types of organisations. Finally, this thesis contributes in the field of strategic management by providing insights in the relationship between organisational direction and performance measurement.

8.5 Future research

The research conducted in this thesis has provided useful insights in to a series of research questions. However, its results should be enhanced through further research. This thesis has drawn conclusions for different types of organisations, dividing them according to their organisational characteristics: size and rate of change in the sector. More research is required in individual industrial sectors via comparative case studies whose results will produce specific recommendations for

the implementation of the strategy and its relationship with performance measurement.

One of the findings in this research is that most of the proposed management tools are designed for larger organisations. Hence, future research should map the current practices in SMEs and try to identify 'best practice' approaches, whose utilisation could support successful strategic development processes in smaller organisations.

Based on the finding that strategic options development and selection is an element of the strategic planning process which is not very influential for the success of the process, further research should establish the pitfalls of the current practices of this activity. This research has determined that the ability of an organisation to deal with unexpected changes in the environment is vital for its survival. Hence, future research could establish how the development and selection of the strategic options should be more effective and influential for all the other activities of the strategic planning process.

More empirical work is required on organisational learning and particularly on the nature of organisational as a link between organisational direction and performance measurement. Finally, more empirical work on the concept of maturity which has been identified in the follow-up interviews conducted in this study, in order to frame the boundaries of the concept, identify its dimensions and ultimately map analytically the various stages of maturity for the strategic planning process.

References List

Ackoff R. L., 1970, 'A concept of corporate planning', Wiley and Son.

Ackoff R. L., 1974, 'Redesigning the future', Wiley and Son.

Ahn H., 2001, 'Applying the Balanced Scorecard Concept: An Experience Report', Long Range Planning, Vol. 34, No. 4, pp. 441-452.

Al-Bazazz J. and Grinyer S., 1981, 'Corporate planning in the UK', Strategic Management Journal, Vol. 2, No. 2 pp. 155-168.

Andersen, 2004, 'Integrating Decentralized Strategy Making and Strategic Planning Processes in Dynamic Environments', Journal of management studies, Vol. 41, No. 8, pp. 1271-1279.

Andrews K. R., 1971, 'The concept of corporate strategy', Irwin.

Ansoff H. I., 1965, 'Corporate strategy: business policy for growth and expansion', McGraw-Hill.

Ansoff H. I., Avner J., Brandenberg R. G., Portner F. E., and Radosevich R., 1970, 'Does planning play? The effect of planning on success of acquisitions in American Firms', Long Range Planning, Vol. 2, No. 1, pp. 2-7.

Anthony, 1965, 'Planning and control systems: framework for analysis", Harvard University Press, source: Langfield-Smith, 1997, 'Management control systems and strategy: a critical review', Accounting, Organisations and Society, Vol. 22, No. 2, pp. 207-232.

Argyris C. and Schon D., 1978, 'Organizational Learning: A Theory of Action Perspective', Addison-Wesley:

Argyris, C. and Schön, D. (1996) Organizational learning II: Theory, method and practice, Reading, Mass: Addison Wesley.

Armstrong T. S. and Overton T. S., 1977, 'Estimating nonresponse bias in mail surveys', Journal of Marketing research, Vol., 14, No. 4, pp. 392-406.

Armstrong, J. S. 1991. Strategic planning improves manufacturing performance. Long Range Planning. 24.4: 127-129.

Asrilhant B., 2001, 'Decision support and strategic project management in the UK upstream oil and gas sector', Unpublished PhD thesis, Warwick Business School, University of Warwick.

Asrilhant B., Dyson R. G. and Meadows M, 2005, 'On the strategic project management in the UK upstream oil and gas sector', Omega, (forthcoming).

Atherton and Hannon, 2000, 'Innovation processes and the small business: a conceptual analysis', International Journal of Performance Management, Vol. 2, No. 4, pp. 276-292.

Bachmann, D., Elfrink, J., Vazzana, B., 1996, 'Tracking the progress of e-mail versus snail mail', Marketing Research, Vol. 8, No. 2, pp. 31 35.

Bailey A. and Johnson G., 1995, 'Strategy development processes: a configurational approach', Academy of Management Journal, Vol. 38, No. 1, pp. 2-6.

Bailey A., Johnson G. and Daniels K., 2000, 'Validation of a multi-dimensional measure of strategy development process', British Journal of Management, Vol. 11, No. 2, pp. 151-162.

Barnett J. H. and Wilsted W. D., 1988, 'Strategic management: concepts and cases', PWS-Kent Publishing company.

Bart C.K. and Baetz M.C., 1998, 'The relationship between mission statement and firm performance: an exploratory study', Journal of Management Studies, Vol. 35, No. 6, pp. 823 853.

Baruch Y., 1999, 'Response Rate in Academic Studies — A Comparative Analysis', Human Relations, Vol. 52, No. 4, pp. 421-438.

Beer S., 1959, 'Cybernetics and management', Wiley.

Beer S., 1995, 'Diagnosing the system for organisations', John Wiley & Sons.

Behn R., 2003, Why measure performance? Different purposes require different measures', Public Administration Review, Vol. 63, Iss. 5; p. 586

Bell P. C. and Anderson C. K, 2002, 'In search of strategic operations research/management science', Interfaces, Vol. 32, No. 2, pp. 28-40.

Bell P., 1998, 'Strategic Operational Research', Journal of the Operational Research Society, Vol. 49, No. 4, pp. 381-391.

Benbunan-Fich R. and Hiltz S. R., 1999, 'Impacts of asynchronous learning networks on individual and group problem solving: a field experiment', Group Decision and Negotiation, Vol. 8, No. 5, pp. 409-426.

Berman E., 2002, 'How useful is performance measurement?', Public Performance and Management Review, Vol. 25, No. 4, pp. 348 351.

Berman J.A., Gordon D.D., and Sussman G., 1997. A study to determine the benefits small business firms derive from sophisticated planning versus less sophisticated types of planning. Journal of Business and Economic Studies. 3.3: 1-11.

Berry M., 1998, 'Strategic planning in small high tech companies', Long Range Planning, Vol. 31, No. 3, pp. 455-466.

Bierbusse P. and Siesfeld T., 1997, 'Measures that matter', Journal of Strategic Performance Measurement, Vol. 1 No. 2, pp. 6-11.

Bititci U. S. and Carrie A S, 1998, 'Strategic Management of the Manufacturing Value Chain', Kluwer Academic Publications.

Bititci U., Turner T. and Begemann C., 2000, 'Dynamics of performance measurement systems', International Journal of Operations & Production Management, Vol. 20, No. 6, pp. 692-704.

Bourne M., Franco M.,and Wilkes J., 2003, 'Corporate performance management', Measuring Business Excellence, Vol. 7, No. 3; p. 15-21.

Bourne M., Mills J., Wilcox M., Neely A., Platts K., 2000, 'Designing, implementing and updating performance measurement systems', International Journal of Operations & Production Management, Vol. 20, No. 7; pp. 754-775.

Bourne M., Neely A.D., Platts K. and Mills J., 2002, 'The success and failure of performance measurement initiatives: perceptions of participating managers', International Journal of Operations and Production Management, Vol. 22, No. 11, pp. 1288 1310.

Boyd B. K., 1995, 'Strategic planning and financial performance: a meta-analytic review', Strategic Management Journal, Vol. 4, No. 3, pp. 421-444.

Boyer K. K., Olson J. R., Calantone R. J., Jackson E. C., 2002, 'Print versus electronic surveys: A comparison of two data collection methodologies', Journal of Operations Management, Vol. 20, No. 4, pp. 357-368.

Bower J. L., 1970, 'Managing the resources allocation process', Harvard University Press.

Bracken J.S., Keats B.W., and Pearson J.N., 1988, 'Planning and financial performance among small firms in a growth industry', Strategic Management Journal, Vol. 9, No. 5, pp. 591-603.

Brannen, 1992, 'Combining Qualitative and Quantitative Approaches: An Overview', in Brannen (Ed.), 'Mixing Methods: Qualitative and Quantitative Research'. Ashgate.

Brews P. J. and Hunt M. R., 1999, 'Learning to plan and planning to learn: resolving the planning school/learning debate', Strategic Management Journal, Vol. 19, No. 7, pp. 503-522.

Brignall S., 2002, 'The unbalanced scorecard: a social and environmental critique', Proceedings of the 3rd International Conference on Performance Measurement and Management (PMA 2002), Boston, MA, July.

Brysson, 1988, 'Strategic planning for public and nonprofit organisations', Jossey-Bass.

Bukowitz W. R. and Petrash G. P., 1997, 'Visualizing, measuring and managing knowledge', Research-Technology Management, Vol. 40 No. 4, pp.441-456.

Butler A., Letza S. R. and Neale B., 1997, 'Linking the balanced scorecard to strategy', Long Range Planning, Vol. 30, No. 2, pp. 242-253.

Burgelman R. A., 1983, 'A model of the interaction of strategic behavior, corporate context and the concept of strategy', Academy of Management Review, Vol. 8, No. 1, pp. 61-70.

Burgelman R. A., 1991, 'Interorganizational ecology of strategy making and organizational adaptation: theory and field research', Organization Science, Vol. 2, No. 3, pp. 239-262.

Byrd T. A., Sambamurthy V. and Zmud, R. W., 1995, 'And examination of IT planning in a large, diversified public organisation', Decision Science, Vol. 26, No. 1, pp. 49-73.

Calogirou Y., Protogenous A., Spanos Y. and Papadakis L., 2004, 'Industry versus firm specific effects on performance: contrasting SMEs and Large-sized firms', European Management Journal, Vol. 22, No. 2, pp, 231-243.

Campbell, A. and M. Alexander, 1997, 'What's wrong with strategy?', Harvard Business Review, Vol. 75, No. 6, pp. 45-50.

Campell A. and Yeung S., 1991, 'Mission, vision, and strategic intent', Long Range Planning, Vol. 24, No. 4, pp. 145 147.

Capon N., Farley J. and Hoening S., 1990, 'Determinants of financial performance: a meta-analysis', Management Science, Vol. 36, No. 10, pp. 1143-1159.

Capra F., 1997, 'The web of life: a scientific understanding of living systems', Anchor.

Carley, 1992, 'Content Analysis', in Asher (Ed.), 'The encyclopaedia of language and linguistics', Pergamon Press.

Carmines and Zeller, 1991, 'Reliability and validity assessment', Sage Publications.

Carmines and Zeller, 1991, 'Reliability and validity assessment', Sage Publications.

Chafee E. E., 1985, 'Three models of strategy', Academy of Management Review, Vol. 10, No. 1, pp. 22-43.

Chakravarthy B., and Doz Y., 1992, 'Process research: Focusing on corporate self-renewal', Strategic Management Journal, Vol. 13, Summer Special Issue, pp. 5-14.

Chakravarthy B., and White R., 2002, 'Strategy process: Forming, implementing and changing strategies', in Pettigrew A., Thomas H. and Whittington R. (eds.), 'Handbook of strategy and management', Sage

Chandler A. D., 1962, 'Strategy and Structure: Chapters in the History of American Enterprise', MIT Press.

Checkland P., 1998, 'Systems Thinking, Systems Practice: Includes a 30-Year Retrospective', John Wiley & Sons Ltd.

Clark B.R., 1998, 'Creating Entrepreneurial Universities. Organizational Pathways of Transformation', Issues in Higher Education, IAU Press.

Cobanoglu C., Warde B., and Moreo P.. 2001, 'A Comparison of Mail, Fax, and Web Survey Methods', International Journal of Market Research, Vol. 43, No. 2, pp. 441 52.

Collier N., Fishwich F. and Floyd S. W., 2004, 'Managerial involvement and perception of strategy process', Long Range Planning, Vol. 37, No. 1, pp. 67-75.

Collin J. and Porras J., 2000, 'Built to last: successful habits of visionary organisations', HarperCollins.

Converse J.M., and Presser S., 1986, 'Survey Questions: Handcrafting the Standardised Questionnaire', Sage Publications.

Covin J. D., 1991, 'Entrepreneurial vs conservative firm: a comparison of strategies and performance', Journal of Management Studies, Vol. 28, No. 5, pp. 439-462.

Crawford D., Couper M. P. and Lamias M. J., 2001,. 'Web surveys perceptions of burden', Social Science Computer Review, Vol. 19, No. 2, pp. 146 162.

Cross K. F. and Lynch R. L., 1989, 'The SMART way to define and sustain success', National Productivity Review, Vol. 9, No 1, pp 23-33.

Curtis D. A., 1983, 'Strategic planning for smaller businesses', Heath & Co.

Davies, Hides and Casey, 2001, 'Leadership in higher education', Total Quality Management, Vol. 12, No. 7&8, pp. 1025-1030.

de Wit B. and Meyer R., 'Strategy: Process, Content, Context, An International Perspective', 2nd Edition, International Thomson Business Press, 1998.

Dearden J., 1989, 'Measuring profit centre managers', Harvard Business Review, September/October, pp. 81-88.

DeGeus A., 1988, 'Planning as learning', Harvard Business Review, March-April, pp. 70-4.

DeGeus A., 1999, 'The Living Company', Nicholas Brealey Publications.

Dess G. G. and Miller, A., 1993, 'Strategic Management', McGraw-Hill.

Dess G.G. and Beard D. W., 1984, 'Dimensions of organisational task environments', Administrative Science Quarterly, Vol. 29, No. 1, pp. 52-73.

Dew M., 2001, 'Learning from Baldrige Winners at the University of Alabama', Journal of Organisational Excellence, Spring, pp.49

Dixon J. R., Nanni A.. J. and Vollmann T. E., 1990, 'The New Performance Challenge - Measuring Operations for World-class Competition', Dow Jones-Irwin.

Dommeyer, C. J. and Moriarty, E., 2000, 'Comparing two forms of an e-mail survey: Embedded vs. attached' International Journal of Market Research, Vol. 42, No. 1, pp. 39-120.

Drago L., 1996, 'Strategic plan intensity: effectiveness in different contexts', Management Research News, Vol. 19, No. 1/2, pp. 1-13

Dreyer P. and Gronhaug J., 2004, 'Uncertainty, flexibility, and sustained competitive advantage', Journal of Business Research, Vol. 57, No. 5, pp. 484-494.

Druskat M. and Weller K. L., 2004, 'Managing from the boundary: the effective leadership of self-managing work teams', Academy of Management Journal, Vol. 46, No. 4, pp. 435-457.

Dyson R. G. and Foster M. J., 1980, 'Effectiveness in Strategic Planning', European Journal of Operational Research, Vol. 5, No. 3; pp. 163-173.

Dyson R. G. and Foster M. J., 1982, 'The Relationship of Participation and Effectiveness in Strategic Planning, Strategic Management Journal, Vol. 3, No. 1, pp. 77-88.

Dyson R. G. and Foster M. J., 1983, 'Effectiveness in Strategic Planning Revisited', European Journal of Operational Research, Vol. 12, No. 2; pp. 146-158.

Dyson R. G. and Foster M. J., 1983, 'Making Planning More Effective', Long Range Planning, Vol. 16, No. 6; pp. 68-75.

Dyson R. G.and O'Brien F. A., 1998, 'Strategic Development, Strategic Development: Methods and Models', Wiley.

Dyson R.G., 2004, 'Strategic development and SWOT analysis at the University of Warwick', European Journal of Operational Research, Vol.152, No. 4, pp. 631-640.

Eden C. L. and Ackerman F., 2001, 'SODA—the principles'. In: Rosenhead J. and Mingers J. (Eds.),' Rational Analysis for a Problematic World Revisited', John Wiley.

Eden C. and Ackerman F., 2003, 'Making strategy: the JOURNEY of strategy management', McGraw Hill.

Edvinsson L. and Malone M. S., 1999, 'Intellectual Capital: The Proven Way to Establish Your Company's Real Value By Measuring Its Hidden Values', HarperBusiness.

EFQM, 2005, 'European Foundation for Quality Management', [online] assessed 5/6/2005.

Eisenhardt K. M., 1989, 'Making fast strategic decision making in high velocity environments', Academy of Management, Vol. 32, No. 3, pp. 543-576

Eisenhart K. M. and Zbaracki M. J., 1992, 'Strategic decision making', Strategic Management Journal, Vol. 13, No. 2, pp. 17-37.

Epstein M., Rejc A. and Slapnicar S., (2004), 'The impact of performance measurement on corporate financial performance', PMA 2004, Edinburgh, p.339

Etzokwitz, H., 1998, 'The norms of entrepreneurial science: cognitive effects of the new university–industry linkages' Research Policy, Vol. 27, No. 6, pp.823 833.

EU, 2003, 'The SME definition: User model and model clarification', Enterprise and Industry Publication, [online] at http://europa.eu.int/comm/enterprise/enterprise_policy/sme_definition/sme_user_guide.pdf, accessed 15/1/2005.

Evans J. R., 2004, 'An exploratory case study of performance measurement systems and relationship with performance results', Journal of Operations Management, Vol. 22, No. 3, pp. 219-232.

Ferlie E., Ashburner L., Fitzgerald L. and Pettigrew A., 1996, 'The New Public Management in Action', Oxford University Press.

Feurer R. and Chaharbaghi K., 1995, 'Performance measurement in strategic change', Benchmarking for Quality Management and Technology, Vol. 2, No. 2, pp. 64 72.

Finney, M., and Mitroff, I. 1986. 'Strategic planning failures: The organization as its own worst enemy', in Sims H. P. (Ed.), 'The thinking organization', Jossey-Bass.

Fiol C. M., and Lyles M. A. 1985. Organizational learning. Academy of Management Review, Vol. 10, No. 4: 803-813.

Flamholtz E. G., Das T. K. and Tsui A. S., 1985, 'Toward an integrative framework of organisational control', Accounting, Organisation and Society, Vol. 10, No. 1, pp. 35-50.

Fletcher M. and Harris S., 2002, 'Seven aspects of strategy formation', International Journal of Small Business, Vol. 20, No. 3, pp. 297-312.

Flick F., 1998, 'An introduction to qualitative research', Sage Publications.

Fowler F. J., 1993, 'Survey research methods', Sage.

Franco M. and Bourne M., 2003, 'Factors that play a role in "managing through measures"', Management Decision. Vol. 41, No. 8, pp. 698-710.

Franco-Santos M. and Bourne M., 2005, 'An examination of the literature relating to issues affecting how companies manage through measures', Production Planning & Control, Vol. 16, No. 2, pp. 114-124.

Franco-Santos M., Bourne M. and Huntington R., 2004, 'Executive pay and performance measurement practices in the UK', Measuring Business Excellence, Vol. 8, No. 3; p. 5-11.

French B., Kelly D. B. and Harrison R., 2004, 'the role of strategic planning ', The Journal of Management Development

Friend J. and Hickling A., 1987, 'Planning under Pressure: The Strategic Choice Approach', Pergamon.

Frigo M. L. and Krumwiede K., 1999, 'Balanced Scorecard: A Rising Trend in Strategic Performance Management', Journal of Strategic Performance Measurement, pp. 42-48.

Frost F. A., 2003, 'The use of strategic tools by small and medium-sized enterprises: an Australasian study', Strategic Change, Vol. 12, No 1; pp. 49-63.

Fulmer R. and Rue F., 1974, 'The practice and profitability of long range planning', Managerial Planning, Vol. 22, No. 8, pp. 57-64.

Gable C., 1999, 'Strategic action planning now', Lucie Press.

Galbraith G. and Schendel D., 1983, 'An empirical analysis of strategy types', Strategic Management Journal, Vol. 4, No. 2, pp. 153-173.

Galloway T. D., 1992, 'Threatened schools, imperilled practice: a case for collaboration', Journal of American Planning Association, Vol. 58, No. 2, pp. 229 240.

Garvin D. A., 1998, 'The Processes of Organization and Management', Sloan Management Review. Vol. 39, Iss. 4; pp. 33-50.

Gates S., 1999, 'Aligning strategic performance measures and results', The Conference Board.

Gharajedaghi J., 1999, 'Systems Thinking: Managing Chaos and Complexity - A Platform for Designing Business Architecture', Butterworth Heinemann.

Gioia D.A. and Thomas J.B., 1996, 'Identity, image and issue interpretation: sensemaking during strategic change in the academia', Administrative Science Quarterly, 1996, Vol. 41, No. 4, pp 370 403.

Glazer and Strauss, 1999, 'Discovery of Grounded Theory: Strategies for Qualitative Research', Aldine Transaction

Globerson S., 1985, 'Issues in developing a performance criteria system for an organization', International Journal of Production Research, Vol. 23 No. 4, pp. 639-46.

Goddard J, Wilson J. 1996. Persistence of profits for U.K. manufacturing and service firms. Service Industries Journal April: 105-117.

Golstein L., 1963, 'The Phenomenological and Naturalistic Approaches to the Social." In. Natanson W.(edt.), 'Philosophy of the Social Sciences', pp. 286-301, Random House.'

Goodstein L., Nolan T. and Pfeiffer W., 1993, 'Applied strategic planning', McGraw Hill.

Grant R. M., 'Strategic planning in a turbulent environment: Evidence from the oil majors', Strategic Management Journal, Vol. 24, No. 6; pp. 491-506.

Grigg T., 1994, 'Adopting an entrepreneurial approach in universities', Journal of Engineering and Technology Management, Vol. 11, No. 3/4, pp. 273 298.

Gunasekaran A. Patel C. and Tirtiroglu E., 2001, 'Performance measurement and metrics in a supply chain environment', Vol. 21, No. 1/2, pp. 71-87.

Hacker M.E. and Brotherton P. A., 1998, 'Designing and installing effective performance measurement systems', IIIE Solutions, Vol. 30 No. 8, pp. 18-23.

Hahn W., 1999, 'The impact of strategic planning sophistication on the implementation and firm performance', The Journal of Business and Economic Studies, Vol. 5, No. 2, pp. 19-35.

Hair J. F., Babin K., Money A. and Samouel P., 2003, 'Essential of business research methods', Wiley.

Hair J. F.., Anderson R. E., Tatham R. L., and Black W. C, 1998, 'Multivariate data analysis' 5th Edition, Prentice Hall.

Hambrick D. C., 1982, 'Environmental scanning and organizational strategy', Strategic Management Journal, Vol. 3, No. 2, pp.159-175.

Hamel G. and Prahalad C. K, 1989, 'Strategic intent', Harvard Business Review, Vol. 67, No. 3, pp. 63-76.

Hansen G. and Wernerfelt B, 1989, 'Determinants of firm performance: the relative importance of economic and organisational factors', Strategic Management Journal, Vol. 10, No. 5, pp. 399-411.

Harrington R. J., Lemak D. J., Reed R. and Kendall K. W., 2004, 'A question of fit: the links among environment, strategy formulation and performance', Vol. 10, No. 1, pp. 15-38.

Hart S. and Banbury C., 1994, 'How strategy-making process can be make a difference', Strategic Management Journal, Vol. 15, No. 2, pp. 251-269.

Hart S., 1992, 'An integrative framework for strategy making processes', Academy of Management Review, Vol. 17, No. 2, pp. 372-352.

Hastings S., 1996, 'A strategy evaluation model for management', Management Decision, Vol. 34, No. 1, pp. 25-34.

Heene A. and Sanchez R., 1997, 'Competence- Based Strategic Management', John Wiley.

Hewlett C. A., 1999, 'Strategic planning for real estates', Journal of Property Management, Vol. 64, No. 1, pp. 64-73.

Hickson D. J., Buttler R. J., Gray D., Malony G. R. and Wilson D. C., 1986, 'Top decisions – Strategic decision making in organisations', Blackwell.

Hill C. W. and Jones G. R, 1998, 'Strategic management: an integrated approach', Mifflin International.

Hill R., and Steward J., 2000, 'Human resources development in small organisations', Journal of European Industrial Training, Vol. 24, No. 1, pp. 105-117.

Hill T. and Westbrook R., 1997, 'SWOT analysis: It's time for a product recall', Long Range Planning, Vol. 30, No. 1; p. 46-52.

Hitt M., Gimeno Y. and Hoskisson R., 1998, 'Current and future research methods in strategic management', Organizational Research Methods, Vol. 1, No. 1, pp, 6-44.

Holladay S.J. and Cobbs W.T., 1993, 'Communicating visions. An exploration of the role of delivery in the creation of leader charisma', Management Communication Quarterly, Vol. 6, No. 4, 405 427.

Holloway S.J., 2001, 'Investigating the impact of performance measurement', International Journal of Business Performance Measurement, Vol. 3, No. 3/4, pp. 167 180.

Holsti G., 1969, 'Content Analysis for the Social Sciences and Humanities Reading', Addison-Wesley Publications.

Hrebiniak L. and Joyce W., 1985, 'Implementing strategy', MacMillan Publications

Huber G.P., 1991, 'Organizational learning: the contributing process and the literatures', Organization Science, Vol. 2, No. 1, pp. 88 115.

Huff A., and Reger R., 1987, 'Review of Strategic Process Research', Journal of Management, Vol. 13, No. 2, pp. 211 36.

Hycner S., 1985, 'Some guidelines for the phenomenological analysis of interview data', Human Studies, Vol. 8, 279-303.

Hycner S., 1999, 'Some guidelines for the phenomenological analysis of interview data', In Bryman and Burgess (Eds.), 'Qualitative research' (Vol. 3, pp. 143-164), Sage.

Irwin D., 2002, 'Strategy mapping in the public sector', Long Range Planning, Vol. 35, No. 6, pp. 637-647.

Ittner C. D. and Larker D. F., 1998, 'Are non-financial measures leading indicators of financial performance? An analysis of customer satisfaction', Journal of Accounting Research, Vol. 36, No. 1, pp. 1-46.

Ittner C., Larcker D., and Randell T., 2003, 'Performance implications of strategic performance measurement in financial services firms', Accounting, Organizations and Society, Vol. 28, No. 7 8, pp. 715 741.

Jacobsen R., 1988, 'The persistence of abnormal returns', Strategic Management Journal, Vol. 9, No. 5, pp. 415-430.

Jarzabkowski P. and Wilson D., 2002, 'Top teams and strategy in a UK University', Journal of Management Studies, Vol. 39, No. 3, pp. 355-381.

Jencks C. and Riesman D., 1968, 'The Academic Revolution', Doubleday.

Johnes G. and Cave M., 1994, 'The development of competition among higher education institutions', in Bartlett W., Le Grand J. and Propper C. (eds), 'Quasi-Markets in the Welfare State', Sage.

Johnson G. and Scholes K., 1997, 'Corporate strategy: text and cases', 4th edition, Prentice Hall.

Jook C., 2001, 'Profit from the core: growth strategy in an area of turbulence', Harvard Business Review Press.

Jook C., 2004, 'Beyond the core: expand your market without abandoning your roots', Harvard Business Review Press.

Judge M. and Douglas K. M., 1999, 'Performance implications of incorporating natural environment issues into strategic planning process: an empirical investigation', Journal of Management Studies, Vol. 35, No. 2, pp. 241-262.

Kaplan R. and Norton D., 2001b, 'Transforming the balanced scorecard from performance measurement to strategic management: part I', Accounting Horizons, Vol. 15, No. 1, pp. 87-91.

Kaplan R. S. and Norton P. D., 1991, 'The Balanced scorecard – measures that drive performance', Harvard Business Review, Jan/Feb, pp. 71-79.

Kaplan R. S. and Norton P. D., 1996, 'The balanced scorecard: Translating strategy into action', Harvard Business School Press.

Kaplan R. S. and Norton P. D., 2001a, 'The Strategy-focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment', Harvard Business School Press.

Kaplan S. and Beinhocker E., 2003, 'The real value of strategic planning', Sloan Management Review, Vol. 44., No. 2, pp. 71-76.

Keats K. and Hitt R., 1988, 'A causal model validity of selected business economic performance measures', Journal of Applied Behavioural Science, Vol. 24, No. 2, 151-160.

Keegan D. P., Eiler R. G. and Jones, C. R. 1989, 'Are your performance measures obsolete?', Management Accounting, June, pp. 45-50.

Kennerley, M. and Neely, A.D., 2000, 'Performance measurement frameworks – a review', Proceedings of the 2nd International Conference on Performance Measurement and Management (PMA 2000), Cambridge, July.

Kerlinger P., 1986, 'Foundations of behavioural research', 3rd Edition, Brace College Publication.

Ketchen K. and Berge D., 2004, 'Research methodology in strategy and management. 1 , Elsevier

Ketokivi B. and Scroeder J., 2004, 'Perceptual measures of performance: fact or fiction?', Journal of Operations Management, Vol. 22, No. 2, pp. 247-264.

Keys P., 1991, 'Operational Research and Systems: The Systemic Nature of Operational Research', Kluwer Academic.

King A. and Zeithaml C., 2001, 'Competencies and firm performance: examining the causal ambiguity paradox', Strategic Management Journal, Vol. 22, No. 1, pp. 75-99.

Koontz H. and Bradspies R.W., 1972, 'Managing through feedforward control', Business Horizons, Vol.24, pp. 25-36.

Kotha S. and Nair A., 1995, 'Strategy and environment as determinants of performance: evidence from the Japanese machine tool industry', Strategic Management Journal, Vol. 16, No. 7, pp. 497-518.

Kotter D., 1982, 'The General Manager', Free Press

Kotter D., 1999, 'What Leaders Really Do', Harvard Business School Press.

Kouzes J. and Posner B., 1987, 'The Leadership Challenge: How to Get Extraordinary Things in Organizations', Jossey-Bass.

Kravchuk, R. S., and Schack R. W., 1996, 'Designing Effective Performance Measurement Systems under the Government Performance and Results Act of 1993 , Public Administration Review, Vol. 56, No. 4, pp. 348-58

Kulda R. J., 1980, 'The effects of strategic planning on common stock returns', Academy of management journal, Vol. 23, No. 1, pp. 5-20.

Labroukos N. S., Lioukas S. and Chambers D., 1995, 'Planning and performance in state-owned enterprises: a multidimensional assessment', European Journal of Operational Research, Vol. 87, No. 3, pp. 624-640.

Lai T. S., 2004, 'The professionally managed family-ruled Enterprise: ethnic Chinese Business in Singapore', Journal of Management Studies, Vol. 41, No. 4, pp. 693-723.

Lal Y., Pitt B. and Strachan K. L., 2002, 'Strategic change in UK telecommunications: empirical evidences', European Management Journal, Vol. 22, No. 1, pp. 99-109.

Langfield-Smith K.,1997, 'Management Control Systems and Strategy: A Critical Review', Accounting, Organizations and Society, Vol 22, No. 2, pp. 207-232.

Lawless M., Bergh D. and Wilsted W., 1989, 'Performance variations among strategic group members: an examination of individual firm capability', Journal of Management, Vol. 15, No. 4,pp. 649-661.

Lawrie G. and Cobbold I., 2004, 'Third-generation balanced scorecard: evolution of an effective strategic control tool', International Journal of Productivity and Performance Management, Vol. 53, No. 7; pp. 611-627.

Lehn K. and Makhija A. K., 1996, 'EVA and MVA: As performance measures and signals for strategic change', Strategy and leadership, Vol. 24, No. 3, pp. 24-31.

Letza S., 1996, 'The design and implementation of the balanced business scorecard. An analysis of three companies in practice', Business Process Re-Engineering and Management Journal, Vol. 2, No. 3, pp. 54 64.

Levin I. M., 2000, 'Vision revisited. Telling a story of the future', Journal of Applied Behavioural Science, Vol. 36, No. 1, pp. 91 107.

Liedtka J. M., 1998, 'Strategic Thinking: Can it be Taught', Long Range Planning, Vol. 31, No. 1, pp. 120-129.

Lingle J. H. and Schiemann, W. A., 1996, 'From balanced scorecard to strategic gauges: Is measurement worth it?', Management Review, Vol. 85, pp. 56-61

Lyles M. A., Baird L. S., Orris J. B., and Kuratko D.F., 1993, 'Formalized planning in small business: increasing strategic choices. Journal of Small Business Management. April: 38-50.

Maltz A. C., Shenhar A. J. and Reilly R.R, 2003, 'Beyond the Balanced Scorecard: Refining the Search for Organizational Success Measures', Long Range Planning, Vol. 36, No. 2, pp. 65-79.

March J. G. and Simon H. A., 1958, 'Organizations', Wiley,

Marginson D. E. W., 2002, 'Management control systems and their effects on strategy formation at middle-management levels: Evidence from a U.K. organization', Strategic Management Journal, Vol. 23, No. 11; p. 1019-1223.

Markides C., 1999, 'In search of strategy', Sloan Management Review, Vol. 40, No. 3, pp. 6-10.

Marr B., and Schiuma G., 2003, 'Performance measurement: past, present and future', Management Decision, Vol. 41, No. 8, pp. 680-687.

Marshall M., Wray L., Epstein P. and Grifel S., 1999, '21st century community focus better results by linking citizens, government and performance measurement', Public Management, Vol. 81, No. 10, pp. 12 19.

Maskell B., 1989, 'Performance measures of world class manufacturing', Management accounting, No. 4, pp. 32-3.

May J., 1997, 'Social research, issues, methods and process', 2nd edition, Open University Press.

Mazany P., Francis S. and Sumich P., 1995, 'Evaluating the effectiveness of an experiential "hybrid" workshop strategy development and team building in a manufacturing organization', The Journal of Management Development, Vol. 14, No. 1; pp. 40-52.

MBNQA, 2005, 'Malcolm Baldrige National Quality Award', [online] assessed 5/6/2005.

McAdam, 2002, 'Large scale innovation-reengineering methodology in the SME', International Small Business Journal, Vol. 20, No. 1, pp. 33-52.

McAdams, R. and Bailie, B., 2002, 'The business performance measures and alignment impact on strategy. The role of business improvement models.' International Journal of Operations and Productions Management, Vol. 22, No. 9, pp. 972 996.

McCunn P., 1998, 'The balanced scorecard: the eleventh commandment", Management Accounting, December, pp. 34-6.

McDonald J. ,1999, 'The determinants of firm profitability in Australian manufacturing', Economic Record June, pp. 115-126.

McDougall P. P., Covin J. G., Robinson R. B. and Herron L., 1994, 'The effects of industry growth and strategic breadth on new venture performance and strategy content', Strategic Management Journal, Vol. 15, No. 5, pp. 537-554.

McGahan A., 1999, 'The performance of U.S. corporations: 1981-1994 , Journal of Industrial Economics, Vol. 47, No.1, pp. 373-398.

McKeirnan P., 1993, 'Strategic Planning and Financial Performance in the UK SMEs: Does Formality Matter?', British Academy of Management (ed.) BAM,

7th Annual Conference, pp. 20 2. Milton Keynes: British Academy of Management.

McKiernan P., 1997, 'Strategy past; strategy futures', Long Range Planning, Vol. 30 No. 5, pp. 690-708.

McLarney R., 2001, 'Strategic planning-effectiveness-environment linkage: a case study', Decision Management, Vol. 39, No. 10, pp. 809-817.

Meadows M., Tapinos E. and Dyson R.G., 2003, 'Strategic development: a survey of UK organisations', EURO/INFORMS, Istanbul, Turkey.

Meekings A., 1995, 'Unlocking the potential of performance measurement: a guide to practical implementation', Public Money & Management, October-December, pp. 1-8.

Mehta R. and Sivadas E., 1995, 'Comparing response rates and response content in mail versus electronic mail surveys', Journal of the Market Research Society, Vol. 37, No. 4, pp. 429 439.

Melnyk S. A., Stewart D. M., and Swink M., 2004, 'Metrics and performance measurement in operations management: dealing with the metrics maze', Journal of Operations Management, Vol. 22, No. 3; p. 209.

Meyer M. W. and Gupta V., 1994, 'The performance paradox', in Straw B. M. and Cummings L. L. (ed), 'Research and organisational behaviour', Vol. 16, JAI Press.

Michaluk G., 2002, 'Riding the storm: strategic planning in turbulent markets', McGraw Hill.

Mikkelsen A., Ogaard T. and Lovrich N., 2000, 'Modeling the effects of organizational setting and individual coping style on employees' subjective health, job satisfaction and commitment', Public Administration Quarterly, Vol. 24, No. 3, pp. 371- 397.

Miles M. and Huberman S., 1994, 'Qualitative data analysis: an expanded sourcebook', 2nd Edition, Sage.

Miles M. B., 1979, 'Qualitative data as an attractive nuisance: The problem of analysis', Administrative Science Quarterly, Vol. 24,No. 3, pp. 590-601.

Mingers J., 1997, 'Multi-paradigm mutlimethdology', in: Mingers J and Gill A (eds). 'Multimethodology: Theory and Practice of Combining Management Science Methodologies', Wiley, pp 1 20.

Mingers J., 2001, 'Combining IS Research Methods: Towards a Pluralistic Methodology', Information Systems Research, Vol. 12, No. 3, pp. 240-259.

Mintzberg H. Ahstrand L. and Lampel A., 1998, 'Strategy safari', Prentice Hall

Mintzberg H. and Lampel J., 1999, 'Reflecting on the strategic planning process', Sloan Management Review, Vol. 40, No. 2, pp. 21-30.

Mintzberg H. and Waters J., 1985, 'Of strategies, deliberate and emergent', Strategic Management Journal, Vol. 6, No. 3, pp. 257-272.

Mintzberg H., 1994a, 'The rise and fall of strategic planning', Harvard Business Review, Vol. 74, No. 1, pp. 107-114

Mintzberg H., 1994b, 'The rise and fall of strategic planning', Prentice Hall

Mitchell F., 1998, 'Employing qualitative methods in the private sector', Sage publications.

Montanar, J. R.,. Morgan C. P and Bracker J. S., 1990, 'Strategic Management: A choice approach', Dryden.

Montgomery D., 2001, 'Introduction to Statistical Process Control', Wiley and Son Publication

Moustakas M., 1994, 'Phenomenological research methods', Sage.

Moxley P., 2004, 'Factors influencing the successful use of vision-based strategic planning for non-profit human services organisations', International Journal of Organizational Theory and Behavior, Vol. 7, no. 1, pp. 107-122.

Mueller D. 1986. Profits in the Long-Run. Cambridge University Press: Cambridge, U.K.

Mueller D., 1986, 'Profits in the Long-Run', Cambridge University Press.

Munqith D. M. and Zaydie K. H., 2004, 'The measurement of strategic thinking type for managers', International Journal of Commerce and Management, Vol. 15, No. 1, pp. 34-45.

Nanus B.,1992, 'Visionary Leadership. Creating a Compelling Sense of Direction for Your Organization', Jossey-Bass.

Neely A., Adams C. and Kennerly M., 2002, 'The performance prism. The scorecard for measuring and managing business success', Prentice Hall.

Neely A., Bourne M. and Adams C., 2003, Better budgeting or beyond budgeting?. Measuring Business Excellence, Vol. 7, No. 3; pp. 22-28.

Neely A., Gregory M. and Platts K., 1995, 'Performance Measurement System Design: A Literature Review and Research Agenda', International Journal of Operations and Production Management, Vol. 15, No 4, pp. 80-116.

Neely A., Mills J., Platt K. and Richards H., 1994, 'Realising strategy through performance measurement', International Journal of Operations and Production Management, Vol. 14, No. 4, pp. 76-85.

Neely, A., 1999, 'The Performance Measurement Revolution: Why Now and What Next?', International Journal of Operations and Production Management, Vol. 19, No. 2, pp. 205-28.

Neely, A.D., Mills, J.F., Gregory, M.J. and Platts, K.W., 1995, 'Performance measurement system design–a literature review and research agenda', International Journal of Operations and Production Management, Vol. 15, No. 4, pp.80 116.

Neely, A.D., Mills, J.F., Platts, K.W. and Huw R., 2000, 'Performance measurement system design: developing and testing a process-based approach',

International Journal of Operations and Production Management, Vol. 20, No. 10, pp. 1119-1128.

Newman A., 2000, 'Social Research methods, qualitative and quantitative approaches', Allyn and Bacon publications.

O'Brien F. and Meadows M., 2000, 'Corporate visioning: A survey of UK practice', Journal of the Operational Research Society. Vol. 51, No. 1, pp. 36-44.

O'Brien and Meadows, 2003, 'Exploring the current practice of visioning: case studies from the UK financial sector', Management Decision, Vol. 41, pp. 488-497.

O'Regan N. and Ghobadian A., 2002, 'Effective strategic planning in small and medium sized firms', Management Decision, Vol. 40, No. 7, pp. 663-671.

O'Brien F. A. and Meadows M , 2001, 'How to develop visions: a literature review, and a revised CHOICES approach for an uncertain world', Journal of Systemic Practice and Action Research, Vol. 14 No. 4, pp. 495-515.

Ohmae K., 1983, 'Mind of the Strategist: Business Planning for a Corporate Advantage', Penguin.

Oliver N., 1993, 'Quality, costs and changing strategies of control in universities in the UK', Journal of Educational Administration, Vol. 31, No. 1,pp. 41 47.

Otley D., 1999, 'Performance management: a framework for management control system design', Management Accounting Research, Vol. 10, No. 3, pp. 363 382.

Paglis L.L. and Green C.J., 2002, 'Leadership, self-efficacy and managers' motivation for leading change', Journal of Organizational Behavior, Vol. 23, No. 2, 215 223.

Pallant E., 1998, 'SPSS survival manual', McGraw Hill.

Parnell J. A., Wright P. and Tu S. H., 1996, 'Beyond the strategy-performance linkage: the impact of the strategy-organization-environment fit on business performance', No. 1, pp. 41-50.

Patton M. Q., 1998, 'Qualitative Evaluation Methods', 2nd ed., Sage,

Pearce, J. A., and Robinson R. B. Jr., 'Strategic Management', 5th Ed., Irwin.

Perry L., Scott R. and Smallwood N., 1993, 'Real time strategy: improvising team-based planning for a fast changing world', Wiley and Sons.

Pettigrew A., 1992, 'The character and significance of strategy process research', Strategic Management Journal, Vol. 13, No. 3, pp. 5-16.

Pettigrew A., Ferlie E. and McKee L., 1992, 'Shaping Strategic Change', Sage.

Pettigrew A., Whipp R. and Rosenfield R., 1989, 'Competitiveness and the management of strategic change processes', in Francis A. and Tharakan P. K. M. (Eds), 'The Competitiveness of European Industry: Country Policies and Company Strategies', Routledge.

Pettigrew A., Woodman M. and Cameron J., 2001, 'Studying Organizational Change and Development: Challenges for Future Research', Academy of Management Journal, Vol. 44, No. 4, pp. 697-713.

Pike S. and Ross G., 2001, 'Measuring and decision support in the knowledge society', The 4th World Congress on Intellectual Capital, Hamilton.

Porter M., 1996, 'What is strategy?, Harvard Business Review, Vol. 74, No. 6, pp. 61-78.

Porter, M., 1980, 'Competitive Strategy', Free Press.

Powell T., 1992, 'Organisational alignment as competitive advantage'. Strategic Management Journal, No. 13, Vol. 2, pp. 119-134.

Powell T., 1995, 'Total quality management as competitive advantage', Strategic Management Journal, Vol. 16, No. 1, pp. 15-37.

Powell T., 2003, 'Varieties of competitive parity', Strategic Management Journal, Vol. 24, No. 1, pp. 61-72.

Price A. D. F, Ganiev B. V., Newson E., 2003, 'Changing strategic management practice within the UK construction industry', Strategic Change, Vol. 12, Iss. 7; p. 347-355.

Punch, 2000, 'Introduction to social research: Quantitative and Qualitative approaches', Sage.

Radnor Z. and Lovell B., 2003, 'Defining, justifying and Implementing the Balance Scorecard in the National Health Service', International Journal of Medical Marketing, Vol. 3, No. 2 pp. 174-188.

Ramanujam V. and Venkatraman R., 1987, 'Planning and performance a new look in the old question', Business Horizon, May-June, pp. 19-25.

Ramanujam V., Venkatraman R., Camillus J. C., 1986, 'Multi-Objective Assessment of Effectiveness of Strategic Planning: A Discriminant Analysis Approach', Academy of Management Journal, Vol. 29, No. 2; pp. 347-363.

Raynor M.A., 1998, 'That vision thing: do we need it?', Long Range Planning, Vol. 31, No. 3, pp. 368 376.

Reger R., Duhaime I. and Stimert J., 1992, 'Deregulation, strategic choice, risk and financial performance', Strategic Management Journal, Vol. 11, No. 2, pp. 90-109.

Regner R., 2003, 'Strategy creation in the periphery: inductive versus deductive strategy making', Journal of Management Studies, Vol. 40, No. 1, pp. 57-86

Rejc A, 2003, 'Toward Contingency Theory of performance measurement', Journal for East European Management Studies, Vol. 9, No. 3; pp. 243-264.

Rhyne L. C., 1986, 'The relationship of strategic planning to financial planning', Strategic Management Journal, Vol. 23, No. 7, pp. 423-436.

Robinson R. B. and Pearce J. A., 1984, 'The relationship between stage of development and small firm planning performance', Journal of Small Business Management, Vol. 12, No. 2, pp. 45-52.

Robinson, R.B. Jr., and J.A. Pearce II, 1984, 'Research thrusts in small firm strategic planning', Academy of Management Review, Vol. 9, No. 1, pp. 128-137.

Roger E., 1983, 'So what is strategy?', Long Range Planning, Vol. 16, No. 3, pp. 57-72.

Romano C. and Ratnantuga A., 1994, 'Growth strategies for small manufacturing firms: the relationship between planning and control', British Accounting Review, Vol. 26, No. 2, pp. 173-195.

Rosenhead J. and Mingers J., 2003, 'Rational Analysis for a Problematic World Revisited: Problem Structuring Methods for Complexity, Uncertainty and Conflict', John Wiley & Sons Ltd.

Rowley, D. J., Lujan, H. D. and Dolence, M.G. , 1997, 'Strategic Change', Jossey-Bass.

Rumelt R., 1991, 'How much does industry matter?', Strategic Management Journal, Vol. 12, No. 3. pp. 167-185.

Sarantakos, 1999, 'Social research', 2nd Edition, Palgrave.

Sarrico C. S. and Dyson R. G., 2000, 'Using DEA for planning UK universities-an institutional perspective', Journal of Operational Research Society, Vol. 51, No. 7, pp. 78-87.

Santos S. P., Belton V. and Howick S., 2002, 'Adding value to performance measurement by using system dynamics and multiple criteria analysis', International Journal of Operations and Production Management, Vol. 22, No. 11, pp. 1246-1273.

Scandura T. A. and Williams E. A., 2000, 'Research methodology in management: Current practices, trends, and implications for future research', Academy of Management Journal, Vol. 43, No. 7, pp. 1248-1264.

Schendel D. E. and Hofer C. W., 1979, 'Strategic Management: A New View of Business Policy', Brown.

Schneiderman A., 1999, 'Why balanced scorecards fail', Journal of Strategic Performance Measurement, special edition, pp. 6-11.

Schramm M., 1971, 'Notes on case studies of instructional media projects', Sage.

Schuldt B. A., Totten, J. W., 1994, 'Electronic mail versus mail survey response rates', Marketing Research, Vol. 6, No. 1, pp. 36 39.

Schwenk C. R., 1988, 'The essence of strategic decision making', Heath & Co.

Scott M. and Bruce R., 1987, 'Five stages of growth in small business', Long Rangae Planning, Vol. 20, No. 3, pp. 45-52.

Selznick P., 1957, 'Leadership in administration: a sociological interpretation', Row.

Shapiro H. J. and Kallman E. A., 1978, 'Long range planning is not fit for everything', Planning review, Vol. 2, No. 2, pp. 27-34.

Sharma F. and Vredenburg R. J., 1998, 'Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities' Strategic Management Journal. Vol. 19, pp. 729 753.

Shewhart W. A., 1931, 'Economic Control of Quality of Manufactured Product', Van Nostrand Reinhold Co (Republished in 1981 by the American Society for Quality Control).

Shimizu S. and Hitt M., 2004, 'Strategic flexibility: Organizational preparedness to reverse ineffective strategic decisions', Academy of Management Executive, Vol. 18, No. 44-51.

Shuman J. and Seegar J., 1986, 'The theory and practise of strategic management in smaller rapid growth companies', American Journal of Small Business, Vol. 11, No. 1, pp. 7-18.

Shuman J., Shaw J. and Sussman G., 1989, 'Strategic planning in smaller rapid growth companies', Long Range Planning, Vol. 18, No. 6, pp. 48-53.

Silverman, D., 2000, 'Doing Qualitative Research. A Practical Handbook', Sage.

Simons R, 1995, 'Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal', Harvard Business School Press.

Simons R., 1991, 'Strategic orientation and top management attention to control systems', Strategic Management Journal, Vol. 12, No. 1, pp. 49-62.

Simons R., 1992, 'How new top managers use control systems as levers of strategic renewal', Strategic Management Journal, Vol. 15, No. 2, pp. 169 189.

Simons, R., 1999, 'Performance Measurement and Control Systems for Implementing Strategy', Prentice Hall.

Smith P., 1993, 'Outcome-related performance indicators and organizational control in the public sector', British Management Journal, Vol. 4, No. 2, pp. 135 151.

Smith P., 1995, 'Performance indicators and outcome in the public sector', Public Money and Management, Vol. 11, No. 3, pp. 13 16.

Stewart J.M., 1993, 'Future state visioning – a powerful leadership process', Long Range Planning, Vol. 26, No. 6, pp. 89 98.

Stonehouse G. and Pemberton J, 2002, 'Strategic planning in SMEs-some empirical findings', Management Decision, Vol. 40, No. 9; pp. 853-861.

Storey D., 1994, 'Understanding the small business sector', Routledge.

Tapinos E., Dyson R. G. and Meadows M., 2003a, 'The impact of the performance measurement systems in setting the 'direction' in University of Warwick', 3rd International Workshop on Performance Measurement, Implementation and impact of performance measurement systems, Bergamo, Italy.

Tapinos E., Dyson R. G. and Meadows M., 2003b, 'Determining the linkages between direction setting', 45th Operational Research Society, Keele, UK.

Tapinos E., Dyson R. G. and Meadows M., 2004a, 'Assessing the elements of strategic/corporate planning: a global survey', 20th European Conference on Operational Research, OR and MANAGEMENT of ELECTRONIC SERVICES, Rhodes, Greece.

Tapinos E., Dyson R. G. and Meadows M., 2004b, 'The impact of performance measurement in strategic/corporate planning', 3rd Conference of the Performance Measurement Association, Edinburgh, UK.

Tapinos E., Dyson R. G. and Meadows M., 2005a, 'The impact of the performance measurement systems in setting the 'direction' in University of Warwick', Production and Planning Control, Vol. 16, No. 2, pp. 189-198.

Tapinos E., Dyson R. G. and Meadows M., 2005b, 'The impact of performance measurement in strategic/corporate planning', International Journal of Productivity and Performance Management, Vol. 54, No. 5/6, pp. 370-384.

Taylor B., 1997, 'The return of strategic planning', Long Range Planning, Vol. 30, No. 3, pp. 334-344.

Teo T. S. H., Lim V. K. G., and Lai R. Y. C., 1997, 'Users and uses of the Internet: The case of Singapore', International Journal of Information Management, Vol. 17, No.5, pp. 325 336.

Tesch, 1990, 'Qualitative research: analysis and software tools', Fallen Press.

Thirkell P. C. and Dau R., 1998, 'Export performance: success determinants for New Zealand manufacturing exporters', European Journal of Marketing, Vol. 32, No. 9/10, pp. 813-829.

Thompson A. A. Jr. and Strickland A. J., 1995, 'Strategic management: concepts and cases', Irwin.

Thurnhurst C. and Barker C., 1999, 'Using problem structuring methods in strategic planning', Health and Policy Planning, Vol. 14, No. 2, pp. 127-134.

Tomlinson R. C. and Dyson R. G., 1983, 'Some Systems Aspects of Strategic Planning', The Journal of the Operational Research Society, Vol. 34, No. 8; pp. 765-778.

Tse A. B. C., 1998, 'Comparing the response rate, response speed and response quality of two methods of sending questionnaires: E-mail vs. mail', Journal of the Market Research Society, Vol. 40, No. 4; pp. 353-361.

Var de Heijden K., 2004, 'Scenarios: the art of conversation', Wiley.

Var de Heijden K., Bradfield R., Burt G., Cairns G. and Wright G., 2002, 'The sixth sense. Accelerating organizational learning with scenarios', Wiley.

Veen-Dirks and Wijn, 2002, 'Strategic control: meshing critical success factors and the balanced scorecard', Long Range Planning, Vol. 35, No. 4, pp. 407-417.

Veen-Dirks and Wijn, 2002, 'Strategic control: meshing critical success factors and the balanced scorecard', Long Range Planning, Vol. 35, No. 4, pp. 407-417.

Verweire K. and Van Den Berghe L., 2004, 'Integrated performance management: a guide to strategy implementation', Sage.

Wang, X., 2002, 'Assessing performance measurement impact. A study of US local governments', Public Performance and Management Review, Vol. 26, No. 1, pp.26 43.

Warwick, 2002, 'Preparation of the university's strategic plan', University of Warwick unpublished internal paper.

WBS, 2004, 'WBS Alumni Homepage', [online] http://www.wbs.ac.uk/alumni, accessed on 10/2/2004.

Weber M., 1990, 'Basic content analysis', 2nd edition, Sage Publications.

Weible R. and Wallace J., 1998, 'Cyber research: the impact of the Internet on data collection', Marketing Research, Vol. 10, No. 3, pp. 19 31.

Wessel J. R., 1993, 'The strategic human resource management process in practice', Planning review, Vol. 21, No. 5, pp. 37-8.

Westley F. and Mintzberg H., 1989, 'Visionary leadership and strategic management', Strategic Management Journal, Vol. 10, No. 1, pp. 17 32.

Whittington R., 2001, 'What is strategy? Does it matter?', Thompson Publications.

Wilcox M. and Bourne M., 2003, 'Predictive performance', Management Decision, Vol. 41, No. 8, pp. 806-816.

Wilcox N., Mason S., Neely A. and Bourne M, 2004, 'A pragmatic theory of prediction', in Neely A., Kennerly M. and Walters A. (eds), 2004, 'Performance Measurement and Management: Public and Private', 4th international conference of Performance Measurement Association, July, Edinburgh, UK.

Wilson I., 1992, 'Realizing the power of strategic vision', Long Range Planning, Vol. 25, No. 5, pp. 18 28.

Wisner J. D. and Fawcett S. E., 1991, 'Linking strategy to operating decisions through performance measurement', Performance and Inventory Management Journal, Vol. 11, No. 3, pp. 5-11.

Yeniyurt S., 2003, 'A literature review and integrative performance measurement framework for multinational companies', Marketing Intelligence & Planning, Vol. 21, No. 3; pp. 134-142.

Yeo L., 2003, 'Linking organisational learning to organisational performance and success: Singapore case studies', Leadership and Organisation Development Journal, Vol. 24, No. 1/2, pp. 70-83.

Yin, 1994, 'Case Study Research: Design and Methods, 2nd Edition, CA: Sage.

Zabriskie N. B. and Huellmantel A. B., 1991, 'Developing strategic thinking in senior managers', Long Range Planning, Vol. 24, No. 6, pp. 25-32.

Appendix I

Cover Letter and Questionnaire

Dear colleague,

As a WBS graduate you may know that we have an active research interest in the current practice of strategic/corporate planning in organisations.

We are therefore writing to ask you to support us in our current research project. We attach a questionnaire of our latest survey, and we hope you will be good enough to spend a few minutes filling it in. Your feedback on the current practice of strategic development in your own organisations is invaluable to us; in return we hope to be able to share with you the results of a large scale survey of 'best practice' later this year.

Alternatively, you can complete the survey online at:
http://users.wbs.ac.uk/ors/research/survey/sp.cfm

We would appreciate if you could fill in the questionnaire within the following two weeks.

If you have any questions or queries, please contact E.Tapinos@phd.wbs.ac.uk or one of our email addresses below.

Please use this email address to send your completed questionnaire.

Many thanks indeed, and we hope to see you at Warwick again sometime soon!

Yours sincerely
Robert Dyson and Maureen Meadows
Professor of Operational Research and Systems and Lecturer, ORS Group
R.G.Dyson@warwick.ac.uk M.Meadows@warwick.ac.uk

Sent on his behalf by:
Nicola Price
Alumni Relations Assistant, Alumni Office
Warwick Business School, Coventry, CV4 7AL

WARWICK BUSINESS SCHOOL

Strategic/Corporate Planning Survey

Responder's profile:

Job position/title: .....

What is your experience with strategic/corporate planning? (please cross)

Head of Strategic/Corporate planning team	
Member of Strategic/Corporate planning team	
Contributing to the Strategic/Corporate planning process	
Awareness of the Strategic/Corporate planning process	
Not involved at all	

At what level is your involvement with the strategic/corporate planning process?

Corporate ☐ Subsidiary ☐ Departmental ☐ Other

(*Please fill in the rest of the questionnaire according to your answer to this question*)

Which course have you attended in WBS?

Organisation's profile:

What is the location (country) of your company?

What is the location (country) of the Head Office (if different)?

What is the turnover of your organisation? (£ sterling)

Less than 500K ☐ 500k-5M ☐ 5M-100M ☐ 100M-500M ☐ more than 500M ☐

How many employees does your organisation employ?

Fewer than 50 ☐ 50-250 ☐ 250-1000 ☐ 1000-3000 ☐ more than 3000 ☐

In which sector does your organisation operate?

Aerospace	☐	Airlines	☐	Automotive	☐
Banking/Financial services	☐	Chemical/Petroleum	☐	Construction	☐
Defence	☐	Education	☐	Electrical and Electronics	☐
Engineering	☐	Food/Beverage	☐	Government/Other public	☐
Health	☐	Insurance	☐	IT	☐
Media	☐	Medical/Pharmaceutical	☐	Professional services	☐
Publishing	☐	Retail	☐	Telecommunications	☐
Tobacco	☐	Utilities	☐		
Other (please specify)					

	1	2	3	4	5	6	7
Do you consider this sector to be rapidly changing? (*1 for slow changing and 7 for rapidly changing*)							

Which of the following parameters are the strongest drivers of change in your sector? (*1 for 'not all' and 7 for 'strong driver'*)	1	2	3	4	5	6	7
Competition							
Customer requirements							
Globalisation							
Government							
IT							
Regulators							
Stock market/Shareholders							
Suppliers							
Other (please specify):							

WARWICK BUSINESS SCHOOL

Please state the extent to which you feel that the following statements are true within your organisation:
1 meaning 'disagree strongly'
7 meaning 'agree strongly'

	1	2	3	4	5	6	7
Development of organisational 'direction'							
The organisation's 'direction' (*the direction may be defined for example by the vision, mission and/or strategic objectives*):							
is specific							
is formally expressed							
is clearly articulated							
is reviewed frequently							
is developed with wide participation							
is influenced by performance measurement							
takes a long term perspective							
Strategic initiative/options development							
In our organisation,							
there is very wide participation in strategy formulation/generating strategic options							
there is a very extensive and wide-ranging search for possible strategic options							
uncertainties in the external environment are a major consideration when developing strategic options							
the organisation's 'direction' seems to have a major impact upon strategic initiative/options development							
performance measurement influences the development of strategic initiatives/options							
a sufficiently wide range of factors (e.g. competition, finance, resource availability) are usually considered when generating strategic options							
Strategy evaluation/selection							
In our organisation,							
a sufficiently wide range of factors (e.g. finance, competition, resource availability) are usually considered when evaluating strategic options							
the full range of relevant resources is considered as part of the strategic/corporate planning process							
the feasibility of alternative strategies is fully assessed							
the strategy evaluation/selection is based on consensus							
Implementation							
In our organisation,							
the selected strategy is translated into specific activities							
there is wide internal communication of the organisation's direction							
there is wide external communication of the organisation's direction							
the implementation of the selected strategies is properly supported							

WARWICK BUSINESS SCHOOL

Please state the extent to which you feel that the following statements are true within your organisation:
1 meaning 'disagree strongly'
7 meaning 'agree strongly'

	1	2	3	4	5	6	7
Feedback and strategic control							
In our organisation,							
the implementation of the selected strategies is adequately monitored and controlled							
the effectiveness of internal communication of the organisation's direction is fully evaluated							
the effectiveness of external communication of the organisation's direction is fully evaluated							
the strategic/corporate planning process is highly flexible, allowing much iteration between stages							
the strategic/corporate planning process is highly flexible, allowing for significant modification to plans, where desirable							
the strategic/corporate planning process is highly responsive to new information							
it is extremely important for the strategic/corporate planning process to be highly responsive to new information							
Performance Measurement							
In our organisation,							
the scope of performance measures used is appropriate							
an appropriate level of detail is used in performance measurement and target setting							
an appropriate degree of quantification is used in performance measurement and target setting							
performance measurement has a major impact upon all stages of the strategic/corporate planning process							
performance measurement gives a good indicator of organisational performance							
the performance measurement system monitors and controls the alignment of the organisation's activities with the organisation's direction							
the performance measurement system monitors and controls the alignment of the organisation's achievements with its direction							
Assessment of uncertainty							
In our organisation,							
uncertainties in the external environment are adequately captured and assessed as part of the strategic/corporate planning process							
uncertainties in the external environment have a major impact upon every stage of the strategic/corporate planning process							

WARWICK BUSINESS SCHOOL

Please state the extent to which you feel that the following statements are true within your organisation:

1 meaning 'disagree strongly' 7 meaning 'agree strongly'

	1	2	3	4	5	6	7
Evaluating strategic/corporate planning **In our organisation, strategic/corporate planning:**							
is a process whose assumptions are made explicit							
is a standardised and formal process							
is realised with wide participation							
is regularly reviewed							
is strongly influenced by the organisational long term 'direction'							
is strongly influenced by financial planning (budgets)							
supports the achievement of the organisation's goals							
is considered effective							
is considered efficient							
leads to the adoption of successful strategies							
is considered a successful process							
Management Techniques in Strategic/Corporate Planning **To your knowledge, which of the following techniques are used in the strategic/corporate planning process in your organisation:**							
Balanced Scorecard							
Benchmarking							
Cognitive Mapping							
Contingency analysis							
Core Capabilities/Competencies analysis							
Corporate modelling							
Cost-Benefit analysis							
Decision Tree analysis							
Delphi							
Economic forecasting models							
Gaming							
Gap analysis							
Political Economic Socio-cultural and Technological (PEST or STEP)							
Porter's 5 Forces model							
Portofolio matrices or Growth-share or Boston Consulting Group matrix							
Profit Impact of Market Strategy (PIMS) analysis							
Real Options analysis							
Resource Based Planning							
Risk analysis							
Scenario Planning							
Sensitivity analysis							
Soft Systems Methodology							
SWOT (or TOWS) analysis							
System Dynamics							
Value Chain analysis							
Visioning							
Others (please specify)							

Appendix II

Cover letter for follow up interviews and webpage with the survey's results

Subject: WARWICK BUSINESS SCHOOL Strategic/Corporate planning survey results

Dear ,

I am writing to you because you had expressed an interest in participating in WBS' research on strategic/corporate planning. This research is an extension of a survey questionnaire that you completed last summer. A webpage with the results of this survey has been set up at
http://users.wbs.ac.uk/homepage/E.Tapinos/strategic_corporate_planning_survey

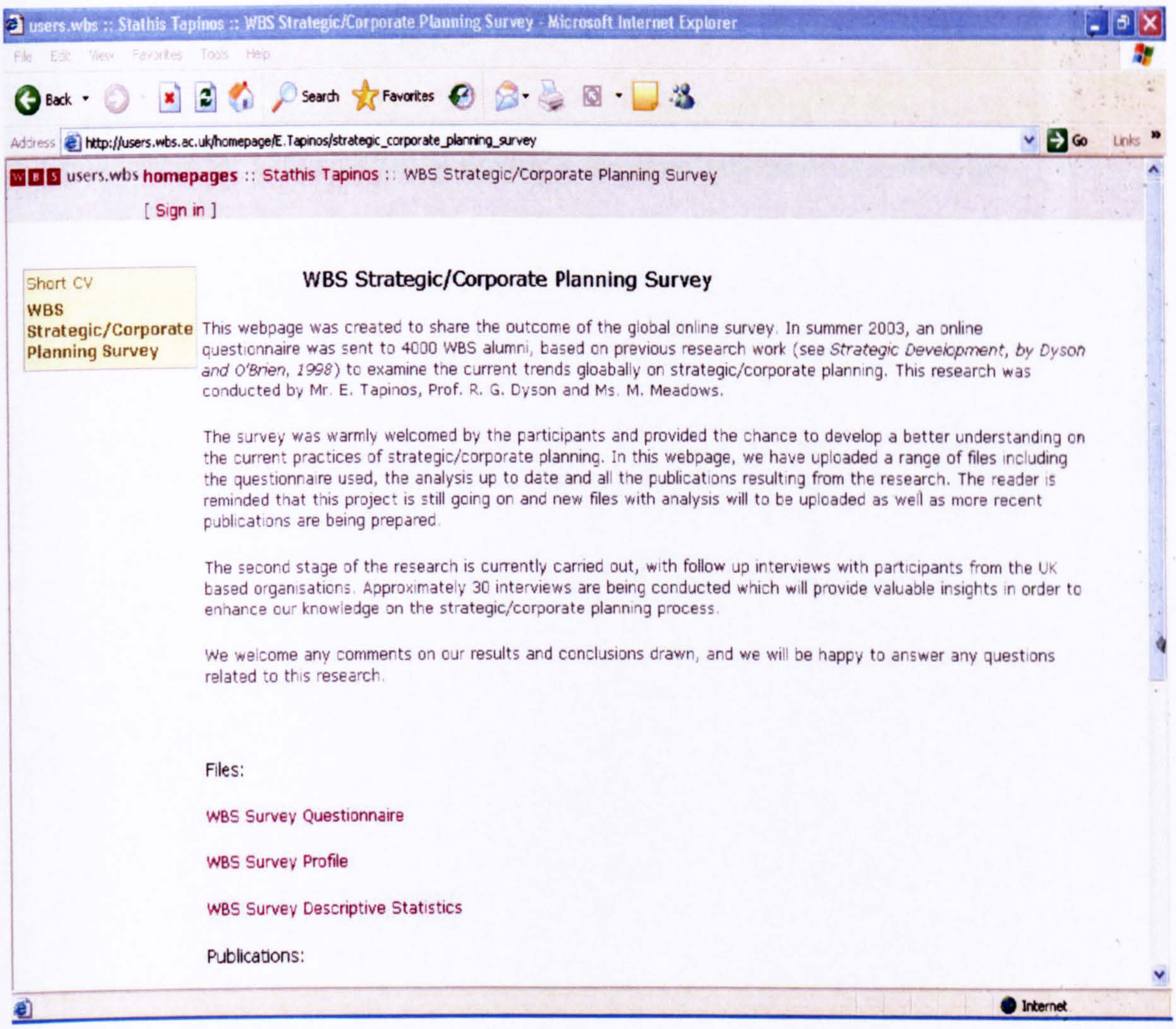
We would like to invite you to participate in a follow up interview. These are designed to last approximately 1 hour and will be conducted at a date and time of your convenience.

The outcome of the survey has shown that significant variations exist in the practice of strategic/corporate planning within similar organisations. The follow up interviews are intended to explore these differences further. The first set of interviews, which were conducted recently, has shown that the adoption of successful strategies is reached through the implementation of quite different approaches. We are trying to compare organisations with different characteristics, therefore we are interested in your organisation which, as an SME from a dynamic sector, would enhance our current understanding and knowledge of this field.

We look forward to hearing from you, and to arranging a date to meet with you to discuss your experience of strategic/corporate planning.

Thank you in advance.

Best Regards,
Prof. R. G. Dyson
M. Meadows
E. Tapinos


users.wbs :: Stathis Tapinos :: WBS Strategic/Corporate Planning Survey - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://users.wbs.ac.uk/homepage/E.Tapinos/strategic_corporate_planning_survey
Go Links
users.wbs homepages :: Stathis Tapinos :: WBS Strategic/Corporate Planning Survey
[Sign in]
Short CV
WBS Strategic/Corporate Planning Survey
WBS Strategic/Corporate Planning Survey
This webpage was created to share the outcome of the global online survey. In summer 2003, an online questionnaire was sent to 4000 WBS alumni, based on previous research work (see Strategic Development, by Dyson and O'Brien, 1998) to examine the current trends gloabally on strategic/corporate planning. This research was conducted by Mr. E. Tapinos, Prof. R. G. Dyson and Ms. M. Meadows.
The survey was warmly welcomed by the participants and provided the chance to develop a better understanding on the current practices of strategic/corporate planning. In this webpage, we have uploaded a range of files including the questionnaire used, the analysis up to date and all the publications resulting from the research. The reader is reminded that this project is still going on and new files with analysis will to be uploaded as well as more recent publications are being prepared.
The second stage of the research is currently carried out, with follow up interviews with participants from the UK based organisations. Approximately 30 interviews are being conducted which will provide valuable insights in order to enhance our knowledge on the strategic/corporate planning process.
We welcome any comments on our results and conclusions drawn, and we will be happy to answer any questions related to this research.
Files:
WBS Survey Questionnaire
WBS Survey Profile
WBS Survey Descriptive Statistics
Publications:
Internet

Appendix III

Comparison for University of Warwick's statement organisational direction

	1997-98 (7.7.94)	1998-00 (3/7/95)
Elements of the Mission	A Research-led University Improving access and Continuing education The University's Regional Role Excellence in Teaching An international University	Identical with the previous year.
General Statements of Aims	Staff evaluation and staff selection. Modern Records Centre. - Warwick Research Fellowship. IMC. New Building for Maths etc. Rise in the Open Studies. 2+2 Degree Hillfield centre. Regional partnership. Science Park. Industrial collaboration. Arts Centre Direct contacts with scholars, practitioners, etc. High entry standards. Mature students. New procedures for approval and review of academic programs. Upgrade AV/IT equipment. Extend active research links and collaborative agreements. Linguistically equipped. International partnerships and long-standing exchange agreements. Hong Kong and Malaysia. – Latin America Eastern Europe	Identical with the previous year. Identical with the previous year. Plus: joint staff development with collaboration with local colleges. Identical with the previous year. Identical with the previous year. Identical with the previous year
Strategic and planning objectives	Improving research capability Increasing postgraduate numbers Increasing the science/technology component of the University Improving access Maintaining the infrastructure to support academic development Continuing the University's policy of income generation	Maintaining Research Strengths Development of the Graduate School Increasing the Science/Technology Component of the University Improving Access and Regional Academic Collaboration Maintaining the Infrastructure to Support Academic Development Continuing the University's Policy of Income Generation Enhancing the University's role in Europe
Corporate Plan	Not stated in as in following years	Not stated in as in following years

	2000-01 (3/7/96)	2001-04 (22/08/01)
Elements of the Mission	A Research-led University Excellence in Teaching The University's Regional Role Improving access and Continuing education An international University	General statement: Priority to widening participation and to lifelong learning. Links with its local and regional community and expand its work to an international level in both teaching and research. Work in collaboration with business and industry and active role in economic regeneration. Mission is: Wide recognition, at regional, national and international level, as a world leader in research and teaching. Research across all academic departments. Teaching and research to contribute to the economy and society as a whole. Recruit students and staff with outstanding potential, and provide the best support and facilities. Serve local and regional communities. Strengthen and diversify the activities on industrial and business liaison, innovation, exploitation and entrepreneurialism. High quality and challenging education.
General Statements of Aims	Identical with the previous years. Plus: reference to the Medical Research Institute. Identical with the previous years. Plus: capital investment in the teaching environment, innovation in course delivery and design and access to computing facilities. Identical with the previous years. Identical with the previous years. Plus: the joint staff development is conducted with the Associated Further Education Colleges. Identical with the previous years. Plus: formal teaching with Thailand and South Africa. And promotion as for postgraduate and	Maintaining and enhancing as one of the leading UK research universities. Maintaining excellence in the quality of teaching and learning. Improving access and enabling the broadest participation. Improving the infrastructure to support academic aims. Continuing the University's policy of income generation and diversification. Recruiting and retaining staff of the very highest quality and potential. Enhancing the role in the region and improve links at the local,

	postdoctorate students in Europe	national and international level. Enhancing and promoting the University's reputation, particular on the international stage. Maintaining and developing our academic strengths in Humanities, Social Studies, Science and Technology. Developing and exploiting opportunities for academic collaboration. Maintaining and developing our strengths in institutional governance and management
Strategic and planning objectives	Maintaining Research Strengths Maintaining Excellence in Teaching at Undergraduate, Postgraduate and Post-Experience Levels Development of the Science and Technology Base of the University Maintaining and Developing the Graduate School Maintaining the Infrastructure to Support the University's Academic Aims Maintaining and Developing Opportunities for Academic Collaboration, Access and Widening Participation Enhancing the University's Role in Europe Continuing the University's Policy of Income Generation	Maintaining and enhancing our Research Strengths Maintaining Excellence in Teaching and Learning Expanding Students Numbers in those areas where we can attract high calibre students at undergraduate level Development and exploiting opportunities for academic collaboration Maintaining and improving the infrastructure to support the University's academic objectives Enhancing the University's international role.
Corporate Plan	Academic Aims and Objectives Policies in Relation to Staff Student Numbers Estate Strategy Information and Library Systems Strategy Financial Strategy Quality The University and Regional Policy	Academic Strategy Widening Participation Human Research Strategy Library, Information and e-Strategy Regional Policy Enterprise and Innovation Public Affairs Estates Strategy Financial Strategy and Governance and management

PAGE NUMBERING AS ORIGINAL

Appendix IV

Correlation Matrix

Correlations

	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44
Q10	1																																	
Q11	.337(**)	1																																
Q12	.310(**)	.263(**)	1																															
Q13	.201(**)	.266(**)	.161(**)	1																														
Q14	0.066	-.110(*)	-0.029	-.117(*)	1																													
Q15	.356(**)	.143(**)	.147(**)	.151(**)	0.102	1																												
Q16	0.079	-0.03	-0.046	-0.032	.596(**)	.142(**)	1																											
Q17	0.107	.316(**)	0.08	.224(**)	-0.007	.152(**)	.272(**)	1																										
Q18	.112(*)	.205(**)	.144(**)	.225(**)	.133(*)	.204(**)	.189(**)	.323(**)	1																									
Q20	.114(*)	0.041	.150(**)	0.053	0.106	0.044	-0.031	0.046	0.012	1																								
Q21	0.064	0.043	.141(**)	0.02	.169(**)	0.046	-0.041	-0.052	0.042	.595(**)	1																							
Q22	0.072	0.04	.191(**)	0.075	.139(*)	.120(*)	0.03	-0.008	0.068	.655(**)	.718(**)	1																						
Q23	.139(*)	-0.012	0.068	-0.011	.179(**)	.196(**)	0.101	0.005	0.07	.407(**)	.409(**)	.476(**)	1																					
Q24	.159(**)	-0.024	.156(**)	0.021	.163(**)	.154(**)	0.06	-0.019	.181(**)	.415(**)	.472(**)	.550(**)	.532(**)	1																				
Q25	.182(**)	.226(**)	.112(*)	.138(*)	0.017	.184(**)	0.086	0.091	.126(*)	.341(**)	.306(**)	.385(**)	.421(**)	.474(**)	1																			
Q26	0.083	-0.028	.163(**)	0.06	0.045	.113(*)	-0.016	-0.07	0.031	.515(**)	.424(**)	.535(**)	.259(**)	.391(**)	.238(**)	1																		
Q27	.176(**)	-0.022	.153(**)	0.08	.140(*)	0.09	0.09	-0.003	.138(*)	.395(**)	.402(**)	.451(**)	.373(**)	.749(**)	.407(**)	.405(**)	1																	
Q28	.141(**)	0.098	0.106	0.097	0.076	0.1	0.077	0.054	.122(*)	.378(**)	.308(**)	.415(**)	.398(**)	.627(**)	.395(**)	.363(**)	.680(**)	1																
Q29	.291(**)	.240(**)	.140(*)	.125(*)	.130(*)	.121(*)	0.1	0.095	0.104	.285(**)	.181(**)	.192(**)	.197(**)	.324(**)	.293(**)	.256(**)	.373(**)	.448(**)	1															
Q30	.171(**)	.139(*)	.118(*)	.126(*)	0.013	.200(**)	-0.007	0.066	0.093	.328(**)	.329(**)	.322(**)	.260(**)	.317(**)	.367(**)	.366(**)	.408(**)	.382(**)	.312(**)	1														
Q31	.168(**)	.225(**)	0.089	.143(**)	0.086	.135(*)	.144(**)	0.091	0.071	.250(**)	.242(**)	.283(**)	.349(**)	.300(**)	.690(**)	.175(**)	.272(**)	.345(**)	.259(**)	.396(**)	1													
Q32	.111(*)	.132(*)	.108(*)	0.094	-0.038	0.053	-0.017	0.058	.111(*)	.380(**)	.253(**)	.369(**)	.335(**)	.459(**)	.454(**)	.428(**)	.446(**)	.500(**)	.417(**)	.441(**)	.414(**)	1												
Q33	.116(*)	.181(**)	.116(*)	0.073	-0.018	0.095	-0.041	0.073	0.089	.391(**)	.266(**)	.357(**)	.320(**)	.447(**)	.426(**)	.419(**)	.411(**)	.522(**)	.423(**)	.429(**)	.393(**)	.839(**)	1											
Q34	0.09	0.101	.173(**)	0.085	-0.005	.109(*)	-0.017	0.07	0.074	.379(**)	.218(**)	.340(**)	.350(**)	.439(**)	.382(**)	.347(**)	.430(**)	.495(**)	.396(**)	.409(**)	.385(**)	.711(**)	.730(**)	1										
Q35	.122(*)	0.041	.116(*)	.120(*)	0.046	.128(*)	0.105	.181(**)	.152(**)	.406(**)	.202(**)	.333(**)	.317(**)	.449(**)	.334(**)	.369(**)	.423(**)	.569(**)	.443(**)	.346(**)	.384(**)	.531(**)	.578(**)	.651(**)	1									
Q36	.117(*)	0.093	0.082	0.062	0.002	0.095	0.02	0.049	0.104	.279(**)	.210(**)	.264(**)	.229(**)	.464(**)	.304(**)	.292(**)	.528(**)	.420(**)	.265(**)	.242(**)	.260(**)	.333(**)	.320(**)	.355(**)	.416(**)	1								
Q37	.153(**)	0.002	.212(**)	0.069	0.068	0.096	0.048	0.047	0.066	.473(**)	.396(**)	.449(**)	.359(**)	.405(**)	.412(**)	.411(**)	.407(**)	.382(**)	.331(**)	.378(**)	.383(**)	.412(**)	.434(**)	.447(**)	.471(**)	.321(**)	1							
Q38	0.081	-0.073	.148(**)	0.073	.110(*)	0.03	0.029	-0.104	0.069	.444(**)	.503(**)	.560(**)	.364(**)	.448(**)	.384(**)	.448(**)	.489(**)	.408(**)	.274(**)	.402(**)	.354(**)	.372(**)	.345(**)	.325(**)	.364(**)	.318(**)	.515(**)	1						
Q39	0.045	0.006	.166(**)	0.1	.185(**)	.118(*)	.160(**)	0.017	.175(**)	.348(**)	.428(**)	.470(**)	.328(**)	.404(**)	.298(**)	.321(**)	.372(**)	.332(**)	.177(**)	.220(**)	.296(**)	.246(**)	.257(**)	.240(**)	.273(**)	.203(**)	.393(**)	.540(**)	1					
Q40	.119(*)	0.045	.195(**)	0.054	0.031	0.083	0.065	0.068	0.084	.480(**)	.320(**)	.512(**)	.339(**)	.468(**)	.411(**)	.474(**)	.477(**)	.493(**)	.275(**)	.386(**)	.387(**)	.473(**)	.481(**)	.483(**)	.533(**)	.411(**)	.605(**)	.540(**)	.474(**)	1				
Q41	0.073	0.017	.243(**)	0.083	.136(*)	.128(*)	0.034	0.033	0.068	.468(**)	.408(**)	.487(**)	.364(**)	.435(**)	.376(**)	.470(**)	.392(**)	.431(**)	.260(**)	.394(**)	.427(**)	.445(**)	.478(**)	.484(**)	.471(**)	.318(**)	.513(**)	.498(**)	.446(**)	.605(**)	1			
Q42	.157(**)	0.063	.171(**)	.190(**)	.115(*)	0.095	0.047	0.051	.129(*)	.420(**)	.350(**)	.433(**)	.287(**)	.418(**)	.318(**)	.428(**)	.460(**)	.436(**)	.303(**)	.392(**)	.341(**)	.397(**)	.423(**)	.402(**)	.483(**)	.358(**)	.453(**)	.572(**)	.437(**)	.563(**)	.548(**)	1		
Q43	.163(**)	0.044	.179(**)	.154(**)	0.107	.183(**)	.119(*)	0.097	.200(**)	.307(**)	.285(**)	.388(**)	.291(**)	.371(**)	.290(**)	.324(**)	.349(**)	.350(**)	.267(**)	.315(**)	.316(**)	.298(**)	.293(**)	.359(**)	.396(**)	.244(**)	.350(**)	.393(**)	.583(**)	.397(**)	.456(**)	.636(**)	1	
Q44	.132(*)	.127(*)	.125(*)	0.086	-0.083	0.079	0.01	0.106	0.095	.296(**)	.123(*)	.302(**)	.335(**)	.358(**)	.353(**)	.310(**)	.374(**)	.469(**)	.279(**)	.283(**)	.301(**)	.388(**)	.400(**)	.434(**)	.484(**)	.338(**)	.378(**)	.287(**)	.265(**)	.513(**)	.368(**)	.416(**)	.360(**)	1
Q45	.134(*)	.169(**)	.152(**)	.112(*)	-0.093	0.03	-0.058	0.052	0.03	.264(**)	.138(*)	.253(**)	.242(**)	.267(**)	.327(**)	.245(**)	.303(**)	.370(**)	.243(**)	.263(**)	.235(**)	.314(**)	.340(**)	.359(**)	.384(**)	.307(**)	.372(**)	.292(**)	.170(**)	.493(**)	.342(**)	.360(**)	.220(**)	.784(**)
Q46	.143(**)	.109(*)	.143(**)	0.1	-0.056	0.085	-0.05	0.007	0.055	.301(**)	.138(*)	.281(**)	.324(**)	.350(**)	.334(**)	.291(**)	.355(**)	.471(**)	.307(**)	.335(**)	.296(**)	.404(**)	.422(**)	.426(**)	.438(**)	.330(**)	.421(**)	.349(**)	.269(**)	.517(**)	.406(**)	.409(**)	.366(**)	.724(**)
Q47	0.035	0.103	0.092	0.032	0.022	0.028	0.032	0.019	0.071	.231(**)	.141(*)	.154(**)	.229(**)	.150(**)	.192(**)	.126(*)	.135(*)	.268(**)	.250(**)	.214(**)	.223(**)	.290(**)	.271(**)	.281(**)	.288(**)	.155(**)	.233(**)	.267(**)	.178(**)	.255(**)	.259(**)	.282(**)	.247(**)	.372(**)
Q48	0.044	0.065	0.098	0.038	0.032	0.092	0.038	0.071	.111(*)	.352(**)	.260(**)	.411(**)	.303(**)	.386(**)	.460(**)	.364(**)	.340(**)	.422(**)	.253(**)	.312(**)	.470(**)	.420(**)	.419(**)	.412(**)	.464(**)	.300(**)	.431(**)	.387(**)	.301(**)	.493(**)	.515(**)	.371(**)	.307(**)	.455(**)
Q49	0.044	0.03	.147(**)	0.021	-0.004	.162(**)	0.017	0.076	.170(**)	.337(**)	.286(**)	.433(**)	.329(**)	.377(**)	.384(**)	.389(**)	.394(**)	.443(**)	.228(**)	.312(**)	.395(**)	.405(**)	.404(**)	.435(**)	.480(**)	.329(**)	.403(**)	.448(**)	.324(**)	.475(**)	.515(**)	.423(**)	.355(**)	.436(**)
Q50	0.001	0.005	.127(*)	0.018	0.009	0.034	-0.008	0.014	0.083	.334(**)	.296(**)	.457(**)	.316(**)	.339(**)	.396(**)	.347(**)	.354(**)	.392(**)	.234(**)	.269(**)	.439(**)	.422(**)	.400(**)	.401(**)	.414(**)	.243(**)	.414(**)	.449(**)	.300(**)	.422(**)	.465(**)	.395(**)	.329(**)	.400(**)
Q51	0.048	.132(*)	0.103	0.075	0.023	.110(*)	0.074	0.107	0.09	.331(**)	.272(**)	.352(**)	.347(**)	.337(**)	.528(**)	.235(**)	.307(**)	.392(**)	.182(**)	.278(**)	.597(**)	.381(**)	.401(**)	.393(**)	.405(**)	.259(**)	.375(**)	.370(**)	.319(**)	.401(**)	.464(**)	.374(**)	.346(**)	.365(**)
Q52	-0.013	0.038	0.035	0.038	0	0.046	0.054	0.061	0.004	.262(**)	.172(**)	.259(**)	.179(**)	.244(**)	.363(**)	.183(**)	.291(**)	.266(**)	.187(**)	.173(**)	.376(**)	.266(**)	.242(**)	.302(**)	.300(**)	.200(**)	.288(**)	.284(**)	.219(**)	.345(**)	.275(**)	.307(**)	.281(**)	.338(**)
Q53	0.005	0.065	0.079	0.059	0.034	0.024	0.025	0.083	.123(*)	.292(**)	.232(**)	.282(**)	.238(**)	.310(**)	.430(**)	.280(**)	.330(**)	.359(**)	.241(**)	.308(**)	.503(**)	.357(**)	.362(**)	.346(**)	.450(**)	.253(**)	.391(**)	.398(**)	.300(**)	.427(**)	.471(**)	.491(**)	.433(**)	.405(**)
Q54	0.034	0.063	.116(*)	0.101	0.048	0.024	0.038	0.083	.115(*)	.345(**)	.271(**)	.369(**)	.277(**)	.339(**)	.425(**)	.252(**)	.361(**)	.372(**)	.192(**)	.330(**)	.504(**)	.339(**)	.352(**)	.367(**)	.465(**)	.312(**)	.432(**)	.420(**)	.349(**)	.492(**)	.506(**)	.524(**)	.477(**)	.393(**)
Q55	0.076	0.032	.191(**)	.113(*)	0.063	0.107	0.037	0.085	0.071	.324(**)	.218(**)	.323(**)	.176(**)	.342(**)	.244(**)	.391(**)	.439(**)	.445(**)	.446(**)	.291(**)	.217(**)	.416(**)	.429(**)	.390(**)	.441(**)	.392(**)	.426(**)	.338(**)	.280(**)	.433(**)	.403(**)	.372(**)	.311(**)	.403(**)
Q56	0.106	0.066	0.101	0.091	0.083	0.065	0.057	0.068	0.071	.297(**)	.150(**)	.178(**)	.259(**)	.268(**)	.207(**)	.303(**)	.315(**)	.364(**)	.474(**)	.315(**)	.304(**)	.412(**)	.411(**)	.390(**)	.390(**)	.341(**)	.381(**)	.285(**)	.248(**)	.345(**)	.340(**)	.363(**)	.295(**)	.355(**)
Q57	0.042	-0.032	0.075	0.046	0.038	0.023	-0.001	0.035	0.015	.400(**)	.373(**)	.436(**)	.346(**)	.406(**)	.289(**)	.410(**)	.486(**)	.436(**)	.197(**)	.270(**)	.253(**)	.382(**)	.369(**)	.391(**)	.456(**)	.423(**)	.410(**)	.467(**)	.314(**)	.470(**)	.438(**)	.468(**)	.296(**)	.472(**)
Q58	0.066	0.031	.113(*)	0.045	.242(**)	0.104	.137(*)	0.08	.126(*)	.417(**)	.500(**)	.432(**)	.329(**)	.380(**)	.257(**)	.252(**)	.368(**)	.348(**)	.176(**)	.190(**)	.229(**)	.187(**)	.185(**)	.189(**)	.287(**)	.265(**)	.280(**)	.381(**)	.413(**)	.282(**)	.366(**)	.353(**)	.352(**)	.129(*)
Q59	0.104	-0.037	0.068	0.057	.170(**)	0.08	0.052	-0.043	.127(*)	.394(**)	.459(**)	.477(**)	.379(**)	.664(**)	.362(**)	.372(**)	.692(**)	.539(**)	.287(**)	.318(**)	.256(**)	.379(**)	.374(**)	.322(**)	.367(**)	.518(**)	.399(**)	.541(**)	.422(**)	.484(**)	.419(**)	.496(**)	.394(**)	.371(**)
Q60	0.005	-0.049	-0.011	-0.022	0.089	.129(*)	-0.017	-0.077	0.007	.384(**)	.352(**)	.394(**)	.555(**)	.488(**)	.311(**)	.354(**)	.423(**)	.489(**)	.285(**)	.308(**)	.272(**)	.373(**)	.369(**)	.443(**)	.376(**)	.331(**)	.396(**)	.441(**)	.280(**)	.427(**)	.413(**)	.318(**)	.284(**)	.418(**)
Q61	0.066	-0.016	.162(**)	0.021	0.024	0.089	-0.074	-0.053	0.033	.487(**)	.357(**)	.473(**)	.312(**)	.383(**)	.256(**)	.653(**)	.410(**)	.406(**)	.269(**)	.457(**)	.223(**)	.385(**)	.408(**)	.425(**)	.434(**)	.227(**)	.504(**)	.509(**)	.348(**)	.560(**)	.482(**)	.454(**)	.355(**)	.320(**)
Q62	0.095	.108(*)	0.104	-0.081	0.017	0.043	-0.057	0.044	0.022	.190(**)	.280(**)	.156(**)	.260(**)	.181(**)	.293(**)	0.025	.124(*)	.167(**)	.190(**)	.165(**)	.335(**)	.203(**)	.165(**)	.219(**)	.213(**)	.222(**)	.178(**)	.176(**)	.139(*)	.135(*)	.249(**)	0.086	.147(**)	0.062
Q63	.147(**)	0.065	.155(**)	0.019	-0.035	0.08	-0.072	0.032	0.057	.463(**)	.418(**)	.494(**)	.363(**)	.394(**)	.451(**)	.406(**)	.381(**)	.243(**)	.405(**)	.345(**)	.401(**)	.371(**)	.379(**)	.362(**)	.308(**)	.536(**)	.553(**)	.328(**)	.510(**)	.503(**)	.418(**)	.313(**)	.352(**)	
Q64	0.069	0.017	.126(*)	0.014	0.025	.133(*)	0.043	0.027	0.044	.477(**)	.385(**)	.520(**)	.374(**)	.439(**)	.394(**)	.527(**)	.441(**)	.462(**)	.268(**)	.387(**)	.355(**)	.482(**)	.474(**)	.477(**)	.493(**)	.371(**)	.574(**)	.495(**)	.319(**)	.668(**)	.532(**)	.463(**)	.365(**)	.497(**)
Q65	0.062	-0.041	0.063	-0.04	0.045	0.072	0.107	.129(*)	0.059	.381(**)	.300(**)	.375(**)	.276(**)	.358(**)	.338(**)	.389(**)	.434(**)	.398(**)	.239(**)	.292(**)	.315(**)	.373(**)	.370(**)	.393(**)	.464(**)	.346(**)	.471(**)	.432(**)	.265(**)	.557(**)	.447(**)	.404(**)	.296(**)	.454(**)
Q66	0.084	0.023	.119(*)	0.062	-0.017	0.07	0.02	0.06	0.05	.513(**)	.380(**)	.524(**)	.312(**)	.443(**)	.382(**)	.571(**)	.470(**)	.457(**)	.299(**)	.434(**)	.339(**)	.461(**)	.446(**)	.466(**)	.470(**)	.409(**)	.555(**)	.541(**)	.322(**)	.626(**)	.557(**)	.484(**)	.342(**)	.469(**)
Q67	0.057	0.015	.136(*)	0.037	0.003	0.066	0.044	0.054	0.018	.490(**)	.388(**)	.477(**)	.315(**)	.407(**)	.323(**)	.536(**)	.442(**)	.432(**)	.221(**)	.411(**)	.332(**)	.404(**)	.434(**)	.399(**)	.417(**)	.360(**)	.545(**)	.508(**)	.305(**)	.614(**)	.553(**)	.445(**)	.346(**)	.420(**)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67
Q45	1																						
Q46	.710(**)	1																					
Q47	.349(**)	.445(**)	1																				
Q48	.368(**)	.413(**)	.309(**)	1																			
Q49	.280(**)	.314(**)	.221(**)	.775(**)	1																		
Q50	.233(**)	.298(**)	.229(**)	.719(**)	.803(**)	1																	
Q51	.237(**)	.328(**)	.280(**)	.595(**)	.627(**)	.617(**)	1																
Q52	.241(**)	.207(**)	.210(**)	.386(**)	.428(**)	.431(**)	.522(**)	1															
Q53	.296(**)	.342(**)	.303(**)	.556(**)	.560(**)	.560(**)	.700(**)	.615(**)	1														
Q54	.305(**)	.367(**)	.246(**)	.569(**)	.552(**)	.554(**)	.667(**)	.551(**)	.850(**)	1													
Q55	.345(**)	.461(**)	.248(**)	.406(**)	.406(**)	.421(**)	.320(**)	.245(**)	.370(**)	.379(**)	1												
Q56	.294(**)	.445(**)	.342(**)	.331(**)	.286(**)	.308(**)	.329(**)	.196(**)	.350(**)	.364(**)	.692(**)	1											
Q57	.403(**)	.423(**)	.241(**)	.430(**)	.436(**)	.443(**)	.334(**)	.319(**)	.420(**)	.444(**)	.488(**)	.401(**)	1										
Q58	0.008	0.042	.128(*)	.263(**)	.365(**)	.336(**)	.362(**)	.319(**)	.343(**)	.365(**)	.262(**)	.214(**)	.438(**)	1									
Q59	.287(**)	.333(**)	0.104	.380(**)	.437(**)	.426(**)	.335(**)	.310(**)	.372(**)	.422(**)	.467(**)	.361(**)	.564(**)	.589(**)	1								
Q60	.339(**)	.436(**)	.223(**)	.380(**)	.428(**)	.412(**)	.388(**)	.238(**)	.321(**)	.342(**)	.418(**)	.431(**)	.458(**)	.368(**)	.607(**)	1							
Q61	.272(**)	.325(**)	.206(**)	.390(**)	.434(**)	.406(**)	.322(**)	.218(**)	.335(**)	.349(**)	.446(**)	.351(**)	.456(**)	.286(**)	.394(**)	.487(**)	1						
Q62	0.052	0.083	.240(**)	.249(**)	.227(**)	.242(**)	.268(**)	.154(**)	.209(**)	.222(**)	.146(**)	.196(**)	.163(**)	.358(**)	.178(**)	.211(**)	.157(**)	1					
Q63	.314(**)	.405(**)	.233(**)	.460(**)	.455(**)	.425(**)	.403(**)	.271(**)	.378(**)	.421(**)	.426(**)	.301(**)	.486(**)	.311(**)	.477(**)	.487(**)	.615(**)	.287(**)	1				
Q64	.442(**)	.474(**)	.256(**)	.495(**)	.518(**)	.450(**)	.487(**)	.360(**)	.488(**)	.509(**)	.485(**)	.395(**)	.497(**)	.324(**)	.480(**)	.537(**)	.527(**)	.199(**)	.592(**)	1			
Q65	.358(**)	.383(**)	.207(**)	.451(**)	.471(**)	.412(**)	.386(**)	.352(**)	.405(**)	.412(**)	.420(**)	.302(**)	.454(**)	.284(**)	.429(**)	.388(**)	.379(**)	.228(**)	.473(**)	.746(**)	1		
Q66	.431(**)	.510(**)	.307(**)	.501(**)	.478(**)	.416(**)	.384(**)	.332(**)	.399(**)	.449(**)	.530(**)	.430(**)	.552(**)	.309(**)	.488(**)	.482(**)	.582(**)	.155(**)	.654(**)	.738(**)	.609(**)	1	
Q67	.375(**)	.423(**)	.266(**)	.469(**)	.454(**)	.419(**)	.434(**)	.348(**)	.438(**)	.463(**)	.513(**)	.390(**)	.513(**)	.349(**)	.479(**)	.482(**)	.562(**)	.181(**)	.615(**)	.817(**)	.709(**)	.817(**)	1

	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q20	Q21	Q22	Q23	Q24	Q25	Q26	
Q10	1																
Q11	.337(**)	1															
Q12	.310(**)	.263(**)	1														
Q13	.201(**)	.266(**)	.161(**)	1													
Q14	0.066	-.110(*)	-0.029	-.117(*)	1												
Q15	.356(**)	.143(**)	.147(**)	.151(**)	0.102	1											
Q16	0.079	-0.03	-0.046	-0.032	.596(**)	.142(**)	1										
Q17	0.107	.316(**)	0.08	.224(**)	-0.007	.152(**)	.272(**)	1									
Q18	.112(*)	.205(**)	.144(**)	.225(**)	.133(*)	.204(**)	.189(**)	.323(**)	1								
Q20	.114(*)	0.041	.150(**)	0.053	0.106	0.044	-0.031	0.046	0.012	1							
Q21	0.064	0.043	.141(**)	0.02	.169(**)	0.046	-0.041	-0.052	0.042	.595(**)	1						
Q22	0.072	0.04	.191(**)	0.075	.139(*)	.120(*)	0.03	-0.008	0.068	.655(**)	.718(**)	1					
Q23	.139(*)	-0.012	0.068	-0.011	.179(**)	.196(**)	0.101	0.005	0.07	.407(**)	.409(**)	.476(**)	1				
Q24	.159(**)	-0.024	.156(**)	0.021	.163(**)	.154(**)	0.06	-0.019	.181(**)	.415(**)	.472(**)	.550(**)	.532(**)	1			
Q25	.182(**)	.226(**)	.112(*)	.138(*)	0.017	.184(**)	0.086	0.091	.126(*)	.341(**)	.306(**)	.385(**)	.421(**)	.474(**)	1		
Q26	0.083	-0.028	.163(**)	0.06	0.045	.113(*)	-0.016	-0.07	0.031	.515(**)	.424(**)	.535(**)	.259(**)	.391(**)	.238(**)	1	
Q27	.176(**)	-0.022	.153(**)	0.08	.140(*)	0.09	0.09	-0.003	.138(*)	.395(**)	.402(**)	.451(**)	.373(**)	.749(**)	.407(**)	.405(**)	
Q28	.141(**)	0.098	0.106	0.097	0.076	0.1	0.077	0.054	.122(*)	.378(**)	.308(**)	.415(**)	.398(**)	.627(**)	.395(**)	.363(**)	.6
Q29	.291(**)	.240(**)	.140(*)	.125(*)	.130(*)	.121(*)	0.1	0.095	0.104	.285(**)	.181(**)	.192(**)	.197(**)	.324(**)	.293(**)	.256(**)	.3
Q30	.171(**)	.139(*)	.118(*)	.126(*)	0.013	.200(**)	-0.007	0.066	0.093	.328(**)	.329(**)	.322(**)	.260(**)	.317(**)	.367(**)	.366(**)	.4
Q31	.168(**)	.225(**)	0.089	.143(**)	0.086	.135(*)	.144(**)	0.091	0.071	.250(**)	.242(**)	.283(**)	.349(**)	.300(**)	.690(**)	.175(**)	.2
Q32	.111(*)	.132(*)	.108(*)	0.094	-0.038	0.053	-0.017	0.058	.111(*)	.380(**)	.253(**)	.369(**)	.335(**)	.459(**)	.454(**)	.428(**)	.4
Q33	.116(*)	.181(**)	.116(*)	0.073	-0.018	0.095	-0.041	0.073	0.089	.391(**)	.266(**)	.357(**)	.320(**)	.447(**)	.426(**)	.419(**)	.4
Q34	0.09	0.101	.173(**)	0.085	-0.005	.109(*)	-0.017	0.07	0.074	.379(**)	.218(**)	.340(**)	.350(**)	.439(**)	.382(**)	.347(**)	.4
Q35	.122(*)	0.041	.116(*)	.120(*)	0.046	.128(*)	0.105	.181(**)	.152(**)	.406(**)	.202(**)	.333(**)	.317(**)	.449(**)	.334(**)	.369(**)	.4
Q36	.117(*)	0.093	0.082	0.062	0.002	0.095	0.02	0.049	0.104	.279(**)	.210(**)	.264(**)	.229(**)	.464(**)	.304(**)	.292(**)	.5
Q37	.153(**)	0.002	.212(**)	0.069	0.068	0.096	0.048	0.047	0.066	.473(**)	.396(**)	.449(**)	.359(**)	.405(**)	.412(**)	.411(**)	.4
Q38	0.081	-0.073	.148(**)	0.073	.110(*)	0.03	0.029	-0.104	0.069	.444(**)	.503(**)	.560(**)	.364(**)	.448(**)	.384(**)	.448(**)	.4
Q39	0.045	0.006	.166(**)	0.1	.185(**)	.118(*)	.160(**)	0.017	.175(**)	.348(**)	.428(**)	.470(**)	.328(**)	.404(**)	.298(**)	.321(**)	.3
Q40	.119(*)	0.045	.195(**)	0.054	0.031	0.083	0.065	0.068	0.084	.480(**)	.320(**)	.512(**)	.339(**)	.468(**)	.411(**)	.474(**)	.4
Q41	0.073	0.017	.243(**)	0.083	.136(*)	.128(*)	0.034	0.033	0.068	.468(**)	.408(**)	.487(**)	.364(**)	.435(**)	.376(**)	.470(**)	.3
Q42	.157(**)	0.063	.171(**)	.190(**)	.115(*)	0.095	0.047	0.051	.129(*)	.420(**)	.350(**)	.433(**)	.287(**)	.418(**)	.318(**)	.428(**)	.4
Q43	.163(**)	0.044	.179(**)	.154(**)	0.107	.183(**)	.119(*)	0.097	.200(**)	.307(**)	.285(**)	.388(**)	.291(**)	.371(**)	.290(**)	.324(**)	.3
Q44	.132(*)	.127(*)	.125(*)	0.086	-0.083	0.079	0.01	0.106	0.095	.296(**)	.123(*)	.302(**)	.335(**)	.358(**)	.353(**)	.310(**)	.3
Q45	.134(*)	.169(**)	.152(**)	.112(*)	-0.093	0.03	-0.058	0.052	0.03	.264(**)	.138(*)	.253(**)	.242(**)	.267(**)	.327(**)	.245(**)	.3
Q46	.143(**)	.109(*)	.143(**)	0.1	-0.056	0.085	-0.05	0.007	0.055	.301(**)	.138(*)	.281(**)	.324(**)	.350(**)	.334(**)	.291(**)	.3
Q47	0.035	0.103	0.092	0.032	0.022	0.028	0.032	0.019	0.071	.231(**)	.141(*)	.154(**)	.229(**)	.150(**)	.192(**)	.126(*)	.
Q48	0.044	0.065	0.098	0.038	0.032	0.092	0.038	0.071	.111(*)	.352(**)	.260(**)	.411(**)	.303(**)	.386(**)	.460(**)	.364(**)	.3
Q49	0.044	0.03	.147(**)	0.021	-0.004	.162(**)	0.017	0.076	.170(**)	.337(**)	.286(**)	.433(**)	.329(**)	.377(**)	.384(**)	.389(**)	.3
Q50	0.001	0.005	.127(*)	0.018	0.009	0.034	-0.008	0.014	0.083	.334(**)	.296(**)	.457(**)	.316(**)	.339(**)	.396(**)	.347(**)	.3
Q51	0.048	.132(*)	0.103	0.075	0.023	.110(*)	0.074	0.107	0.09	.331(**)	.272(**)	.352(**)	.347(**)	.337(**)	.528(**)	.235(**)	.3
Q52	-0.013	0.038	0.035	0.038	0	0.046	0.054	0.061	0.004	.262(**)	.172(**)	.259(**)	.179(**)	.244(**)	.363(**)	.183(**)	.2
Q53	0.005	0.065	0.079	0.059	0.034	0.024	0.025	0.083	.123(*)	.292(**)	.232(**)	.282(**)	.238(**)	.310(**)	.430(**)	.280(**)	.3
Q54	0.034	0.063	.116(*)	0.101	0.048	0.024	0.038	0.083	.115(*)	.345(**)	.271(**)	.369(**)	.277(**)	.339(**)	.425(**)	.252(**)	.3
Q55	0.076	0.032	.191(**)	.113(*)	0.063	0.107	0.037	0.085	0.071	.324(**)	.218(**)	.323(**)	.176(**)	.342(**)	.244(**)	.391(**)	.4
Q56	0.106	0.066	0.101	0.091	0.083	0.065	0.057	0.068	0.071	.297(**)	.150(**)	.178(**)	.259(**)	.268(**)	.207(**)	.303(**)	.3
Q57	0.042	-0.032	0.075	0.046	0.038	0.023	-0.001	0.035	0.015	.400(**)	.373(**)	.436(**)	.346(**)	.406(**)	.289(**)	.410(**)	.4
Q58	0.066	0.031	.113(*)	0.045	.242(**)	0.104	.137(*)	0.08	.126(*)	.417(**)	.500(**)	.432(**)	.329(**)	.380(**)	.257(**)	.252(**)	.3
Q59	0.104	-0.037	0.068	0.057	.170(**)	0.08	0.052	-0.043	.127(*)	.394(**)	.459(**)	.477(**)	.379(**)	.664(**)	.362(**)	.372(**)	.6
Q60	0.005	-0.049	-0.011	-0.022	0.089	.129(*)	-0.017	-0.077	0.007	.384(**)	.352(**)	.394(**)	.555(**)	.488(**)	.311(**)	.354(**)	.4
Q61	0.066	-0.016	.162(**)	0.021	0.024	0.089	-0.074	-0.053	0.033	.487(**)	.357(**)	.473(**)	.312(**)	.383(**)	.256(**)	.653(**)	.4
Q62	0.095	.108(*)	0.104	-0.081	0.017	0.043	-0.057	0.044	0.022	.190(**)	.280(**)	.156(**)	.260(**)	.181(**)	.293(**)	0.025	.
Q63	.147(**)	0.065	.155(**)	0.019	-0.035	0.08	-0.072	0.032	0.057	.463(**)	.418(**)	.494(**)	.363(**)	.394(**)	.451(**)	.478(**)	.4
Q64	0.069	0.017	.126(*)	0.014	0.025	.133(*)	0.043	0.027	0.044	.477(**)	.385(**)	.520(**)	.374(**)	.439(**)	.394(**)	.527(**)	.4
Q65	0.062	-0.041	0.063	-0.04	0.045	0.072	0.107	.129(*)	0.059	.381(**)	.300(**)	.375(**)	.276(**)	.358(**)	.338(**)	.389(**)	.4
Q66	0.084	0.023	.119(*)	0.062	-0.017	0.07	0.02	0.06	0.05	.513(**)	.380(**)	.524(**)	.312(**)	.443(**)	.382(**)	.571(**)	.4
Q67	0.057	0.015	.136(*)	0.037	0.003	0.066	0.044	0.054	0.018	.490(**)	.388(**)	.477(**)	.315(**)	.407(**)	.323(**)	.536(**)	.4

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60	
Q45	1																
Q46	.710(**)	1															
Q47	.349(**)	.445(**)	1														
Q48	.368(**)	.413(**)	.309(**)	1													
Q49	.280(**)	.314(**)	.221(**)	.775(**)	1												
Q50	.233(**)	.298(**)	.229(**)	.719(**)	.803(**)	1											
Q51	.237(**)	.328(**)	.280(**)	.595(**)	.627(**)	.617(**)	1										
Q52	.241(**)	.207(**)	.210(**)	.386(**)	.428(**)	.431(**)	.522(**)	1									
Q53	.296(**)	.342(**)	.303(**)	.556(**)	.560(**)	.560(**)	.700(**)	.615(**)	1								
Q54	.305(**)	.367(**)	.246(**)	.569(**)	.552(**)	.554(**)	.667(**)	.551(**)	.850(**)	1							
Q55	.345(**)	.461(**)	.248(**)	.406(**)	.406(**)	.421(**)	.320(**)	.245(**)	.370(**)	.379(**)	1						
Q56	.294(**)	.445(**)	.342(**)	.331(**)	.286(**)	.308(**)	.329(**)	.196(**)	.350(**)	.364(**)	.692(**)	1					
Q57	.403(**)	.423(**)	.241(**)	.430(**)	.436(**)	.443(**)	.334(**)	.319(**)	.420(**)	.444(**)	.488(**)	.401(**)	1				
Q58	0.008	0.042	.128(*)	.263(**)	.365(**)	.336(**)	.362(**)	.319(**)	.343(**)	.365(**)	.262(**)	.214(**)	.438(**)	1			
Q59	.287(**)	.333(**)	0.104	.380(**)	.437(**)	.426(**)	.335(**)	.310(**)	.372(**)	.422(**)	.467(**)	.361(**)	.564(**)	.589(**)	1		
Q60	.339(**)	.436(**)	.223(**)	.380(**)	.428(**)	.412(**)	.388(**)	.238(**)	.321(**)	.342(**)	.418(**)	.431(**)	.458(**)	.368(**)	.607(**)	1	
Q61	.272(**)	.325(**)	.206(**)	.390(**)	.434(**)	.406(**)	.322(**)	.218(**)	.335(**)	.349(**)	.446(**)	.351(**)	.456(**)	.286(**)	.394(**)	.487(**)	
Q62	0.052	0.083	.240(**)	.249(**)	.227(**)	.242(**)	.268(**)	.154(**)	.209(**)	.222(**)	.146(**)	.196(**)	.163(**)	.358(**)	.178(**)	.211(**)	.1
Q63	.314(**)	.405(**)	.233(**)	.460(**)	.455(**)	.425(**)	.403(**)	.271(**)	.378(**)	.421(**)	.426(**)	.301(**)	.486(**)	.311(**)	.477(**)	.487(**)	.6
Q64	.442(**)	.474(**)	.256(**)	.495(**)	.518(**)	.450(**)	.487(**)	.360(**)	.488(**)	.509(**)	.485(**)	.395(**)	.497(**)	.324(**)	.480(**)	.537(**)	.5
Q65	.358(**)	.383(**)	.207(**)	.451(**)	.471(**)	.412(**)	.386(**)	.352(**)	.405(**)	.412(**)	.420(**)	.302(**)	.454(**)	.284(**)	.429(**)	.388(**)	.3
Q66	.431(**)	.510(**)	.307(**)	.501(**)	.478(**)	.416(**)	.384(**)	.332(**)	.399(**)	.449(**)	.530(**)	.430(**)	.552(**)	.309(**)	.488(**)	.482(**)	.5
Q67	.375(**)	.423(**)	.266(**)	.469(**)	.454(**)	.419(**)	.434(**)	.348(**)	.438(**)	.463(**)	.513(**)	.390(**)	.513(**)	.349(**)	.479(**)	.482(**)	.5

Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40
1																
.474(**)	1															
.391(**)	.238(**)	1														
.749(**)	.407(**)	.405(**)	1													
.627(**)	.395(**)	.363(**)	.680(**)	1												
.324(**)	.293(**)	.256(**)	.373(**)	.448(**)	1											
.317(**)	.367(**)	.366(**)	.408(**)	.382(**)	.312(**)	1										
.300(**)	.690(**)	.175(**)	.272(**)	.345(**)	.259(**)	.396(**)	1									
.459(**)	.454(**)	.428(**)	.446(**)	.500(**)	.417(**)	.441(**)	.414(**)	1								
.447(**)	.426(**)	.419(**)	.411(**)	.522(**)	.423(**)	.429(**)	.393(**)	.839(**)	1							
.439(**)	.382(**)	.347(**)	.430(**)	.495(**)	.396(**)	.409(**)	.385(**)	.711(**)	.730(**)	1						
.449(**)	.334(**)	.369(**)	.423(**)	.569(**)	.443(**)	.346(**)	.384(**)	.531(**)	.578(**)	.651(**)	1					
.464(**)	.304(**)	.292(**)	.528(**)	.420(**)	.265(**)	.242(**)	.260(**)	.333(**)	.320(**)	.355(**)	.416(**)	1				
.405(**)	.412(**)	.411(**)	.407(**)	.382(**)	.331(**)	.378(**)	.383(**)	.412(**)	.434(**)	.447(**)	.471(**)	.321(**)	1			
.448(**)	.384(**)	.448(**)	.489(**)	.408(**)	.274(**)	.402(**)	.354(**)	.372(**)	.345(**)	.325(**)	.364(**)	.318(**)	.515(**)	1		
.404(**)	.298(**)	.321(**)	.372(**)	.332(**)	.177(**)	.220(**)	.296(**)	.246(**)	.257(**)	.240(**)	.273(**)	.203(**)	.393(**)	.540(**)	1	
.468(**)	.411(**)	.474(**)	.477(**)	.493(**)	.275(**)	.386(**)	.387(**)	.473(**)	.481(**)	.483(**)	.533(**)	.411(**)	.605(**)	.540(**)	.474(**)	1
.435(**)	.376(**)	.470(**)	.392(**)	.431(**)	.260(**)	.394(**)	.427(**)	.445(**)	.478(**)	.484(**)	.471(**)	.318(**)	.513(**)	.498(**)	.446(**)	.605(**)
.418(**)	.318(**)	.428(**)	.460(**)	.436(**)	.303(**)	.392(**)	.341(**)	.397(**)	.423(**)	.402(**)	.483(**)	.358(**)	.453(**)	.572(**)	.437(**)	.563(**)
.371(**)	.290(**)	.324(**)	.349(**)	.350(**)	.267(**)	.315(**)	.316(**)	.298(**)	.293(**)	.359(**)	.396(**)	.244(**)	.350(**)	.393(**)	.583(**)	.397(**)
.358(**)	.353(**)	.310(**)	.374(**)	.469(**)	.279(**)	.283(**)	.301(**)	.388(**)	.400(**)	.434(**)	.484(**)	.338(**)	.378(**)	.287(**)	.265(**)	.513(**)
.267(**)	.327(**)	.245(**)	.303(**)	.370(**)	.243(**)	.263(**)	.235(**)	.314(**)	.340(**)	.359(**)	.384(**)	.307(**)	.372(**)	.292(**)	.170(**)	.493(**)
.350(**)	.334(**)	.291(**)	.355(**)	.471(**)	.307(**)	.335(**)	.296(**)	.404(**)	.422(**)	.426(**)	.438(**)	.330(**)	.421(**)	.349(**)	.269(**)	.517(**)
.150(**)	.192(**)	.126(*)	.135(*)	.268(**)	.250(**)	.214(**)	.223(**)	.290(**)	.271(**)	.281(**)	.288(**)	.155(**)	.233(**)	.267(**)	.178(**)	.253(**)
.386(**)	.460(**)	.364(**)	.340(**)	.422(**)	.253(**)	.312(**)	.470(**)	.420(**)	.419(**)	.412(**)	.464(**)	.300(**)	.431(**)	.387(**)	.301(**)	.493(**)
.377(**)	.384(**)	.389(**)	.394(**)	.443(**)	.228(**)	.312(**)	.395(**)	.405(**)	.404(**)	.435(**)	.480(**)	.329(**)	.403(**)	.448(**)	.324(**)	.475(**)
.339(**)	.396(**)	.347(**)	.354(**)	.392(**)	.234(**)	.269(**)	.439(**)	.422(**)	.400(**)	.401(**)	.414(**)	.243(**)	.414(**)	.449(**)	.300(**)	.422(**)
.337(**)	.528(**)	.235(**)	.307(**)	.392(**)	.182(**)	.278(**)	.597(**)	.381(**)	.401(**)	.393(**)	.405(**)	.259(**)	.375(**)	.370(**)	.319(**)	.401(**)
.244(**)	.363(**)	.183(**)	.291(**)	.266(**)	.187(**)	.173(**)	.376(**)	.266(**)	.242(**)	.302(**)	.300(**)	.200(**)	.288(**)	.284(**)	.219(**)	.345(**)
.310(**)	.430(**)	.280(**)	.330(**)	.359(**)	.241(**)	.308(**)	.503(**)	.357(**)	.362(**)	.346(**)	.450(**)	.253(**)	.391(**)	.398(**)	.300(**)	.427(**)
.339(**)	.425(**)	.252(**)	.361(**)	.372(**)	.192(**)	.330(**)	.504(**)	.339(**)	.352(**)	.367(**)	.465(**)	.312(**)	.432(**)	.420(**)	.349(**)	.492(**)
.342(**)	.244(**)	.391(**)	.439(**)	.445(**)	.446(**)	.291(**)	.217(**)	.416(**)	.429(**)	.390(**)	.441(**)	.392(**)	.426(**)	.338(**)	.280(**)	.433(**)
.268(**)	.207(**)	.303(**)	.315(**)	.364(**)	.474(**)	.315(**)	.304(**)	.412(**)	.411(**)	.390(**)	.390(**)	.341(**)	.381(**)	.285(**)	.248(**)	.345(**)
.406(**)	.289(**)	.410(**)	.486(**)	.436(**)	.197(**)	.270(**)	.253(**)	.382(**)	.369(**)	.391(**)	.456(**)	.423(**)	.410(**)	.467(**)	.314(**)	.470(**)
.380(**)	.257(**)	.252(**)	.368(**)	.348(**)	.176(**)	.190(**)	.229(**)	.187(**)	.185(**)	.189(**)	.287(**)	.265(**)	.280(**)	.381(**)	.413(**)	.282(**)
.664(**)	.362(**)	.372(**)	.692(**)	.539(**)	.287(**)	.318(**)	.256(**)	.379(**)	.374(**)	.322(**)	.367(**)	.518(**)	.399(**)	.541(**)	.422(**)	.484(**)
.488(**)	.311(**)	.354(**)	.423(**)	.489(**)	.285(**)	.308(**)	.272(**)	.373(**)	.369(**)	.443(**)	.376(**)	.331(**)	.396(**)	.441(**)	.280(**)	.427(**)
.383(**)	.256(**)	.653(**)	.410(**)	.406(**)	.269(**)	.457(**)	.223(**)	.385(**)	.408(**)	.425(**)	.434(**)	.227(**)	.504(**)	.509(**)	.348(**)	.560(**)
.181(**)	.293(**)	0.025	.124(*)	.167(**)	.190(**)	.165(**)	.335(**)	.203(**)	.165(**)	.219(**)	.213(**)	.222(**)	.178(**)	.176(**)	.139(*)	.135(*)
.394(**)	.451(**)	.478(**)	.406(**)	.381(**)	.243(**)	.405(**)	.345(**)	.401(**)	.371(**)	.379(**)	.362(**)	.308(**)	.536(**)	.553(**)	.328(**)	.510(**)
.439(**)	.394(**)	.527(**)	.441(**)	.462(**)	.268(**)	.387(**)	.355(**)	.482(**)	.474(**)	.477(**)	.493(**)	.371(**)	.574(**)	.495(**)	.319(**)	.666(**)
.358(**)	.338(**)	.389(**)	.434(**)	.398(**)	.239(**)	.292(**)	.315(**)	.373(**)	.370(**)	.393(**)	.464(**)	.346(**)	.471(**)	.432(**)	.265(**)	.557(**)
.443(**)	.382(**)	.571(**)	.470(**)	.457(**)	.299(**)	.434(**)	.339(**)	.461(**)	.446(**)	.466(**)	.470(**)	.409(**)	.555(**)	.541(**)	.322(**)	.646(**)
.407(**)	.323(**)	.536(**)	.442(**)	.432(**)	.221(**)	.411(**)	.332(**)	.404(**)	.434(**)	.399(**)	.417(**)	.360(**)	.545(**)	.508(**)	.305(**)	.614(**)

Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67
1									
.589(**)	1								
.368(**)	.607(**)	1							
.286(**)	.394(**)	.487(**)	1						
.358(**)	.178(**)	.211(**)	.157(**)	1					
.311(**)	.477(**)	.487(**)	.615(**)	.287(**)	1				
.324(**)	.480(**)	.537(**)	.527(**)	.199(**)	.592(**)	1			
.284(**)	.429(**)	.388(**)	.379(**)	.228(**)	.473(**)	.746(**)	1		
.309(**)	.488(**)	.482(**)	.582(**)	.155(**)	.654(**)	.738(**)	.609(**)	1	
.349(**)	.479(**)	.482(**)	.562(**)	.181(**)	.615(**)	.817(**)	.709(**)	.817(**)	1

Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44
1																
.448(**)	1															
.382(**)	.312(**)	1														
.345(**)	.259(**)	.396(**)	1													
.500(**)	.417(**)	.441(**)	.414(**)	1												
.522(**)	.423(**)	.429(**)	.393(**)	.839(**)	1											
.495(**)	.396(**)	.409(**)	.385(**)	.711(**)	.730(**)	1										
.569(**)	.443(**)	.346(**)	.384(**)	.531(**)	.578(**)	.651(**)	1									
.420(**)	.265(**)	.242(**)	.260(**)	.333(**)	.320(**)	.355(**)	.416(**)	1								
.382(**)	.331(**)	.378(**)	.383(**)	.412(**)	.434(**)	.447(**)	.471(**)	.321(**)	1							
.408(**)	.274(**)	.402(**)	.354(**)	.372(**)	.345(**)	.325(**)	.364(**)	.318(**)	.515(**)	1						
.332(**)	.177(**)	.220(**)	.296(**)	.246(**)	.257(**)	.240(**)	.273(**)	.203(**)	.393(**)	.540(**)	1					
.493(**)	.275(**)	.386(**)	.387(**)	.473(**)	.481(**)	.483(**)	.533(**)	.411(**)	.605(**)	.540(**)	.474(**)	1				
.431(**)	.260(**)	.394(**)	.427(**)	.445(**)	.478(**)	.484(**)	.471(**)	.318(**)	.513(**)	.498(**)	.446(**)	.605(**)	1			
.436(**)	.303(**)	.392(**)	.341(**)	.397(**)	.423(**)	.402(**)	.483(**)	.358(**)	.453(**)	.572(**)	.437(**)	.568(**)	.548(**)	1		
.350(**)	.267(**)	.315(**)	.316(**)	.298(**)	.293(**)	.359(**)	.396(**)	.244(**)	.350(**)	.393(**)	.583(**)	.397(**)	.456(**)	.636(**)	1	
.469(**)	.279(**)	.283(**)	.301(**)	.388(**)	.400(**)	.434(**)	.484(**)	.338(**)	.378(**)	.287(**)	.265(**)	.513(**)	.368(**)	.416(**)	.360(**)	1
.370(**)	.243(**)	.263(**)	.235(**)	.314(**)	.340(**)	.359(**)	.384(**)	.307(**)	.372(**)	.292(**)	.170(**)	.493(**)	.342(**)	.360(**)	.220(**)	.784(**)
.471(**)	.307(**)	.335(**)	.296(**)	.404(**)	.422(**)	.426(**)	.438(**)	.330(**)	.421(**)	.349(**)	.269(**)	.517(**)	.406(**)	.409(**)	.366(**)	.724(**)
.268(**)	.250(**)	.214(**)	.223(**)	.290(**)	.271(**)	.281(**)	.288(**)	.155(**)	.233(**)	.267(**)	.178(**)	.255(**)	.259(**)	.282(**)	.247(**)	.372(**)
.422(**)	.253(**)	.312(**)	.470(**)	.420(**)	.419(**)	.412(**)	.464(**)	.300(**)	.431(**)	.387(**)	.301(**)	.493(**)	.515(**)	.371(**)	.307(**)	.455(**)
.443(**)	.228(**)	.312(**)	.395(**)	.405(**)	.404(**)	.435(**)	.480(**)	.329(**)	.403(**)	.448(**)	.324(**)	.475(**)	.515(**)	.423(**)	.355(**)	.436(**)
.392(**)	.234(**)	.269(**)	.439(**)	.422(**)	.400(**)	.401(**)	.414(**)	.243(**)	.414(**)	.449(**)	.300(**)	.422(**)	.465(**)	.395(**)	.329(**)	.400(**)
.392(**)	.182(**)	.278(**)	.597(**)	.381(**)	.401(**)	.393(**)	.405(**)	.259(**)	.375(**)	.370(**)	.319(**)	.401(**)	.464(**)	.374(**)	.346(**)	.365(**)
.266(**)	.187(**)	.173(**)	.376(**)	.266(**)	.242(**)	.302(**)	.300(**)	.200(**)	.288(**)	.284(**)	.219(**)	.345(**)	.275(**)	.307(**)	.281(**)	.338(**)
.359(**)	.241(**)	.308(**)	.503(**)	.357(**)	.362(**)	.346(**)	.450(**)	.253(**)	.391(**)	.398(**)	.300(**)	.427(**)	.471(**)	.491(**)	.433(**)	.405(**)
.372(**)	.192(**)	.330(**)	.504(**)	.339(**)	.352(**)	.367(**)	.465(**)	.312(**)	.432(**)	.420(**)	.349(**)	.492(**)	.506(**)	.524(**)	.477(**)	.393(**)
.445(**)	.446(**)	.291(**)	.217(**)	.416(**)	.429(**)	.390(**)	.441(**)	.392(**)	.426(**)	.338(**)	.280(**)	.433(**)	.403(**)	.372(**)	.311(**)	.403(**)
.364(**)	.474(**)	.315(**)	.304(**)	.412(**)	.411(**)	.390(**)	.390(**)	.341(**)	.381(**)	.285(**)	.248(**)	.345(**)	.340(**)	.363(**)	.295(**)	.355(**)
.436(**)	.197(**)	.270(**)	.253(**)	.382(**)	.369(**)	.391(**)	.456(**)	.423(**)	.410(**)	.467(**)	.314(**)	.470(**)	.438(**)	.468(**)	.296(**)	.472(**)
.348(**)	.176(**)	.190(**)	.229(**)	.187(**)	.185(**)	.189(**)	.287(**)	.265(**)	.280(**)	.381(**)	.413(**)	.282(**)	.366(**)	.353(**)	.352(**)	.129(*)
.539(**)	.287(**)	.318(**)	.256(**)	.379(**)	.374(**)	.322(**)	.367(**)	.518(**)	.399(**)	.541(**)	.422(**)	.484(**)	.419(**)	.496(**)	.394(**)	.371(**)
.489(**)	.285(**)	.308(**)	.272(**)	.373(**)	.369(**)	.443(**)	.376(**)	.331(**)	.396(**)	.441(**)	.280(**)	.427(**)	.413(**)	.318(**)	.284(**)	.418(**)
.406(**)	.269(**)	.457(**)	.223(**)	.385(**)	.408(**)	.425(**)	.434(**)	.227(**)	.504(**)	.509(**)	.348(**)	.560(**)	.482(**)	.454(**)	.355(**)	.320(**)
.167(**)	.190(**)	.165(**)	.335(**)	.203(**)	.165(**)	.219(**)	.213(**)	.222(**)	.178(**)	.176(**)	.139(*)	.135(*)	.249(**)	0.086	.147(**)	0.062
.381(**)	.243(**)	.405(**)	.345(**)	.401(**)	.371(**)	.379(**)	.362(**)	.308(**)	.536(**)	.553(**)	.328(**)	.510(**)	.503(**)	.418(**)	.313(**)	.352(**)
.462(**)	.268(**)	.387(**)	.355(**)	.482(**)	.474(**)	.477(**)	.493(**)	.371(**)	.574(**)	.495(**)	.319(**)	.666(**)	.532(**)	.463(**)	.365(**)	.497(**)
.398(**)	.239(**)	.292(**)	.315(**)	.373(**)	.370(**)	.393(**)	.464(**)	.346(**)	.471(**)	.432(**)	.265(**)	.557(**)	.447(**)	.404(**)	.296(**)	.454(**)
.457(**)	.299(**)	.434(**)	.339(**)	.461(**)	.446(**)	.466(**)	.470(**)	.409(**)	.555(**)	.541(**)	.322(**)	.646(**)	.557(**)	.484(**)	.342(**)	.469(**)
.432(**)	.221(**)	.411(**)	.332(**)	.404(**)	.434(**)	.399(**)	.417(**)	.360(**)	.545(**)	.508(**)	.305(**)	.614(**)	.553(**)	.445(**)	.346(**)	.420(**)

Q62	Q63	Q64	Q65	Q66	Q67
1					
.287(**)	1				
.199(**)	.592(**)	1			
.228(**)	.473(**)	.746(**)	1		
.155(**)	.654(**)	.738(**)	.609(**)	1	
.181(**)	.615(**)	.817(**)	.709(**)	.817(**)	1

Appendix V

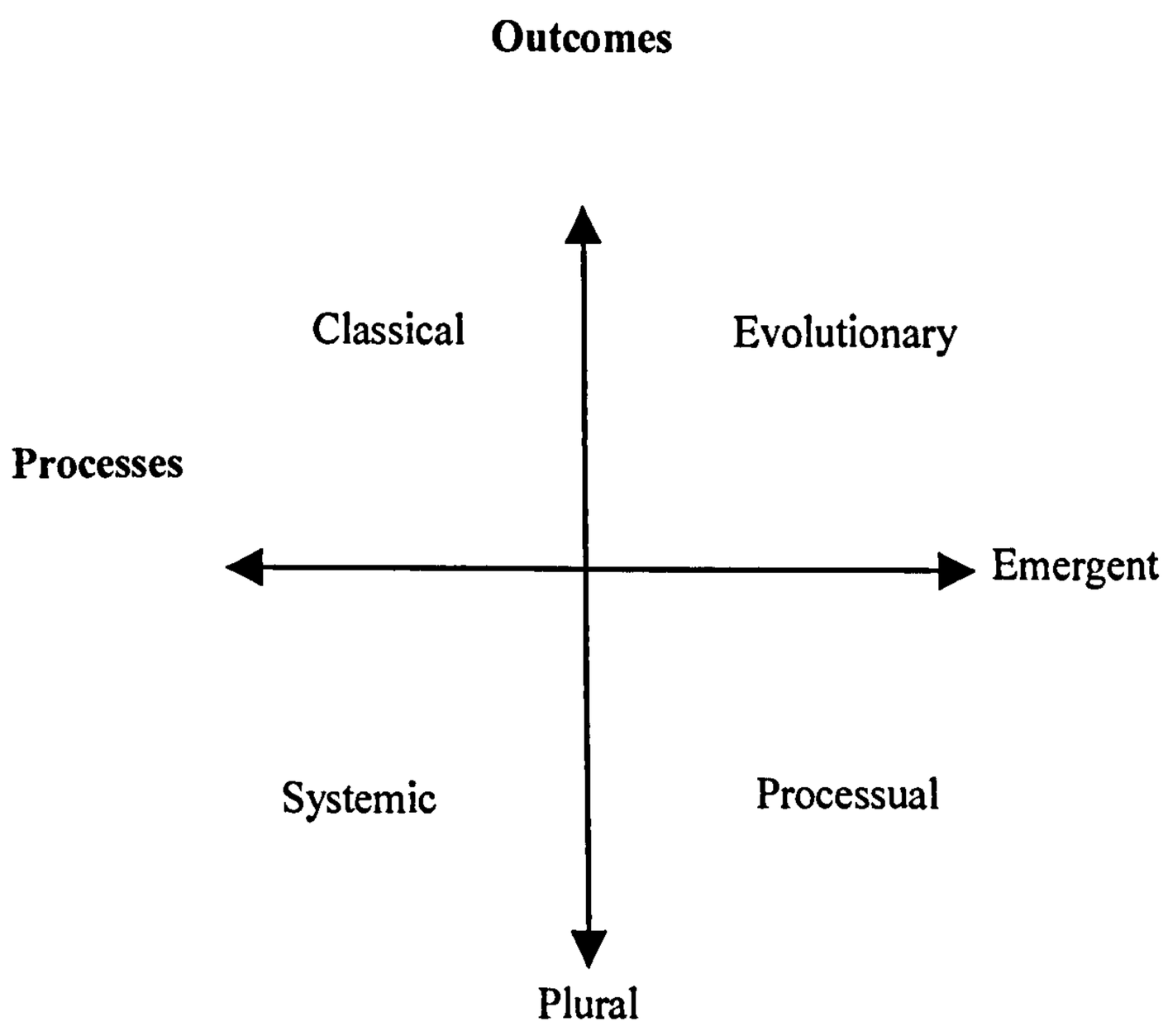
Model of Maturity

Components / Maturity level	Goal setting	Operational Processes	Support Processes	Evaluations and control	Organ. behaviour process
START	Partly known	Activities delinked	Informal according to needs	Informing	Ad hoc
LOW	Identified	Structured	Conventional	Coordinating measuring	Cooperation
MEDIUM	Unequivocally known	Streamlined	Formal and powerful	Correcting	Disciplined teamwork
HIGH	Broadly revised	Autonomous and flexible	Integrated and optimised	Learning	Self-directing teamwork

Performance Management Maturity levels by Verweive and Berghe (2002)

Appendix VI

Strategy and types of strategic development process



Whittington, 2001